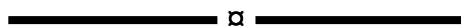


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A Sourcebook for Poverty Reduction Strategies



Volume 1: Core Techniques and Cross-Cutting Issues

*Edited by
Jeni Klugman*



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Foreword

Poverty Reduction Strategy Papers (PRSPs) provide a framework for domestic policies and programs to reduce poverty in low-income countries, as well as for development assistance to these countries. The strategies are prepared by the countries themselves, defining their own priorities and taking into account a comprehensive view of development. PRSPs focus on results and reflect the input of a wide range of domestic and external partnerships. In all these respects, PRSPs translate the principles of the Comprehensive Development Framework—principles that have been widely endorsed among developing countries and the international development community—into a plan of action for low-income countries.

A recent review by the World Bank and International Monetary Fund, undertaken two years after the introduction of the PRSP approach, examined early experiences with developing, implementing, and monitoring PRSPs. It drew on contributions from PRSP countries, external development partners, and civil society. The key messages of the review reinforced a sense that PRSPs are indeed becoming a central element of the development dialogue in low-income countries, and the framework for external assistance of most of the development community.

This Sourcebook is a guide to assist countries as they develop and strengthen their poverty reduction strategies. It is intended to be used selectively as a resource and to provide information about possible approaches to poverty reduction. It is not prescriptive, nor does it provide “the answers,” which can emerge only as a result of analysis and dialogue within each country.

I hope that you find this resource useful to your work on poverty reduction strategies.

Gobind Nankani
Vice President
Poverty Reduction and Economic
Management Network
World Bank
Washington, D.C., June 2002

Preface

A Sourcebook for Poverty Reduction Strategies is a guide to assist countries in developing and strengthening poverty reduction strategies. Its intent is only suggestive, and it may be selectively used as a resource to provide information about possible approaches. It does not provide “the answers,” which can emerge only as a result of experience, analysis, and dialogue at the level of the individual country. The book reflects the thinking and practices associated with the Comprehensive Development Framework, the *World Development Report 2000/2001*, good international practices related to poverty reduction, and emerging experience about the effective design and implementation of PRSPs.

The usefulness of this book for a particular country context will depend on, among other things, whether well-developed strategies to address poverty already exist. A range of other materials will also be available in the country, including the country’s own poverty diagnostics, sectoral and rural development strategies, national human development reports, situation assessments of women and children, and other materials and activities supported by external partners. The book should not be taken to imply a need to create an entirely new national blueprint—indeed, the opposite is the case, and national authorities are encouraged to draw upon existing materials as much as possible.

A Sourcebook for Poverty Reduction Strategies is prepared mainly by World Bank staff and reflects their experience working in various sectors and regions, although it has benefited from feedback from government officials in several African and Asian countries as a result of field-test workshops and from staff of related U.N. organizations. Although the drafts have been reviewed by the heads of the relevant sectors at the World Bank, the views expressed in the book do not necessarily represent official World Bank policy.

The Process of Developing or Strengthening Poverty Reduction Strategies

The evolution of a Poverty Reduction Strategy (PRS) in a particular country will depend on, among other things, the initial conditions and the social and political forces that shape the process of building a PRS. These include the type of government and the degree of institutional and technical capacity to design and implement sectoral programs and policies to tackle poverty.

Nonetheless, some general building blocks are likely to be relevant across countries. For example, typically key areas include understanding the nature of poverty and its causes, identifying obstacles to pro-poor growth, and ascertaining whether key sectoral policies and programs are working to reduce poverty. It is hoped that the PRS approach will foster the development of reliable fiscal, macroeconomic, and poverty data systems over the long run. The current statistical capacity of the country will determine which types of analyses are used to support the PRS process in the short and medium terms.

Table 1 provides some guidance in this respect, highlighting the most critical questions for national policymakers charged with developing a PRS. Associated with each essential building block are generic suggestions concerning data needs and sources, key domestic agents, and possible capacity-building issues, as well as key chapters of the book. The specific and relevant questions will of course vary from country to country. In this sense, Table 1 is meant to be only illustrative.

Part of the challenge arises because important linkages exist between the building blocks. How macroeconomic, structural, and sectoral policies can be integrated in a PRS is of crucial importance. This involves the important and necessary task of evaluating tradeoffs (and synergies) between alternative policy and program options. Another related challenge will be to resolve differences in opinion and perceived priorities that emerge during the participatory process. The primary objective of the process is not the PRS paper itself, but building better policies and programs to reduce poverty. In order to be most useful, PRSPs need to be accurate reflections of what the countries intend to achieve and to undertake by way of policy and program implementation and reform.

Important tensions remain, including those between speed of preparation versus ownership and quality, especially in the cases where preparation of a PRSP or Interim PRSP (I-PRSP) is needed for HIPC debt relief. Another tension is whether the PRSP will provide a framework for the International Monetary Fund and the World Bank only, or for all donors; a number of key partners, including the European Union, the Netherlands, and the United Kingdom are basing their assistance strategies on PRSPs. More generally, finding an appropriate resolution will take place on a country-by-country basis.

Preparing or strengthening a PRS is expected to be an interactive, iterative process. National authorities are expected to take the lead in the various dimensions. Key elements in these interactive processes would likely be seminars and workshops both internal to the country and, where relevant, on a regional basis. It is recognized that many countries face key capacity constraints—in their governments and within their own private sectors and civil societies—and that these can only gradually be addressed.

Diverse elements of potential support exist outside of governments, including private sector agencies and civil society in addition to sources of technical assistance such as the U.N. Development Programme and bilateral agencies engaged in the country. Related training possibilities also exist. External partners—bilateral and multilateral—may be invited to facilitate dialogue, engage in long-term capacity building, and finance data collection, civil society involvement, participatory assessments, and so on.

How to Use This Book

The book seeks to provide guidance both on the process aspects of the PRS and on substantive aspects of poverty diagnosis and the formulation of a strategy to address poverty in its various dimensions. As emphasized above, however, the book is not intended to be prescriptive: it is not expected that any country would apply the guidelines in the entire book. Nor is the book a panacea for all the difficult issues that countries will face in putting together a PRS because PRSP development represents a learning experience for World Bank and IMF staff just as it does for national authorities.

It is expected that the majority of readers will use this document selectively. The chapters in volume 2 (macroeconomic and sectoral approaches) are likely to be useful mainly for staff in the respective line ministries. For example, staff in the ministry of education may be interested in particular aspects of chapter 19, “Education” (to help determine whether the input mix for schools is appropriate), and in cross-references to chapter 6, “Public Spending” (to assess expenditure tradeoffs), and chapter 3, “Monitoring and Evaluation” (to establish methods to track changes over time).

Some aspects of the core techniques section in volume 1 are likely to be useful for many people involved in preparing PRSPs—but, again, only staff with the relevant responsibility are likely to examine any one chapter in its entirety. Hence, readers concerned with a specific sector or topic are encouraged to refer directly to their area of interest, although there are cross-references in each of the chapters to important related areas of the book.

Each chapter adopts a layered approach, with technical notes on procedures to follow suitable for persons with technical expertise in a country, together with case studies, resource material, and references.

Future editions of *A Sourcebook for Poverty Reduction Strategies* will be revised in response to the comments and feedback received as well as country experience in developing and strengthening poverty reduction strategies. The Web site, <http://www.worldbank.org/poverty/strategies/index.htm>, will contain regular updates of the chapters that make up the book. Copies of chapters in French, Spanish, and Russian can be downloaded from this site.

Who are the poor and why?

Constructing a basic poverty profile—Who? Where? For how long?—and identifying key patterns of poverty, inequality, and vulnerability

Examining regulatory and spending policies, and institutional factors, that contribute to the lack of opportunities among the poor—based on information about their sources of income, their assets (human and physical), and access and utilization of key services

Assessing the main needs and vulnerabilities of the poor and prioritizing based on, for example, the number of people with unsatisfied needs and/or facing risks, and the magnitude of their needs/risks

Relevant data (by region, rural and urban location, and household type) from surveys and multitopic surveys

Administrative data disaggregated by gender and age

User surveys

Qualitative assessments

Census data

Statistical agency
Poverty working group(s)

Civil society, nongovernmental organizations (NGOs), and so on

Participatory poverty assessment

Social and situation assessments

Human development reports

Frequency of multitopic surveys

Provision of training in poverty analysis for key officials

Poverty Measurement and Analysis

Gender

Inequality and Social Welfare

Strengthening Statistical Systems

What policies are needed to support more rapid growth?

Determining how macrostability can be achieved and sustained—fiscal, monetary, and exchange rate policy—identifying sources of noninflationary finance

Transparency and accountability in fiscal management

Determining whether conditions for private sector growth are present: institutional and regulatory arrangements, functioning markets and access to infrastructure, public ownership role, property rights, judicial system, corruption, banking system, trade regime, tax system, infrastructure, education, and skills

Examining the extent to which the poor participate in markets, notably labor and financial (access to credit)

National accounts data

Revenue data and projections

Data on business conditions from surveys of small operators

Corruption surveys

Ministry of finance

Central bank

Tax administration

Sectoral ministries

IMF and World Bank staff reports

Analysis supported by external partners

Improving the reliability of macroeconomic data

Enabling private sector development

Macroeconomic Issues

Trade

Governance

Public Spending

Energy

What are the major obstacles to the poor's participation in more rapid growth?

Examining the poverty focus of government spending: size of nonproductive military spending, amount and effectiveness of poverty-focused spending, the regional and rural and urban spending mix

Examining the extent of formal regulations and informal corruption, and impact on microeconomic and small and medium enterprises

Level of transparency and accountability in public expenditure systems

Assessing the tax system's impact on the poor and its efficiency

Distribution of assets (education, health, land)

Access to credit

Infrastructure constraints—distribution of supply and quality

National accounts data

Data by region and level of service in urban and rural areas

Data on income, expenditure, assets, and employment sources (by gender, region, and age) from household surveys

Ministry of finance

Central bank

Tax administration

Sectoral ministries

Local governments

Core poverty working group

Statistical agency

Poverty action plans

U.N.-supported reports

IMF staff reports

World Bank public expenditure, social, and structural reviews

Improving reliability of fiscal data and expenditure monitoring

Fostering private sector development

Improving service delivery

Macroeconomic Issues

Governance

Public Spending

Health, Nutrition, and Population

Education

Transport

Rural Poverty

Poverty Measurement and Analysis

How can governance arrangements be made more effective?

Ensuring transparent electoral processes and developing power-sharing arrangements to ensure stability

Reviewing effectiveness of antidiscrimination legislation and ways to enhance enforcement

Ensuring an independent judiciary and a reliable police system

Identifying the main barriers to more effective public expenditure management, e.g., low real wages in the public sector; lack of unity in the budget preparation process or between sectoral plans; dual budgeting

Establishing safeguards to ensure the transparency and accountability of public budgeting and expenditure disbursements

Disaggregated actual expenditures by sector

Expenditure tracking surveys (by level of service)

Public accounts and information dissemination

Ministry of finance

Parliaments and representative assemblies

Civil society

NGOs and the public

National institutional reviews

Public expenditure management reviews

Corruption surveys

Improving accounting practices

Using poverty-oriented fiscal analysis

Governance

Public Spending

Participation

Gender

How can broad-based participation in dialogue and decision-making be enabled?

Assessing the current status of participation, including the representativeness and accountability of governance structures	Data gathered during program monitoring and impact evaluation (by gender, region, and locality)	Parliament and representative assemblies	National institutional	Improving structures to disseminate information and enable feedback	Governance
Disseminating information on poverty diagnostics, policy options, and goals to facilitate participation	Data on actual expenditures by economic classification	Civil society NGOs	Reviews User surveys		Participation
Seeking involvement in strategy design at the national and local levels and consulting civil society and the private sector		The public			Monitoring and Evaluation
Analyzing feedback on program implementation and budget execution					

Are key sectoral policies and programs—e.g., health, education, rural development, and infrastructure—working to reduce poverty? What is needed?

Examining distributive impact of major programs—distribution of spending across households, regions, and urban and rural localities	Administrative expenditure data (by region and level of service)	National statistical agency	Benefit incidence analysis (along the lines of gender, region, and urban and rural)	Capacity for benefit incidence analysis	Public Spending
Isolating sources of any problems, whether supply side (cost-effectiveness of provision, input mix, etc.) or demand side (constraints facing individuals, households, and local governments)	Household consumption and income data by region from representative household survey	Universities and think tanks Private sector	Poverty maps	Capacity of sectoral ministries and local governments to deliver services to the poor	Chapters in Volume 2 on human development and private sector and infrastructure
Assessing effectiveness and efficiency of public spending. What are the poverty-reducing arrangements for transparency and accountability?	User surveys (by sector and level of service)	Sectoral and finance ministries Coordinating external assistance	Public expenditure reviews	Appropriate regulatory capacity	Rural Poverty
Considering potential for private sector solutions and the need for regulatory reforms to facilitate expansion	Participatory assessments	Parliament Cabinet	Participatory poverty assessments Focus groups		Participation
Considering financing needs for pro-poor priorities, based on intra- and intersectoral reallocations as well as increased expenditures as appropriate					
Establishing linkages between key sectoral and structural policies and programs and identifying a priority list of policies to be enacted or changed					
Setting intermediate and final outcome targets for poverty					

Can we measure progress in poverty reduction and the impact of policies and programs?

Setting measurable indicators	Data on consumption, income, and employment from household surveys	National statistical agency	As above for poverty measurement including participatory poverty assessments and human development reports	It may be necessary to regularize and plan for new data collection	Monitoring and Evaluation
Ensuring relevant data are being collected, for example, national accounts, actual budget expenditures, administrative systems, surveys, and qualitative studies, and assessing the involvement of civil society		Sectoral ministries			Poverty Measurement and Analysis
Establishing whether the relevant data on key intermediate and final outcome indicators are being analyzed and the results disseminated.	Data on educational attainment and health service utilization from administrative records	NGOs			Participation
Are major policies and programs being evaluated? If not, identifying key candidates for evaluation.		Civil society			Development Targets and Costs
Disseminating results and getting feedback from stakeholders on policy and program design and redesign		Ministry of finance			
	National accounts data	Core poverty working group			
	Administrative data				

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Jeni Klugman

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Introduction

Despite modest reductions in poverty in recent decades, progress has been less than hoped for, especially in low-income countries. This disappointment has led to a critical examination of what policies best promote economic growth and reduce poverty in low-income countries. Particular concerns exist about the level of financial resources dedicated to reducing poverty and the ways in which aid, including assistance from the World Bank and the International Monetary Fund (IMF) and debt relief have been delivered. The old model of a technocratic government supported by donors is seen as incomplete and ineffective. Most development practitioners now believe that aid and policy effectiveness depend on the input of a whole range of agents—including the private sector and civil society—as well as on the healthy functioning of the societal and institutional structures within which they operate.

Although poor performance in reducing poverty has many causes, analysts agree that action is needed on both the domestic policy and external assistance fronts. The two sets of issues thus raised are (1) how to identify and implement effective strategies to reduce poverty and (2) how to modify external partnerships and assistance to reduce poverty more effectively.

In late 1999, the World Bank and the IMF launched a new approach to the provision of concessional assistance to low-income countries.¹ Following this new approach, governments in low-income countries would prepare their own Poverty Reduction Strategy Papers (PRSPs) through a participatory process, and these PRSPs would provide the foundation for external assistance, as well as debt relief, by the World Bank and the IMF. The PRSPs would also provide the framework for improved aid coordination among external partners.

The PRSP approach was designed to serve several objectives that complement the primary objective of reducing poverty in its various dimensions in low-income countries. First, given that policy reform programs, however well designed, are unlikely to be sustainable, or even implemented, without full country ownership of the program, underpinned by a substantial degree of domestic consensus, strengthened national ownership of national policies and programs should be paramount (Collier and Dollar 1998; Devarajan and Dollar 2001). The key principles of the PRSP initiative match those of the Comprehensive Development Framework: the strategy should be prepared by the government through a *country-driven* process, including broad participation that promotes *country ownership* of the strategy and its implementation. Second, country ownership of PRSPs would constitute a mechanism to link the use of debt relief under the enhanced Heavily Indebted Poor Country (HIPC) initiative to public actions to reduce poverty, and provide a framework for all World Bank and IMF concessional assistance.

While the early experience with the PRSP approach suggests that it holds considerable promise for improving the effectiveness of development assistance for reducing poverty in low-income countries, the process of preparing and implementing Poverty Reduction Strategies (PRSs) will take time, and it will involve learning by doing. The purpose of *A Sourcebook for Poverty Reduction Strategies* is to provide guidance and analytical tools to countries developing PRSs. The book is a collection of broad policy guidelines, examples of international best practice, and technical notes for more technically oriented readers. As elaborated below, it is not intended to be prescriptive, nor does it attempt to provide “the answers.”

Dimensions of poverty

Poverty is multidimensional, extending beyond low levels of income, as the *World Development Report 2000/2001* emphasizes. This book considers the following dimensions of poverty:

- **Lack of opportunity.** Low levels of consumption and income, usually relative to a national poverty line. This is generally associated with the level and distribution of human capital and social and physical assets, such as land and market opportunities that determine the returns to these assets. The variance in the returns to different assets is also important.
- **Low capabilities.** Little or no improvements in health and education indicators among a particular socioeconomic group.

- **Low level of security.** Exposure to risk and income shocks that may arise at the national, local, household, or individual levels.
- **Empowerment.** Empowerment is the capability of poor people and other excluded groups to participate in, negotiate with, change, and hold accountable institutions that affect their well-being.

The empirical correlations between these different dimensions of poverty are overwhelmingly positive. Using multiple dimensions to analyze poverty will not always increase the number of people considered to be poor, but it will highlight the fact that the poor suffer from multiple deprivations.

Overall feedback from developing countries suggests strong support for this expansion of the concept of poverty. While there is wide support for multidimensional perspectives on poverty, many countries also recognize the practical and operational difficulties associated with that expansion. These difficulties manifest themselves in various ways. First, while inclusion of the vulnerability and security, and powerless and empowerment dimensions is generally welcomed, it is acknowledged that our understanding of those dimensions is much more limited than our understanding of more conventional or standard dimensions. Second, the *World Development Report 2000/2001* framework does not offer guidance on how to weight the relative importance of policy action on the different dimensions, which is a question for national debate. Third, while there are important synergies between opportunities, security, and empowerment, in some cases there may be policy tradeoffs, at least in the short term.

In practice, poverty-reducing interventions will focus on improving income security, education, and health capabilities and on empowering those population groups living in poverty or near the poverty line in addition to those at relatively high risk of falling into income poverty.

What is a Poverty Reduction Strategy Paper?

The international development community has mandated that all low-income countries receiving debt relief under the HIPC initiative or concessional lending from the World Bank, through the International Development Association, or the IMF, through the Poverty Reduction and Growth Facility, should develop country-owned PRSPs; these are on the agenda of some 70 low-income countries.

Almost all external development partners have expressed their strong support for the objectives and principles of the PRSP approach, their eagerness to work with governments in preparing strategies, and their intention to adjust their own programs to support these strategies. For example, the European Union decided to base its five-year assistance programs in African, Caribbean, and Asian Pacific countries on PRSPs. Key bilateral donors, including the Netherlands and the United Kingdom, see PRSPs as playing a leading role in shaping their development assistance. Many governments have begun to use the PRSP process as a means to improve aid coordination. To this end, countries such as Burkina Faso and Uganda have presented their strategies to donors. Countries have also invited donors other than the World Bank and the IMF to provide advice and assistance in preparing better PRSPs. A number of governments have presented their full or Interim Poverty Reduction Strategy Papers (I-PRSPs), or draft PRSPs, to formal Consultative Group meetings or roundtables.

The principles underpinning the PRSP program suggest that these strategies should be:

- country-driven and -owned, predicated on broad-based participatory processes for formulation, implementation, and outcome-based progress monitoring;
- results-oriented, focusing on outcomes that would benefit the poor;
- comprehensive in scope, recognizing the multidimensional nature of the causes of poverty and measures to attack it;
- partnership-oriented, providing a basis for the active and coordinated participation of development partners (bilateral, multilateral, nongovernmental) in supporting country strategies; and
- based on a medium- and long-term perspective for poverty reduction, recognizing that sustained poverty reduction cannot be achieved overnight.

It has been recognized that preparation of country-owned, participatory PRSPs could take some time. In order not to delay progress in providing concessional assistance or debt relief, countries can prepare I-PRSPs that would, at a minimum, include a statement of commitment to poverty reduction, an outline of the nature of the poverty problem and of existing government strategies to tackle it, and a timeline and process for preparing a PRSP, together with a three-year policy matrix and macroeconomic framework (for which the outer years would be tentative).

While the majority of I-PRSPs and PRSPs to date have been prepared by African countries, a significant number are being prepared in Europe and Central Asia, in Latin America and the Caribbean, and in East Asia. The total number of papers brought to the executive boards as of end-July 2002 was 43 I-PRSPs and 19 PRSPs.

When a government presents a PRSP to the executive boards of the World Bank and the IMF, it is accompanied by an assessment by Bank and IMF staff. The Joint Staff Assessment (JSA) makes an overall assessment for the executive boards as to whether or not the strategy presented in the PRSP constitutes a sound basis for concessional assistance from the IMF and the Bank. A positive assessment does not necessarily indicate that the staff agrees with all of the analyses, targets, or public actions set forth in the PRSP, or that it believes that the PRSP represents the best possible strategy for the country. It indicates rather that the staff considers that the strategy provides a credible framework within which the Bank and the IMF can design their assistance programs.

While the shift to country ownership will allow substantially more leeway in terms of policy design and choices, acceptance by the Bank and the IMF boards will depend on the current international understanding of what is effective in lowering poverty. Five basic elements of a full PRSP were set out in broad terms in the earlier board papers (see note 1) and are reflected in the guidelines for staff in preparing JSAs. These elements are the following:

1. Assessing poverty and its key determinants
2. Setting targets for poverty reduction
3. Prioritizing public actions for poverty reduction
4. Establishing systematic monitoring of poverty trends and evaluating the impact of government programs and policies
5. Describing the main aspects of the participatory process.²

Low-income countries and donors have requested further elaboration of the aspects of content and process that are likely to raise concerns with the joint boards. Hence this overview provides more specific guidance in what constitutes good practice, drawing on the JSA guidelines. Box 1 lists the priority content areas for public action in a PRSP.

Initial conditions differ widely, as do other factors that will shape poverty reduction strategies. These include country variations in

- the type of governments and their degree of representativeness;

Box 1. Priority Areas for Public Action in a PRSP

The priority public actions designed to raise sustainable growth and reduce poverty constitute the heart of a PRSP. It is worth distinguishing four key areas of content:

1. Macroeconomic and structural policies to support sustainable growth in which the poor participate
2. Improvements in governance, including public sector financial management
3. Appropriate sectoral policies and programs
4. Realistic costing and appropriate levels of funding for the major programs.

Every PRSP would be expected to provide an adequate overall treatment of each of these four areas. What is covered within each area will, of course, differ across countries. Judgments in the JSAs are grounded in country conditions and have to be made based on the extent of the country's progress in addressing these issues, relative to its starting point.

Full PRSPs are expected to summarize the priority public actions over a three-year horizon by inclusion of tables (a) presenting the country's macroeconomic framework; (b) summarizing the overall public expenditure program (capital and recurrent) and its allocation among key areas; and (c) setting out key policy actions and institutional reforms and target dates for their implementation (a policy matrix).

- the capacity of national authorities to engage in participatory processes with civil society, the public, and private sector groups;
- the extent to which civil society groups exist and are active among the poor;
- the relationships with external partners, such as the United Nations Development Programme, and other U.N. and multilateral agencies, bilateral partners, and the World Bank and IMF;
- the availability of data needed to measure poverty outcomes and analyze the nature of poverty and its determinants; and
- the capacity to design and implement sectoral programs and policies to tackle poverty.

Over the next few years, each country will be learning by doing. The World Bank and IMF welcome experimentation by country authorities; the information provided in this book should be read in that light.

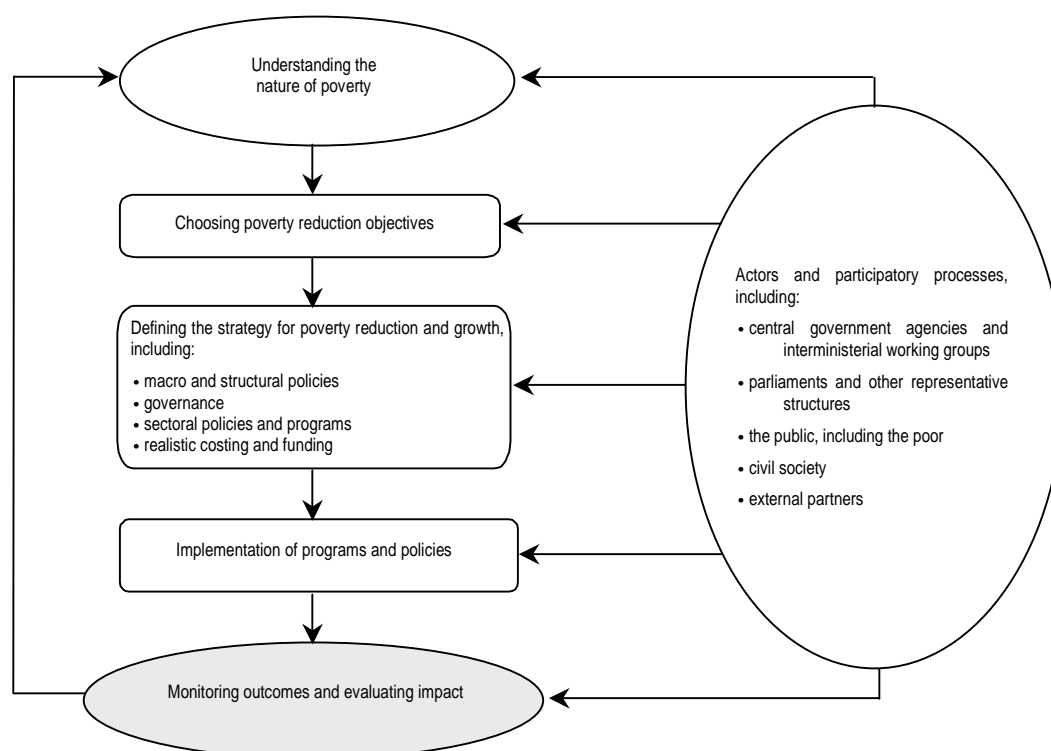
The process of developing a Poverty Reduction Strategy

This section does not prescribe exactly how the process of developing a PRS should unfold. The process will vary greatly because it takes place in different countries, under different kinds of governments and circumstances. The objective here is to suggest a possible sequence of steps in design and implementation and to highlight the general tasks that likely will need to be addressed.

The process can be thought of in terms of several phases, although certain elements, particularly participatory processes, may run throughout. These phases are shown in figure 1. The next section deals with each of the stages in turn.

Broad-based consultations on priorities and policy issues with civil society, citizens' groups, and external partners should influence the strategy. The design and execution of the participatory process, however, is a matter for the national authorities. Chapter 7, "Participation," provides guidance on this process.

Figure 1. How a PRS Can Unfold at the Country Level



To provide clarity and to help structure its description of the participatory process, JSAs focus on the following points in describing whether the PRSP has built country ownership through participation:

- participatory processes within government (among central ministries, parliament, and subnational governments);
- other stakeholder involvement (for example, civil society groups, women's groups, ethnic minorities, policy research institutes and academics, private sector, trade unions, representatives from different regions of the country);
- bilateral and multilateral external development partners' involvement, including collaborative analytical work to support PRSP development;
- mechanisms used to consult the poor and their representatives; and
- plans for dissemination of the PRSP.

The PRSP is expected to summarize major issues raised during the participatory process and its impact on the content of the strategy. It could also indicate how the participatory process evolved over time, including the extent to which the participatory process has been well integrated with existing processes of the government for policymaking and decisionmaking.

It is important that the PRSP build on and provide consistency with other current government processes and resulting documents that set forth national or sectoral development plans and budgets. It is, therefore, also important to build on existing strategies and plans, as far as possible, at the sectoral and national level. Existing national strategies, or national development plans that would have been prepared in any case, provided that these are consistent with the guiding principles of the PRSP approach, may be considered to be the PRSP, as is the case in Uganda with the Poverty Reduction Eradication Plan and Mozambique's Plano de Acção para a Redução da Pobreza Absoluta (PARPA) [*English translation: Action Plan for the Reduction of Absolute Poverty*], which also predated the PRSP initiative.

It is important that PRSPs reinforce, rather than compete with and undermine, existing democratic institutions and processes. Therefore, PRSPs are expected to be fully based on the formally approved policies and budgets of governments, and their preparation should follow appropriate domestic channels, complemented as appropriate with a greater degree of openness and transparency than may have otherwise been the case.

There are important linkages between implementation of the strategy and the annual budget cycle, Medium-Term Expenditure Frameworks where they exist, and the iterative process by which results from the preceding year and ongoing dialogue are fed into policy and program redesign and annual progress reports. It is important that the PRSP become institutionalized in domestic budget preparation and policy and program formulation practices.

Box 2 provides brief tips drawn from a retrospective study on the participatory processes in the I-PRSP and full PRSP countries, which are elaborated in chapter 7, "Participation."

Improving coordination of donor support and minimizing overlaps will also be important. Providing a vehicle for better aid coordination is an explicit objective of the PRSP approach. From the outset, the World Bank and the IMF have stressed that this initiative would fail if PRSPs become only documents that mediate the relationship between a government and the Bank and the IMF. Instead, it is envisioned that the PRSP will be the primary instrument by which a country articulates a strategy around which external development partners could align their own programs of support. Development partners should also be involved to ensure that the poverty strategy has a realistic chance of being funded. As noted already, the PRSP would form the basis for support from the IMF under the Poverty Reduction and

Box 2. Participatory Processes

In establishing participatory processes, the following might be helpful to bear in mind:

- Asking a steering committee with wide representation to manage the process to encourage broader participation
- Analyzing carefully the perceived interests of as wide a cross-section of stakeholders as is feasible
- Structuring the process to generate clear outcomes, which then influence the development of the PRS through a predetermined mechanism, such as a checklist of ideas.

Growth Facility, and from the World Bank as spelled out in its Country Assistance Strategy. After July 1, 2002, all Country Assistance Strategies in low-income countries will normally be based on a PRSP and will present the World Bank's business plan in support of the country's PRSP.

From Understanding Poverty Outcomes to Public Actions

In general, as figure 1 suggests, a fully developed poverty strategy would be expected to cover four broad questions:

1. Where are we now? The PRSP is expected to be grounded in an understanding of the extent, nature, and various dimensions of poverty and its determinants.
2. Where do we want to go? National authorities should reach some consensus through broad-based consultations on the goals and targets for poverty reduction.
3. How are we going to get there? This constitutes the heart of the strategy and involves the selection and prioritization of public actions.
4. How do we know we are getting there? A systematic approach to monitoring poverty outcomes and intermediate indicators is key to the integrity of the overall approach.

Together with a description of the participatory process, these questions correspond to the basic elements of a PRSP set out in the introduction to this overview. This section highlights what is envisaged by these four questions and, as already stressed, the depth and nature of treatment will vary considerably across countries.

Where are we now?

The assessment of poverty would be expected to begin by examining the nature of poverty based on available quantitative and qualitative data sources. To the extent possible, the description should take into account poverty's multidimensional nature by going beyond consideration of income and asset holdings of the poor to encompass the nonmonetary dimensions of poverty, particularly education and health status, vulnerability to shocks, and disempowerment. It is important to disaggregate the analysis to examine, for example, differences in various aspects of individual well-being by gender, region, and ethnic group.

Ideally, national authorities would complement a static profile of the poor with an analysis of the factors that prevent movement out of poverty. This could include interactions among the different dimensions of poverty. The techniques needed to investigate these dimensions are presented in chapter 1, "Poverty Measurement and Analysis."

At the microeconomic level, national authorities should understand where the poor live, how they earn their living, and the types of physical assets they possess (land or other inputs). Labor market diagnostics can be used to assist in identifying the trouble spots where policymakers might choose to intervene. Labor market problems can take many forms—for example, high open unemployment or low earnings prospects for particular groups. Some indicators that could be monitored include labor force participation and unemployment rates, the levels and distribution of earnings and productivity, and formal versus informal shares in employment. At the macroeconomic level, an assessment of the impacts of economic adjustment and structural policies on growth and poverty reduction would be valuable.

More specifically, the key challenges in poverty diagnostics include the following:

1. Availability of adequate poverty data
 - Disaggregated data by regions and by demographic group, including by gender
 - Quantitative data complemented by qualitative information
 - Accessibility of data for policy analysis, especially outside of government
2. Analysis to identify the nature and determinants of poverty outcomes (broadly defined) and of trends over time

- Extent of income or consumption and other dimensions of poverty (health, including environmental diseases; education; natural resource degradation; vulnerability; disempowerment) and their evolution over time
- Analysis of gender dimensions of poverty
- Distribution of assets of various types—natural, physical, financial, and human
- Identification of economic, social, and institutional (including corruption and poor governance) constraints to poverty reduction

Relevant information includes microeconomic data from household- or firm-level surveys and qualitative assessments, as well as administrative data on service provision and usage, and revenues and actual fiscal expenditures at various levels of government and within sectors. Data deficiencies can obviously constrain the analysis. Figure 2 shows a decision-tree type of process for working through data availability and needs for poverty diagnostics and monitoring of progress.

Assessing the growth and distributional impacts of past policies and programs is difficult, not least because data and monitoring and evaluation systems are usually weak, and rigorous quantitative assessments are seldom available. Nevertheless, judgments about the efficacy and impacts of past policies, even if qualitative, are crucially important for improving strategies over time. Areas that should be open to scrutiny include the impact of macroeconomic policies, including the ability to respond to exogenous shocks, and structural and sectoral policies, including the distributional impacts of past reforms and policies affecting private sector development, the operation of product and factor markets, and environmental management. The equity, effectiveness, and efficiency of existing patterns of public expenditures, service delivery, and systems for budget management are important (see chapter 6, “Public Spending”).

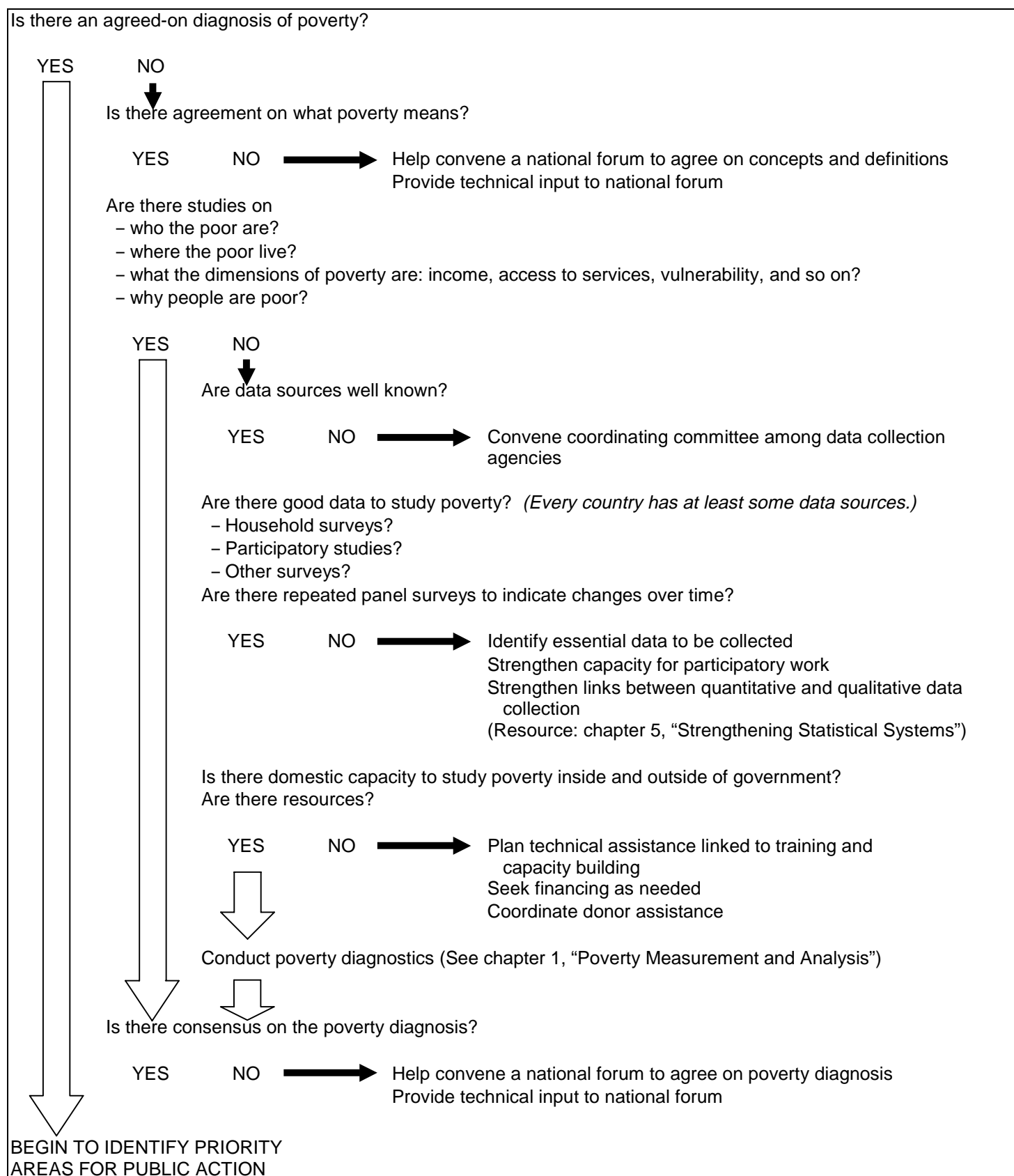
An effective outcome-driven PRS will generally require national authorities to strengthen existing statistical systems to ensure that key survey, administrative, and budget data are reliable and available in a timely manner. In many countries, improvements in the statistical system could be an important part of the PRS. Further guidance on how to build or strengthen statistical capacity, and rally donor support for these efforts, can be found in chapter 5, “Strengthening Statistical Systems.” External partners could provide funding and resources in many of these areas.

The next section suggests a framework for understanding poverty and its determinants, along the dimensions of opportunities, capabilities, security, and empowerment. The intention here is to illustrate some key causal relationships and interrelationships, rather than to provide exhaustive detail. Many of the themes are picked up in other chapters of the book.

Economic opportunities: growth and rising incomes of the poor

Numerous statistical studies confirm that rapid economic growth is the engine of poverty reduction, using both income and nonincome measures of poverty. Domestic policies have an important effect on sustained growth, including prudent macroeconomic management, more open markets, and a stable and predictable environment for private sector activity. Macroeconomic stability provides an important precondition for higher growth rates and also helps prevent balance of payment crises and the resurgence of inflation—both of which have negative consequences for poverty (see chapter 12, “Macroeconomic Issues”). High inflation can also stifle economic expansion and limit poor people’s opportunities to acquire assets necessary to hedge against income shocks. The process of acquiring assets is not determined by market forces alone, however. Regulatory and judicial structures, as well as political, social, and demographic forces, also affect the ability of poor people to acquire a range of financial and human capital assets with high and stable rates of return. Growth also depends on a number of factors outside the control of developing country governments, including weather and trade (quotas and terms of trade) and foreign assistance policies in industrial countries.

Removing barriers to access to new goods, technology, and investment opportunities (through trade, investment, and financial liberalization) has generally been associated with economic growth. Structural policies to improve the functioning of markets are thus critical. Similarly, good governance is crucial to accelerating private investment and thus economic growth.

Figure 2. Possible Steps in Identifying Poverty Data Needs and Uses

Well-functioning labor markets play a central role in reducing poverty (see, for example, chapter 15, “Rural Poverty”). Therefore, removing obstacles to job creation, especially among small and medium-size enterprises, and creating an environment conducive to private sector development will be an important element of the overall PRS.

Various types of asset endowments directly influence the well-being of the poor, including the following:

- **Human capital.** Investment in human capital is the most widely accepted way of improving the asset base of the poor. A close association exists between health and agricultural labor earnings and education and higher earnings from nonagricultural activities, for example. Improving governance to reduce the diversion of public resources from the poor, and shifting budget allocations in favor of the poor, will also encourage human capital accumulation among the poor. Expanding employment opportunities for the poor may also lead to skill acquisition among low-income groups (see chapter 6, “Public Spending”; chapter 8, “Governance”; chapter 18, “Health, Nutrition, and Population”; and chapter 19, “Education”).
- **Infrastructure.** Lack of access to a minimum quantity and quality of infrastructure services—especially safe water, sanitation, transport, electricity, and information and communication technology—can result in unhealthy living conditions for the poor and can reduce their ability to use social services, engage in productive activities, and access employment opportunities. Nonagricultural activity tends to be greater in those areas that are better served by rural infrastructure (see chapter 15, “Rural Poverty,” and chapter 20, “Private Sector and Infrastructure: Overview”).
- **Land.** Access to land can be increased through land reform, land market liberalization, and improvements in the functioning of land markets. Security of tenure can stimulate investment to improve agricultural productivity and promote development of an effective land market (see chapter 8, “Governance”; chapter 15, “Rural Poverty”; and chapter 16, “Urban Poverty”).
- **Credit.** Access to financial services is often problematic for the poor, partly because the poor lack the physical collateral necessary to obtain loans. However, it is often difficult to extend credit access to the poor because they lack access to formal and informal institutions through which credit is available and to information about credit schemes (see chapter 15, “Rural Poverty”).

In order to break a vicious circle of poverty, it is important to understand the extent to which those who escape from poverty tend to possess a particular combination of assets or have gained access to a catalytic asset in each local context. For example, security of land tenure can facilitate access to credit. Simultaneous improvements in access to financial services and provision of training on small business management skills or novel farming techniques can enhance the impact of increasing land tenure security among smallholder farmers.

Capabilities: education and health

Low educational attainment, illness, malnutrition, and high fertility are major contributors to income poverty. And education and health capabilities are among the primary dimensions of individual well-being.

Different sets of factors and actors affect whether poor people achieve literacy and good health. Government policies and actions are important, but private providers of education and health services, the interactions between the public sector and the market, social norms and practices, and individual and household behavior also play important roles. For example, child health outcomes depend on dietary choices at the household level and access to—and the quality of—health services.

Government policies and actions can be designed to improve literacy and health among those who need it most. A profile of education and health outcomes by income group will reveal which groups are worst off and the main correlates—location, gender, and so on—of destitution (see chapter 1, “Poverty Measurement and Analysis”).

The underlying causes of low human capabilities should be identified to inform public actions:

- Are capability gaps the result of differences in how the poor and the nonpoor use relevant services (for example, in the use of health care facilities), to unequal physical access to services, or to constraints at the household level?
- Does the poor quality of roads in rural areas and urban outskirts limit access to education and health services and employment opportunities in urban and rural areas?
- Are there social barriers, including legal discrimination or exclusion of groups from public services, that reduce access and use of health and education services among the poor?
- Are the patterns of public spending in the education and health sectors skewed against the poor (see chapter 6, “Public Spending”)?
- Does military spending drain fiscal resources away from poverty reduction efforts in the priority social sectors?
- Are social protection measures reaching the poorest in society or do they benefit politically powerful groups?

Chapter 17, “Social Protection”; chapter 18, “Health, Nutrition, and Population”; chapter 19, “Education”; and chapter 22, “Transport,” provide guidelines for further analysis at the sector level. There are also important intersectoral relationships (see chapter 6, “Public Spending,” and chapter 8, “Governance,” for further discussion of intersectoral synergies).

Security

Insecurity can be understood as vulnerability to decline in well-being. The shock triggering the decline can occur at the microeconomic or household level (for instance, illness or death); at the meso or community level (pollution or riots); or at the national or international level (national calamities or macroeconomic shocks). In poor rural areas the most important risks are those affecting the harvest (see chapter 15, “Rural Poverty”). Vulnerability need not be unexpected and could be seasonal. Everywhere, the risk of illness is a prime concern of the poor (see chapter 18, “Health, Nutrition, and Population”). Chapter 12, “Macroeconomic Issues,” discusses the origins of macroeconomic shocks that lower the living standards of the poor. Structural reforms could be associated with increased short-term vulnerability of certain groups. See chapter 1, “Poverty Measurement and Analysis,” for details on the measurement of vulnerability.

Declines in income are more devastating for the poor than for the better-off because the poor are less likely to have the assets they need—or have access to insurance or credit—to hedge against income shocks. Risks at the microeconomic level can be offset, to some extent, by actions at the household level, but risks at the meso and macroeconomic levels will tend to require public actions to reduce the risk of the shock or to help offset its negative repercussions.

The poor engage in various strategies to minimize and cope with risks, including precautionary savings and informal group-based risk sharing through family and community networks. Nonetheless, consumption variability tends to be high among the poor, in part because the shared networks may face concurrent shocks, such as the effect of a bad harvest.

The extent and nature of the country’s vulnerability to exogenous shocks, and the impact of such shocks on the poor, could be assessed. These sources of vulnerability can reduce the likelihood of successful pursuit of a PRS. At the same time, a good understanding of sources of vulnerability may lead to policies to reduce risk. For example, poverty analysis could be linked to information on food shortages and relative price changes in order to identify specific social protection strategies needed to reduce the risks faced by vulnerable groups. Public investment in effective safety net programs may well be an important element of a long-term strategy for growth and poverty reduction.

Empowerment: the influence of the poor

One important dimension of empowerment is access to, and influence over, state institutions and social processes that set public policies. The level of empowerment among the poor increases as they gain access

Table 1. Main Sources of Risk

	<i>Micro</i>	<i>Meso</i>	<i>Macro</i>
Natural		Rainfall Landslides Volcanic eruption Pests	Earthquakes Floods Drought High winds
Environmental	Indoor air pollution	Pollution Deforestation Soil degradation Desertification	
Health	Illness Injury Disability Death	Epidemic AIDS	
Social	Crime Domestic violence	Terrorism Gangs	Civil strife War
Economic	Unemployment Harvest failure		High inflation Balance of payments, financial crisis Terms of trade shock Growth collapse

Source: Adapted from Holzmann and Jorgensen (1999).

to economic opportunities, develop human capabilities, and establish greater income security. As the poor become empowered, they are more likely to influence public policy discussions on how well the policies and programs that constitute poverty reduction strategies meet their needs.

The nature of formal democratic processes will affect this capacity. Equally important are day-to-day experiences—when people seek care at the local clinic, for example—as well as extragovernmental activities, including mobilization by the poor through their own organizations to promote their rights.

Empowerment is an active process that occurs at different levels. These are influenced by different but overlapping sets of factors:

- *At the household level*, empowerment refers to intrahousehold inequality, access to and control over resources, and decisionmaking processes (for instance, the desired number of children or whether to use contraception).
- *At the community, regional, and national levels*, inequality in access to resources and social interactions affects gender inequality as well as the empowerment outcomes of different income, ethnic, or religious groups. Empowerment also entails representation in decisionmaking bodies at the local and national levels of government. Greater transparency and accountability increase the ability of the poor to gain access to public resources and to the institutions that affect their lives. Transparency also increases the probability that the poor will be treated with fairness and respect.

Although it is obviously difficult to quantify empowerment outcomes, it is possible to identify intermediate indicators that may reflect the capacity of the poor to access and influence state institutions and social processes (see table 2). Several chapters, particularly chapter 8, “Governance”; chapter 7, “Participation”; and chapter 10, “Gender,” provide a fuller treatment of diagnostic approaches and policy and program options relevant to empowerment.

Obstacles to the poor contributing to, and sharing more fully in, the benefits of economic growth could be identified—for example, the slow growth of agriculture and the rural economy in general, limited access to essential services, and institutional obstacles that leave the poor with little voice and control over the kinds of services delivered to them. This should include analysis of the extent to which nonobservance of core labor standards, such as gender discrimination in the labor market, or child labor inconsistent with child development needs, is a problem.

Understanding linkages

At the country level, a PRS would be expected to recognize and deal with intersectoral links and complementarities, the interdependence between sectoral and macroeconomic performance, and overall social and institutional functioning. In many countries the characteristics of poverty are fairly well understood, but the links between alternative public interventions on the one hand and poverty and inequality on the other are often not clearly articulated. The participatory elements of a PRS could commence with a listening exercise to seek feedback on government services and interventions.

The notion of causation may itself be problematic in identifying the key determinants of poverty (see chapter 1, “Poverty Measurement and Analysis”). Several distinctions are especially important:

- **Chronic and transient poverty.** Not surprisingly, different types of poverty have different determinants. Among the chronic poor, one should distinguish between the economically active (able-bodied) and those who would be economically inactive (children, aged, disabled, and mentally ill). Among the transient poor, it is useful to distinguish between poverty that can be (imperfectly) anticipated, such as seasonal poverty for agricultural households, and poverty that cannot be anticipated because of, for example, macroeconomic shocks.
- **Short- versus long-run factors.** Some factors may have an immediate impact, whereas others have longer-term effects. For example, low investment in education of children will have long-run effects on poverty.
- **Direct versus indirect causes.** Much econometric analysis of the determinants of poverty identifies direct causes without attempting to uncover more fundamental processes of which these determinants are really a symptom. An example of a cause that may be a symptom could be having a large number of children.
- **Amenable or not amenable to change by public action.** Not all causal factors can be affected by public action, at least not in the short term. However, what is amenable to change by public action varies over time, because it partly depends on the political will of governments, the capacity of the civil service, and wider social norms.

Where do we want to go?

Poverty diagnostics, drawing on qualitative and quantitative information, should be used to inform medium- and long-term outcome-oriented targets for the country. These targets would need to be linked to present and future macroeconomic, structural, and social policies that together constitute a comprehensive strategy for achieving these outcomes. Agreeing on what goals a country wants focuses efforts and resources and helps to establish priorities. Setting clear targets can add transparency to the process of allocating resources and provide a benchmark against which to monitor progress. Setting clear goals and targets may also help mobilize external resources.

Goals, indicators, and targets are covered in greater depth in chapter 4, “Development Targets and Costs.” The following are useful definitions:

- **Goals.** The objectives national authorities want to achieve; they are often expressed in nontechnical, qualitative terms—for example, “to reduce inflation,” “to eliminate poverty,” “to foster job growth,” or “to eradicate illiteracy.”
- **Indicators.** The variables used to measure the goals—for example, “poverty” measured by a level of consumption insufficient to fulfill minimum food and other basic needs (the “poverty line”), data on completion of the final year of basic schooling, and so forth.
- **Targets.** The levels of the indicators that a country wants to achieve by a given time—for example, “to reduce income poverty by 10 percent by 2004.” These could be point estimates or a target range (e.g., by 10–15 percent).

Both macroeconomic and poverty indicators should be used to monitor progress. The indicators should reflect both the macroeconomic determinants of economic growth and the microeconomic-level obstacles to poverty reduction. The choice of indicators and targets should be guided by country circumstances.

A PRS can specify sets of indicators and targets for both the longer term and for monitoring on an annual basis. In doing so, the following points should be borne in mind:

First, indicators and long-term targets should be given for key poverty reduction goals, consistent with the country's long-term vision that emerges from, among other things, participatory processes. These indicators of long-term goals should include measures of economic progress and material deprivation (for instance, per capita income growth and measures of both the incidence and depth of poverty) and measures of human capabilities (for instance, health and education measures broken down by gender if possible). The selection of the indicators and targets will obviously depend on the country's starting position and what types of data are presently, or will in the future be, available. At the same time, the authorities could draw on international comparisons of key social indicators related to the Millennium Development Goals, although the appropriate indicators, as well as specific targets, will vary among countries.

Second, indicators and annual targets should be given for key determinants of poverty reduction goals; these will generally be inputs and outputs (or intermediate indicators of progress). Table 2 presents a menu of possible indicators from which countries might choose (although it is by no means intended to be exhaustive). This is important to track progress, given the long lags, both in reporting and in the time typically associated with realization of long-term goals. Thus, for example, the long-term goal of improving the literacy rate could be translated into annual (intermediate) targets covering, for example, the primary school enrollment rate. Intermediate indicators should be those that are known to be responsive to changes in economic conditions or improvements in public service delivery.

Third, regional and gender disaggregation in the chosen indicators is likely to better reflect changes in economic and social conditions among the poor. Many of the indicators listed below are already being tracked on a regular basis by government ministries and donors in low-income countries. The final column in table 2 presents the Millennium Development Goals relevant to the different areas of poverty reduction.

Goals and targets should be selected based on the country's current situation and on knowledge of what can and cannot be achieved in a given country. In addition to national-level targets, specific targets may be set for, say, women or girls in certain groups in society. Direct dialogue with poor and vulnerable groups, as well as consultations with organized civil society at the local and central levels, provides a mechanism for the country to reach a shared understanding of priorities (see chapter 3, "Monitoring and Evaluation"; chapter 4, "Development Targets and Costs"; and chapter 7, "Participation").

Fourth, it is important to keep in mind that marginal improvements in poverty indicators may become more difficult as the level of indicators improves. For example, it is more difficult to reduce income poverty from 10 percent to 0 than from 40 percent to 30 percent because the conditions of the most disadvantaged group generally become more difficult to improve.

To summarize, the expectations with respect to targets, indicators, and monitoring can be itemized as follows:

First, the PRSP should define medium- and long-term goals for poverty reduction outcomes (monetary and nonmonetary), establish indicators of progress, and set annual and medium-term targets. These indicators and targets should be appropriate relative to the assessment of poverty and the institutional capacity to monitor as well as consistent with the policy choices in the strategy.

Second, selectivity in the choice of monitorable indicators and targets, in line with priority public actions and capacity, is important. At the same time, the indicators and targets should appropriately capture disparities by social group, gender, and region. In both the long-term targets and the shorter-term indicators and targets, there is a need for selectivity so that the number and type of indicators chosen are consistent with the national capacity to monitor. The targets chosen could be a range of values rather than a single number. It is important to emphasize that the targets are indicative only in the sense that the results of monitoring are a point of departure for assessment of country progress, together with a consideration of policies and exogenous factors that have determined outcomes.

Table 2. Examples of Poverty Reduction Indicators and Targets

	<i>Intermediate indicator (inputs and outputs)</i>	<i>Final outcome indicators (outcomes and impact)</i>	<i>Millennium Development Goals</i>
Poverty and inequality	<ul style="list-style-type: none"> Percentage of roads in good and fair condition Productive asset ownership (land, cattle, or other physical capital) 	<ul style="list-style-type: none"> Poverty headcount Poverty gap Average income Gini coefficient Quintile ratio 	<ul style="list-style-type: none"> Reduce extreme poverty by one-half by 2015 Implement a national strategy for sustainable development by 2005 Reverse trends in the loss of environmental resources by 2015
Macroeconomic stability	<ul style="list-style-type: none"> Inflation Exchange rate fluctuations Unemployment Fiscal deficit 	<ul style="list-style-type: none"> Per capita economic growth rate Unemployment 	
Security	<ul style="list-style-type: none"> Unemployment rate Variability in production of chief staples Expenditure on and number of beneficiaries of public works programs 	<ul style="list-style-type: none"> Food consumption variability Income variability Wasting among children Malnutrition prevalence Death rate due to violence 	
Health	<ul style="list-style-type: none"> Immunization of children (%) (measles, DPT3, all, none) Treatment of diarrhea in children (%) Treatment of acute respiratory infection in children (%) Delivery attendance (%) (doctor, nurse, or trained midwife; % in a public facility, % at home) Use of modern contraception (%) Age at birth of first child Vitamin A supplementation for children Cooking fuel used 	<ul style="list-style-type: none"> Low-birthweight babies (% of births) Infant mortality rate Under-five child mortality rate Children stunted (%) Children underweight (%) Children with respiratory infection (%) Adolescent fertility rate Prevalence of anemia Total fertility rate Sexually transmitted disease infection rates Adult HIV prevalence Tuberculosis prevalence Life expectancy at birth 	<ul style="list-style-type: none"> Reduce infant and child mortality by two-thirds by 2015 Reduce maternal mortality by three-fourths by 2015 Universal access to reproductive health services by 2015
Education	<ul style="list-style-type: none"> Expenditure on primary education as a share of gross domestic product Percentage of schools in good physical condition Pupil-teacher ratio Teacher absenteeism rates 	<ul style="list-style-type: none"> Third-grade math and science scores Seventh and eighth grade math scores Adult illiteracy rate Female illiteracy rate Net enrollment ratio (primary, secondary, and tertiary levels and by gender) Pupils completing grade four (% cohort) Girls reaching grade five (% cohort) Girls' school life expectancy Repetition rates (by level of schooling and gender) Adult average years of schooling 	<ul style="list-style-type: none"> Universal primary education by 2015 Eliminate gender disparity in education by 2005
Empowerment	<ul style="list-style-type: none"> Access to media and the Internet Number of parties participating in last parliamentary elections Number of daily newspapers Female literacy rate Female control over earnings Number of television and radio stations 	<ul style="list-style-type: none"> Number of women in parliament and government Percentage of population voting in parliamentary elections (by gender) Prevalence of domestic violence Share of incarcerated population being held without charge 	

Third, the PRSP is expected to address the challenge of developing monitoring and evaluation systems that are adequate and sustainable. This in turn raises various questions that are covered in chapter 3, “Monitoring and Evaluation,” and chapter 5, “Strengthening Statistical Systems,” including the transparency of arrangements for and results of monitoring the PRSP, including service delivery to the poor and adequate use of the results of monitoring and evaluation in policy formulation.

How are we going to get there?

The priority public actions to raise sustainable growth and reduce poverty constitute the heart of a poverty reduction strategy. These priorities should be clearly stated and incorporated in a way that takes into account what is known of the linkages between different policies, their appropriate sequencing, and the expected contribution of policy actions to the attainment of long-term goals and intermediate indicators. It is expected that a good PRSP will present clear priorities for public action that are appropriate and feasible in light of the diagnosis, the targets, their estimated costs, available resources, institutional capacities, and the effectiveness of past policies.

In order to clarify the nature of this task, it is worth distinguishing four key areas of content that could be covered in a PRS:

1. Macroeconomic and structural policies to support sustainable growth in which the poor participate
2. How to improve governance, including public sector financial management
3. Appropriate sectoral policies and programs
4. Realistic costing and appropriate levels of funding for the major programs.

This section elaborates on what is involved in each of these areas, highlighting what is expected in a PRSP. What is covered within each area will, of course, differ across countries. It is important to reiterate that it is unlikely that any single PRSP, especially in the first round, would systematically cover all of the subtopics listed under these four areas. Joint Staff Assessments (JSAs) will judge whether, overall, and with respect to each of these four areas, the PRSP is satisfactory, relative to country conditions, as well as judge the extent of progress the country has made in addressing these issues.

Macroeconomic and structural policies to support sustainable growth

Prudent macroeconomic management is a precondition for growth. Macroeconomic stability, and the avoidance or removal of significant distortions in the economy and costs in terms of forgone growth and adverse distribution, are needed to underpin sustained improvements in poverty. Hence the adoption or persistence of policies leading to macroeconomic instability (high, say, above 30 percent, or accelerating inflation) would tend to raise concern in a JSA of a PRSP.

The macroeconomic framework should promote: (a) a level of inflation that does not undermine private sector growth; (b) an external position that is sustainable in the medium to long run; (c) growth that is consistent with the poverty reduction objectives laid out in the PRSP; and (d) an overall fiscal stance that is compatible with the PRSP’s poverty reduction and growth objectives. Experience to date suggests that countries are reiterating the importance of macroeconomic stability in their PRSPs and I-PRSPs, with a number of the full PRSPs and I-PRSPs to date moving to relax fiscal targets.

This means that growth projections should be realistic, given past experience and taking into account likely sources of growth. Possible tradeoffs between the pursuit of short-term versus long-term poverty reduction and other macroeconomic goals should, as far as possible, be explicitly addressed. The distributive impact of policy changes needs to be considered in the context of short-term crisis management and stabilization programs (see chapter 12, “Macroeconomic Issues”).

A PRSP is expected to address policy constraints (exchange rate controls) that lead to significant distortions in the economy and reduce the rate of growth. What is a relevant constraint will obviously vary by country and will be informed by the poverty diagnostics. The types of key structural constraints to growth that would need to be addressed include trade barriers, large loss-making state

enterprises, and inefficient regulatory and marketing controls. In the PRSPs and I-PRSPs to date, structural reform measures, including trade reform, privatization, financial sector reform, and agricultural sector reform, are frequently included. Policies that have been advocated include customs reform, lines of credit for small and medium-size enterprises, privatization of utilities, and regulatory reforms. Among the most commonly cited agricultural policies are land reform and investments in rural infrastructure.

Structural policy reforms can be used to address the key policy, incentive, and institutional constraints to poverty reduction. An investigation using poverty data, both quantitative and qualitative, would be expected to reveal information about the most critical barriers facing the poor (see chapter 15, “Rural Poverty”; and chapter 18, “Health, Nutrition, and Population”). The reforms that are designed to increase growth should expand opportunities for the poor, so that the benefits of growth and public services are distributed more equally by region, by economic and social groupings, and by gender. In designing these policies, the PRSP should estimate the likely effect of its proposed policy measures on the poor and include measures to mitigate any negative impacts. Obviously, the prioritization and sequencing of reforms are key and should be considered in terms of expected effects on the poor.

Proactive measures may be needed to address at least some of the obstacles to the participation of the poor in growth. For example, where there exist large regional disparities in the distribution of basic infrastructure, the PRSP could outline actions to remedy these disparities. Similarly, in countries where gender imbalances are severe, measures would be needed to ensure that women are able to participate as key agents in increased growth and poverty reduction.

It is important to consider the labor market policy framework—both regulations and programs—from a poverty perspective. Some of the regulatory areas that policymakers could examine include minimum wages; payroll taxes; rules governing hiring and firing of workers; labor standards, including hours of work, leave, occupational health and safety, and so forth; and regulations against gender and minority discrimination. Based on this assessment, the PRSP could identify reforms to ensure that equitable patterns in growth in demand for labor are encouraged. Labor market programs, such as unemployment benefits and training programs, can be evaluated like other publicly funded social protection programs in terms of cost-effectiveness.

Setting priorities and sequencing reforms will also raise issues. For example, before introducing macroeconomic and structural reforms, national authorities should assess how the proposed changes in policies and programs are likely to benefit and harm the poor, both in the aggregate and by subgroups. An assessment of tradeoffs is needed. This may point to the need to strengthen social safety net programs prior to embarking on the reform program or modify the sequencing of reforms to ensure its successful implementation and to maximize the positive impact of poverty reduction.

A corollary of more sustainable economic policies is improved individual and household security, both as an end in itself and as a means to better economic opportunities and capability outcomes among the poor. Table 3 outlines the types of formal and informal arrangements available to reduce the effect of insecurity on poverty and the poor.

The macroeconomic and sectoral chapters, particularly chapter 12, “Macroeconomic Issues”; chapter 11, “Environment”; chapter 15, “Rural Poverty”; chapter 17, “Social Protection”; and chapter 18, “Health, Nutrition, and Population,” provide substantial guidance as to appropriate public interventions to reduce and mitigate risk as well as ways to assist the poor in coping with adverse shocks when these occur. A number of the public actions necessary to reduce risk have fiscal implications, which would need to be included in the overall budget. Robustness of the macroeconomic program in light of the risks of exogenous shocks is also a factor to consider in PRSP design.

Improving governance and public sector financial management

A PRSP would be expected to consider how governance arrangements and budget management could be improved, since in many countries this has been found to be a critical constraint on the effectiveness of public actions in reducing poverty. One general question is whether legal and institutional reforms are needed at the central and local levels in order to ensure accountability for the use of fiscal resources and

Table 3. Possible Arrangements to Reduce the Impact of Risk

	<i>Individual, household</i>	<i>Group-based</i>	<i>Market-based</i>	<i>Public actions</i>
Risk reduction	<ul style="list-style-type: none"> • Preventive health practices • Migration 	<ul style="list-style-type: none"> • Common property resource management 	<ul style="list-style-type: none"> • Crop diversification • Pest management • Access to price and other information 	<ul style="list-style-type: none"> • Macroeconomic stability • Environmental policy • Education and public health policy • Infrastructure • Reduction of trade barriers to smooth local price variability
Risk mitigation				
Portfolio diversification	<ul style="list-style-type: none"> • Income source diversification • Investment in physical and human capital 	<ul style="list-style-type: none"> • Rotating savings and credit associations • Investment in social capital 	<ul style="list-style-type: none"> • Bank savings • Microeconomic finance 	<ul style="list-style-type: none"> • Agricultural extension • Protection of property rights
Insurance	<ul style="list-style-type: none"> • Sharecrop tenancy • Buffer stocks 		<ul style="list-style-type: none"> • Old-age annuities • Accident and disability insurance 	<ul style="list-style-type: none"> • Pension systems • Unemployment insurance • Health and disability insurance
Risk coping	<ul style="list-style-type: none"> • Selling assets • Reducing food consumption • Withdrawing children from school 	<ul style="list-style-type: none"> • Calling upon networks of mutual support 	<ul style="list-style-type: none"> • Selling financial assets • Borrowing from financial institutions 	<ul style="list-style-type: none"> • Social assistance • Workfare • Subsidies

Source: Adapted from Holzmann and Jorgensen (1999).

to improve service delivery. The process of putting together a PRSP should include a review of potential issues in governance and public expenditure management, such as lack of transparency and accountability, and fragmented budgets, and where these problems are found to exist, appropriate remedial steps should be set out. For example, measures to address critical problems inhibiting civil service performance may be needed (for example, nonpayment of salaries, lack of accountability of staff, and so on). Where corruption has been found to be pervasive, measures would be needed to combat this problem.

The vast majority of PRSPs to date have included measures to combat corruption; other institutional reform measures such as decentralization, civil service reform, and reforms to improve budgetary management are also commonly included.

With respect to public expenditure management, a PRSP would be expected to address any systemic problems in budget decisionmaking and processes, like unpredictability in flow of funds and failure of funds to reach frontline service delivery units, as well as lack of accountability and reporting for use of funds. Severe imbalances in the sectoral composition of the budget, and in the shares of nonsalary recurrent, capital and salary spending in the overall budget that inhibit efficiency and equity should also be addressed.

The PRSP would set out the types of steps being taken to improve transparency and ensure accountability of the line ministries and local or district governments. Community-based mechanisms for fostering transparency, including greater community involvement in the management of local spending, are likely to play an important role in this regard, especially for decentralized expenditure programs, an area that seems likely to grow in importance (see chapter 9, "Community-Driven Development"). The PRSP could set out an agenda of institutional reforms designed to bring overall budgetary procedures closer in line with best practices, drawing on, among other things, the Fund's Code of Fiscal Transparency. This could include procedures for auditing of all public expenditures supported by transparent reporting.

Empowerment of the poor is a key dimension of poverty reduction. The state can play an important role in removing or weakening the social barriers that prevent poor women and poor men from

participating in a community's social or economic life by removing social and institutional barriers to equity, either directly through regulation and enforcement, or indirectly by enabling or promoting the creation of social organizations or coalitions that represent the interests of the poor. National authorities can also foster the participation of the poor and their institutions in decisionmaking processes, resulting in pro-poor policies and reforms (see chapter 7, "Participation" and chapter 10, "Gender").

However, some barriers faced by disadvantaged or excluded groups can be traced to the performance and behavior of government agencies (police, the legal system, and social services, for instance). Ownership and rights related to land are particularly important on smallholder farms (see chapter 15, "Rural Poverty"). More generally, corruption and lawlessness are likely to make it harder for the poor to access services and enforce their rights (see chapter 8, "Governance").

Adopting community-driven development approaches to projects may allow local communities to overcome institutional obstacles to empowering the poor (see chapter 9, "Community-Driven Development"). The promotion of community-driven development also has direct linkages with the processes of fiscal and administrative decentralization (see chapter 8, "Governance").

To summarize, improvements in governance and public sector management may be needed in the following areas:

- measures to address systemic problems in budget formulation and execution, financial management and procurement systems, and monitoring of public spending;
- plans for improvements in governance arrangements and service delivery, including the role of local communities and local government;
- steps to be taken to improve transparency and ensure accountability of public institutions and services in relation to the needs and priorities of the poor; and
- efforts to address critical problems inhibiting civil service performance and issues of corruption in the public service.

Appropriate sectoral policies and programs

A PRSP is expected to review key sectoral policies and programs—for example, health, education, social protection, rural development and infrastructure, and environment—and the extent to which these are working to reduce poverty and to set out needed reforms. A number of chapters in this book provide direct guidance that could be used in undertaking such a review. In many countries, existing sectoral strategies will be available and would provide the appropriate starting point.

Where the poverty and sectoral diagnostics have revealed sources of inefficiency and inequity in the delivery of services—such as regional imbalances in budget allocations; inequities in the distribution of public spending that is revealed by benefit incidence analysis, or very low shares to primary levels of service; or excessively high wage share or lack of accountability of service providers to local populations—the PRSP should outline the ways in which these problems are to be addressed over the next several years. This could include consideration of whether the private sector (profit and nonprofit) should potentially play a larger role in service delivery.

As far as possible, a PRSP should review and address cross-sectoral linkages that jointly determine poverty outcomes. This would include, for example, recognition of linkages between the environment and poverty, including health impacts and natural resource degradation; the role of infrastructure (transport, water and, energy) in enabling greater access and affordability to poor households; policies and programs for helping the poor manage risk across various domains such as agricultural production and health; and linkages between the health and education sectors.

The most commonly advocated policies in the PRSPs and I-PRSPs to date are expenditure increases in spending that is important for poverty reduction, including primary health and education, water and sanitation, rural roads, and other rural infrastructure. However, sectoral policy and program priorities will not be implemented unless countries ensure that they can afford the public expenditures they plan. Public expenditure reviews and Medium-Term Expenditure Frameworks (MTEFs) can provide guidance on how to ensure fiscal sustainability (see chapter 6, "Public Spending"). The budget plans in the PRSP would

outline how poverty reduction programs are to be financed and, in this context, indicate the country's capacity to absorb financial and technical assistance. Institutional reforms may well be needed to support improved allocations on a sustained basis. An appropriate starting point is to map a country's budget cycle (annual and triennial) and then consider how the poverty reduction strategy can be phased in.

Getting started on a process of strengthening or developing a PRS could begin with stocktaking of the nature and effectiveness of existing programs and major weaknesses or obstacles that inhibit the impact of poverty. This can be done on a sectoral basis, coordinated by line agencies. Both qualitative data and consultations with users and potential users or beneficiaries are needed, in addition to quantitative data (number of clients, costs, and so on).

Table 4 provides an example drawn from the case of education in Cambodia's development of its PRSP. It suggests a useful sequential approach to consideration of tackling the problem of low schooling outcomes by, in this example, raising teachers' salaries. Complementary areas were measures to increase school quality and increased budget allocations (and execution) for education.

It is important to note the emphasis on having clear priorities for public action, which in turn suggests that the strategic objectives should not be large in number. The priority actions that are adopted should be appropriate and feasible in light of the poverty analysis, the targets, their estimated costs, available resources, institutional capacities, and the effectiveness of past policies. This raises several core areas that need to be addressed in the context of developing or strengthening an effective poverty reduction strategy—that again, in turn, can be borne in mind by line ministries and central agencies responsible for pulling the strategy together. Table 5 presents an illustration, highlighting the work needed to move forward in four core areas.

Table 5 highlights the importance of having a full costing of proposed actions. Recall that a PRSP is expected to include tables summarizing the overall public expenditure program (capital and recurrent) and its allocation among key areas, which is discussed further in the next section, as well as a matrix of key policy actions and institutional reforms and target dates for their implementation. This in turn underlines the key role of line and delivery agencies in addition to core budget agencies in the process of putting together a realistic PRS.

Realistic costing and appropriate funding for major programs

This has two aspects: (1) realistic costing of all government expenditure programs, including new poverty reduction initiatives, and (2) consistency with the macroeconomic framework. Given the large and challenging agendas that face most countries seeking to reduce poverty, prioritization of possible public actions is key to implementation of a PRSP. The selection of priority actions across sectors would be based on the authorities' judgment about those that are likely to have the largest impact on poverty, identifying the priorities of the population and determining what can be feasibly implemented in the short and longer term.

These priorities would be incorporated in an iterative fashion into the overall macroeconomic framework and the budget. The macroeconomic framework is important because what is affordable to a country depends on both the available domestic resources (which in turn depend on the rate of growth and revenue collection as a share of gross domestic product) and what is expected to flow from external sources. It is important that the projected rate of growth in the baseline case be realistic. On the expenditure side, the PRSP needs to appropriately cost the programs that comprise the strategy. It is important to review budget priorities so that programs that are known to have a significant impact on poverty are not significantly underfunded. New spending priorities will need to be consistent with implementation capacity and noninflationary finance.

The baseline case for costing and financing should be founded on best judgments about the likely level of resource flows. In addition, however, the PRSP could highlight alternative scenarios, where higher (or lower) levels of external assistance are available to attain poverty outcomes and related intermediate targets. Consideration should be given to the absorptive capacity for larger aid flows and the macroeconomic impacts (on employment and growth) of higher expenditure on nontradable goods such as real appreciation of the exchange rate.

Strategic objective	Current status	Obstacles	Consideration	Linkages	Next steps
Reform teacher salary scales and improve incentives to improve teacher performance	\$20 per month, compared to “living wage” of \$80 in rural areas and \$180 in urban areas	<p>Low budget allocation</p> <p>Low morale</p> <p>Low trust in teachers</p> <p>Devaluing of education</p> <p>Hard to link salary increases to performance</p> <p>Current incentives for rural resettlement not sufficient to promote change</p>	<p>Double shift and remedial programs when paid on time</p> <p>Other countries use financial or in-kind incentives to attract teachers</p> <p>UNICEF teacher credit schemes</p> <p>Programs that combine financial incentives with new responsibilities, e.g., cluster schools</p> <p>Professional development as an incentive</p> <p>Communities can recruit local contract teachers</p> <p>Private schools</p>	<p>Raise salaries by 50–100%, starting with core group of head teachers and other key teachers</p> <p>Introduce incentive pay and teacher housing</p> <p>Priority group incentives package for Ministry of Education managerial staff</p>	<p>Who will be future employer of teachers</p> <p>Negotiate with Ministry of Economy and Finance about Priority Action Plan on teachers’ incentives scheme; firm, clear presentation of case, to show efficiency gain and willingness to monitor performance</p>

Table 5. Four Core Areas for PRSP Development and Implementation

<i>Core area</i>	<i>Current status</i>	<i>Key actions to consider</i>	<i>Next steps and timeline</i>
1. Realistic targets for key poverty outcomes and indicators to monitor progress on one- and three-year bases			
2. Full costing of proposed actions, for the next three years, for both capital and current spending			
3. Systems for monitoring and evaluation that allow regular assessment of progress and feedback into decisionmaking			
4. Participatory process: involvement of key stakeholders at different levels, including current and potential users of services, civil society organizations, and so on			

The PRSP will need to consider the scope for reallocation of spending and for increasing the efficiency of spending and raising new revenue in a nondistortionary manner, as well as the scope for more external assistance. The integration of poverty reduction objectives and policies within a consistent macroeconomic framework should be the result of a process of iteration. The PRSP would thus specify key actions and policies consistent with the macroeconomic framework covering a horizon of at least three years. A timetable of key policy actions over a three-year period, including institutional reforms and technical assistance, could be included in a policy matrix. The greater the degree of specification in this matrix, the more external partners (including the World Bank and the IMF) could key off this matrix and the less need for lengthy negotiations to separately specify the conditions in bilateral negotiations between different external partners and the government.

To summarize, the PRSP process would be expected to address such key questions as whether the allocation of expenditures is consistent with the strategic priorities, institutional capacities and efficiency, and realistic cost estimates. A related question is whether domestic revenue measures have been designed in light of likely distributional impacts. In terms of implementation of the strategy, it is clearly important that the capacity for fiscal management be adequate to the task.

This in turn highlights the importance of the following considerations:

- quality of cost estimates for key programs;
- comprehensiveness of budget data, that is, extent to which all programs (including externally financed projects) are included in an integrated budgetary framework;
- disaggregation of expenditure programs by sector and key programs for poverty reduction and by recurrent and investment expenditures; and
- status of the MTEF to improve the capacity to undertake pro-poor budget allocations over time.

A fundamental question is whether the strategy has an adequate and credible financing plan, including domestic borrowing and projected aid (and other external) flows. (As noted in box 1, this is among the key information that is expected to be presented in tabular form in a PRSP.) The answer to this question depends on the realism of external financing projections and implications for long-term debt sustainability, the extent to which external development partners have begun—or indicated their intention—to align and coordinate their own strategies with the PRSP, and contingency plans for expenditures in the event of a shortfall in revenues or financing.

How will we know we are getting there?

Effective outcome monitoring will enable the assessment of progress made toward poverty reduction goals. Thus transparent and systematic monitoring is a critical element of a sound PRS. Many countries already collect poverty outcome data on a regular basis, and the approach adopted with respect to the PRS will build largely on existing systems.

How to strengthen existing monitoring and evaluation practices is addressed in chapter 12, “Monitoring and Evaluation” and chapter 5, “Strengthening Statistical Systems.” It also relates to the discussion of indicators in section 2.2. Some key features include the following:

- **Critical role of participatory approaches.** Civil society and the general public, especially the poor, should be involved in different stages of monitoring the implementation of public policies and programs.
- **Inclusion of an impact evaluation strategy.** Outcome monitoring should be complemented with impact evaluation of selected policies and programs to help determine the extent to which improvements in outcomes are due to specific public actions.
- **Improved budgetary management.** Monitoring of poverty outcomes should be complemented by strengthening the institutions and practices of expenditure management to enhance transparency and accountability in and efficiency of public spending.
- **Dissemination of results.** Greater transparency and accountability implies that the results from monitoring and evaluation are widely disseminated through mechanisms appropriate to different groups in civil society, as well as policymakers, program managers, program beneficiaries, the general public, the media, and academics.

Systematic monitoring of progress, which would allow experience to be gained on the relationship between actions and outcomes, is a crucial element of successful implementation. And, as described above, the PRSP should include monitorable, intermediate targets consistent with the strategy’s long-term goals for poverty reduction. Every year, governments are expected to produce a progress report on implementation of the PRSP. This would highlight whether targets were attained and indicate the reasons for any deviations between actual and targeted outcomes. Modifications to strengthen implementation in light of experience or to deal with exogenous shocks could be presented based on the results of monitoring and interpretation. A full update of the PRSP, developed with broad participation, is suggested every three years. This update would also provide an opportunity for all participants to review implementation.

The PRSP itself is expected to describe the framework and mechanisms for monitoring implementation, including the indicators to be monitored and the planned frequency of reporting and monitoring. It should also describe measures being undertaken to improve monitoring (such as those set out in the section above headed “Where Do We Want to Go?”).

For countries receiving assistance under the HIPC initiative, the monitoring procedures should include a transparent reporting of savings from debt relief, and the additional poverty reduction expenditures thus enabled. This does not imply earmarking of HIPC initiative savings for specified uses, but rather an indication of the increase in public spending on poverty reduction actions that resulted from the relaxation in the fiscal expenditure envelope permitted by debt relief. To the extent that such expenditures, including those associated with the debt relief under the initiative, are channeled through a poverty fund, the PRSP should set out procedures to ensure that these expenditures were fully integrated into the overall budgetary framework.

Conclusion

This chapter has stressed that the development of a Poverty Reduction Strategy in a particular country will vary enormously depending on such factors as initial conditions and the social and political forces that shape the process of building a PRS. Nonetheless, some aspects in the process that are likely to be common across countries can be identified, particularly the following three broad dimensions:

- **Priority public actions.** PRSPs should set forth a comprehensive public sector budget that indicates allocations among expenditures. The governments should also indicate their priorities for policy reform over a several-year horizon, recognizing that the actual pace of implementation will be affected by political and institutional constraints.
- **Public expenditure management system.** The PRSPs should articulate a program to improve efficiency, transparency, and accountability in public expenditure management. Such improvements are usually essential to assure donors that developmental assistance, particularly budget support lending, will be well used.
- **Monitoring and evaluation systems.** Without significant improvements in monitoring and evaluation capacity, countries and external donors will not be able to determine the effectiveness of their policies and their assistance programs. It should, however, be recognized that this is a longer-term undertaking that will need considerable capacity building in the country.

Countries will establish their own timetables for technical policy-related work and the types of poverty diagnostics and analyses that are needed. This would include understanding the nature of poverty and its causes and ascertaining obstacles to pro-poor growth and whether key sectoral policies and programs are working to reduce poverty. It would also include a determination of what is needed to improve outcomes in the future. Many elements will be subject to continual improvements as sectoral strategies are fully developed and the results of monitoring are interpreted. Annual budgets and their execution are clearly key to implementation.

A Sourcebook for Poverty Reduction Strategies is designed to offer some guidance as the process unfolds, on both the process aspects of the PRS and on substantive aspects of poverty diagnosis and the formulation of a strategy to address poverty in its various dimensions. These two companion volumes should be considered a work in progress. Feedback on the content and presentation of the book will be used to guide future revisions.

Notes

1. The "Review of the Poverty Reduction Strategy Paper (PRSP) Approach: Early Experiences with Interim PRSPs and Full PRSPs," available at <http://www.worldbank.org/poverty/strategies/review/earlyexp.pdf>, provides good practices for countries and partners and numerous country examples. See also "Building Poverty Reduction Strategies in Developing Countries" (World Bank, Washington, D.C., 1999) and "Poverty Reduction Strategy Papers: Operational Issues" (Joint International Monetary Fund/World Bank paper, Washington, D.C., 1999). See also www.worldbank.org/prsp for guidelines, including for Joint Staff Assessments.
2. The executive boards have instructed the staffs to *describe*, but not evaluate, the participatory process.

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Part 1

Core Techniques

Chapter 1

Poverty Measurement and Analysis

Aline Coudouel, Jesko S. Hentschel, and Quentin T. Wodon

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1.1 Introduction

This chapter offers a primer on poverty, inequality, and vulnerability analysis and a guide to resources on this topic. It is written for decisionmakers who want to define the type of information they need to monitor poverty reduction and make appropriate policy decisions and for the technical experts in charge of the analysis. The chapter takes a broad look at tools for analysis and provides a brief introduction to each topic. It also outlines why certain information is essential in policymaking and how this information can be generated.

The measurement and analysis of poverty, inequality, and vulnerability are crucial for cognitive purposes (to know what the situation is), for analytical purposes (to understand the factors determining this situation), for policymaking purposes (to design interventions best adapted to the issues), and for monitoring and evaluation purposes (to assess the effectiveness of current policies and to determine whether the situation is changing).

Various definitions and concepts exist for well-being, and this chapter focuses on three of its aspects. First, it addresses what is typically referred to as poverty, that is, whether households or individuals possess enough resources or abilities to meet their current needs. This definition is based on a comparison of individuals' income, consumption, education, or other attributes with some defined threshold below which individuals are considered as being poor in that particular attribute. Second, the chapter focuses on inequality in the distribution of income, consumption, or other attributes across the population. This is based on the premise that the relative position of individuals or households in society is an important aspect of their welfare. In addition, the overall level of inequality in a country, region, or population group, in terms of monetary and nonmonetary dimensions, is in itself also an important summary indicator of the level of welfare in that group. (A detailed analysis of inequality is given in chapter 2, "Inequality and Social Welfare.") Finally, the chapter considers the vulnerability dimension of well-being, defined here as the probability or risk today of being in poverty—or falling deeper into poverty—at some point in the future. Vulnerability is a key dimension of well-being, since it affects individuals' behavior (in terms of investment, production patterns, coping strategies) and their perception of their own situation.

Although the concepts, measures, and analytical tools can be applied to numerous dimensions of well-being, such as income, consumption, health, education, and assets ownership, the chapter focuses mainly on income and consumption and refers only casually to the other dimensions. (See technical note A.12 in the appendix at the end of volume 1 for a brief discussion of the multidimensional aspects of extreme poverty and social exclusion.) Other chapters in this book focus on the dimensions of well-being excluded here. It should also be noted that this chapter outlines general principles that should be valid in many settings, but the methods used for analyzing well-being must always be adapted to country circumstances and the availability of data.

The chapter is arranged into several sections so that readers can easily find the information of greatest interest to them. The chapter begins with the essentials of poverty measurement and analysis (section 1.2) before turning to inequality (section 1.3) and vulnerability (section 1.4). In each of these sections, the chapter first defines some of the concepts, indicators, and measures that can be used, and then discusses the various analytical tools available. Section 1.5 presents an overview of different sources and types of data that can be used for the analysis. The section includes a reference table linking the analytical methods described in this chapter with the data sources necessary for their application. Finally, a reference list contains resources and web sites for further study, and the technical notes explore specific issues in greater depth.

1.2 Poverty Measurement and Analysis

The section provides an introduction to the concept and measurement of poverty as defined above, that is, poverty being defined as not having enough today in some dimension of well-being. It starts with a discussion of what needs to be done to measure poverty (section 1.2.1) before turning to the analyses that can be carried out using the selected measures (section 1.2.2).

1.2.1 Poverty concept and measurement

Three ingredients are required in computing a poverty measure. First, one has to choose the relevant dimension and indicator of well-being. Second, one has to select a poverty line, that is, a threshold below which a given household or individual will be classified as poor. Finally, one has to select a poverty measure to be used for reporting for the population as a whole or for a population subgroup only.

Defining indicators of well-being

This section focuses on the monetary dimensions of well-being, income and consumption. In particular, the concentration is on quantitative, objective measures of poverty. Subjective and qualitative measures of income or consumption poverty receive only cursory treatment in this chapter, as do measures related to nonmonetary dimensions (such as health, education, and assets). The typical data source for the indicators and measures presented here is the household survey (see section 1.5.2).

Monetary indicators of poverty

When estimating poverty using monetary measures, one may have a choice between using income or consumption as the indicator of well-being. Most analysts argue that, provided the information on consumption obtained from a household survey is detailed enough, consumption will be a better indicator of poverty measurement than income for the following reasons:

- ***Consumption is a better outcome indicator than income.*** Actual consumption is more closely related to a person's well-being in the sense defined above, that is, of having enough to meet current basic needs. On the other hand, income is only one of the elements that will allow consumption of goods; others include questions of access and availability.
- ***Consumption may be better measured than income.*** In poor agrarian economies, incomes for rural households may fluctuate during the year, according to the harvest cycle. In urban economies with large informal sectors, income flows also may be erratic. This implies a potential difficulty for households in correctly recalling their income, in which case the information on income derived from the survey may be of low quality. In estimating agrarian income, an additional difficulty in estimating income consists in excluding the inputs purchased for agricultural production from the farmer's revenues. Finally, large shares of income are not monetized if households consume their own production or exchange it for other goods, and it might be difficult to price these. Estimating consumption has its own difficulties, but it may be more reliable if the consumption module in the household survey is well designed.
- ***Consumption may better reflect a household's actual standard of living and ability to meet basic needs.*** Consumption expenditures reflect not only the goods and services that a household can command based on its current income, but also whether that household can access credit markets or household savings at times when current income is low or even negative, perhaps because of seasonal variation, harvest failure, or other circumstances that cause income to fluctuate widely.

One should not be dogmatic, however, about using consumption data for poverty measurement. The use of income as a poverty measurement may have its own advantages. For example, measuring poverty by income allows for a distinction to be made between sources of income. When such distinctions can be made, income may be more easily compared with data from other sources, such as wages, thereby providing a check on the quality of data in the household survey. Finally, for some surveys consumption or expenditure data might not be collected.

When both income and consumption are available, the analyst may want to compute poverty measures with both indicators and compare the results. A simple way of testing the sensitivity of the results to the choice of consumption or income (or to any other choice) entails computing a transition matrix. To construct a transition matrix, divide the population into a number of groups—for example, 10 deciles, each representing 10 percent of the population, from the poorest 10 percent to the richest 10 percent. Each household belongs to only one decile for each indicator, but some households may belong to one decile for income and another for consumption, in which case many households would not

belong to the diagonal of the matrix. Since income and consumption capture different aspects of poverty, the matrix might show that household ranking is affected by the definitions, which can in turn provide information on other aspects of well-being, such as the ability of households to smooth consumption (for an example, see Hentschel and Lanjouw 1996).

Whether one chooses income or consumption, it is typically necessary to aggregate information provided at the household or individual level for many sources of income or consumption in the survey. This aggregation is a complex process. Some adjustments might be necessary to ensure that the aggregation process leads to the desired measures. Most adjustments require access to good information, particularly on prices, which might be unavailable. Complicated adjustments may also limit the understanding some users will have of the poverty analysis and the use they will be able to make of it. Basic guidelines for aggregation are as follows (see technical note A.3 for related issues in the case of Uganda):

- *Adjust for differences in needs between households and intrahousehold inequalities.* Households of different size and composition have different needs, which are not easy to reflect in poverty measures. Two crucial decisions are necessary. First, should adjustments be made to reflect the age of the household members—adults and children—and perhaps their gender? Second, should households of different sizes be treated differently to reflect the fact that larger households may be able to purchase goods in bulk at cheaper rates and to economize on the purchase of some products, especially consumer durables? Box 1.1 discusses the issues related to equivalence scales (adjustments of basic needs for different age groups and by gender) and economies of scale (adjustments for household size). The analyst may want to test for the impact of the choice of equivalence scales and economies of scale on poverty measures and for the validity of conclusions made regarding comparison of these measures between household groups. If feasible, the analyst may also want to investigate the magnitude of intrahousehold inequalities.
- *Adjust for differences in prices across regions and at different points in time.* The cost of basic needs might vary between areas and over time. Expenditure and income data are proxies for the real level of household welfare. Nominal expenditures or incomes need to be made comparable in

Box 1.1. Differences in Needs Between Households and Intrahousehold Inequalities

When computing poverty measures, analysts should examine two important assumptions inherent in these calculations: the assumptions about equivalence scales and about economies of scale in consumption.

Equivalence scales. The standard means of determining whether a household is poor involves a comparison of its per capita spending or income to a per capita poverty line. The calculation of the poverty line is based on assumptions about the cost of basic needs of men and women of different ages. Most often, the poverty line is computed for a typical family of two adults and three children, with adjustments made for lower needs among children. Analysts can vary such equivalence assumptions in deriving the poverty line to quantify the changes this implies. A “pure” means of measuring poverty would be to assign each household in the dataset its own poverty line that reflects the actual demographic composition of the household. Calculating poverty measures with alternative scales allows us to test the degree to which they affect the results.

Economies of scale. When calculating a household’s per capita spending or income by dividing total household resources by the number of people living in the household, the implicit assumption is made that no economies of scale in consumption exist; that is, a two-person household with a consumption of 200 would be equally well off as a one-person household with a consumption of 100. However, larger households generally have an advantage over smaller households because they can benefit from sharing commodities (such as stoves, furniture, housing, and infrastructure) or from purchasing produce in bulk, which might be cheaper. If economies of scale exist in consumption, it will especially affect the relationship between household size and the risk of being poor. There is no single agreed-on method to estimate economies of scale in consumption (see Lanjouw and Ravallion 1995; Deaton 1997). Simple tests can be made to determine the degree of sensitivity of a poverty profile to the assumption about economies of scale (see, for example, World Bank 1999b, p. 69; see also the references on sequential stochastic dominance in technical note A.5).

Another issue relates to intrahousehold inequalities. Measuring intrahousehold allocations and inequality is difficult when the analysis is confined to income and consumption because the available data typically fail to directly capture individual spending and consumption. Intrahousehold inequality has not been systematically measured, but evidence points to its existence. A study by Haddad and Kanbur (1990) suggests that relying on household information only could lead to underestimating inequality and poverty by more than 25 percent. Evidence on differences in health and education outcomes confirms that discrimination within households does exist in certain regions and countries. Capturing intrahousehold inequality and assessing its importance can be achieved partly through qualitative and participatory surveys (section 1.5.3). Another alternative is to analyze nonincome measures of well-being, such as nutrition (anthropometric measures), education, or health, for which measures of individual well-being are possible.

spatial terms by adjusting for different price levels in different parts of the country. The more diverse and vast a country, the more important the spatial adjustments (factors of diversity include the degree of rural–urban integration, remoteness of areas, and so on). Adjustments are sometimes needed over time and within a given survey. For example, the relative degree of inflation could be important during data collection, making it significant whether a household is interviewed at the beginning or the end of the data collection period. Once regional price indexes or inflation data are available, adjustments can be made in two ways: (1) apply spatial and time deflators to the income or consumption of each household and compare them against a single poverty line, or (2) compute one poverty line for each region and date. Technical note A.2 presents an example from Bangladesh.

- ***Exclude input and investment expenditure.*** Care must be taken not to interpret spending on inputs into household production, including outlays for tools or other inputs like fertilizer, water, or seed in agricultural production, as spending for consumption or as income. If we included spending on inputs in the consumption or income aggregate, we would overstate the actual welfare levels achieved by households.
- ***Impute missing price and quantity information.*** Not all households provide information on the various income or consumption sources available in a survey. In the case of consumption, when information is lacking on the amounts and prices of the goods known to be consumed by the household, these data may need to be estimated (imputed). One of the most common imputations is for owner-occupied housing, that is, a hypothetical rental value for those households not paying rent. In the case of income, when it is known that household members are working, an imputation may also be needed if no labor earnings are reported.
- ***Adjust for rationing.*** When constructing a consumption aggregate, even if prices are available for each household in the survey, it is important to keep in mind that markets may be rationed. In other words, there may be restrictions on the quantities available for purchase—for example, for public water or electricity services. In such cases, the price paid by the consumer is lower than his or her marginal utility from consumption, and yet the latter is the yardstick for measuring welfare levels. If possible, the shadow price of the goods consumed should be estimated.
- ***Check whether adjustments for underreporting can be made.*** In some regions of the world such as Latin America, it is often a common practice to adjust income or consumption for underreporting in the surveys. There is a presumption of underreporting when the mean income (or consumption) in the surveys is below that suggested in the disposable income or private consumption information available in the national accounts aggregates. Underreporting tends to be more severe when poverty measures are based on income instead of consumption. Before adjusting household income or consumption estimates for underreporting, however, it is necessary to carefully examine the reliability of the national accounts data. Furthermore, adjustments generally make very strong assumptions about the structure of underreporting across households (for instance, that each household underdeclares income or consumption to the same degree). Such assumptions must be carefully reviewed.

Nonmonetary indicators of poverty

Although poverty has been traditionally measured in monetary terms, it has many other dimensions. Poverty is associated not only with insufficient income or consumption but also with insufficient outcomes with respect to health, nutrition, and literacy, and with deficient social relations, insecurity, and low self-esteem and powerlessness. In some cases it is feasible to apply the tools that have been developed for monetary poverty measurement to nonmonetary indicators of well-being. Applying the tools of poverty measurement to nonmonetary indicators requires the feasibility of comparing the value of the nonmonetary indicator for a given individual or household to a threshold, or “poverty line,” under which it can be said that the individual or household is not able to meet basic needs.

Various chapters in this book, particularly chapter 18, “Health, Nutrition, and Population,” and chapter 19, “Education,” provide examples of indicators that might be suitable for such analysis. Technical note A.6 also provides examples. The relevant chapters offer more detail, but, in brief, analysts

could focus on important dimensions of capabilities, such as literacy and nutrition. A few examples of dimensions of well-being for which the techniques could be used include the following:

- **Health and nutrition poverty.** The health status of household members can be taken as an important indicator of well-being. Analysts could focus on the nutritional status of children as a measure of outcome as well as the incidence of specific diseases (diarrhea, malaria, respiratory diseases) or life expectancy for different groups within the population. If data on such health outcomes are unavailable, input proxies could be used, such as the number of visits an individual makes to hospitals and health centers, access to specific medical services (such as pre- and post-natal care), or the extent to which children receive vaccinations in time as an input for their future health status.
- **Education poverty.** In the field of education, one could use the level of literacy as the defining characteristic and some level judged to represent the threshold for illiteracy as the poverty line. In countries where literacy is nearly universal, one might opt for specific test scores in schools as the relevant outcome indicator to distinguish among different population groups. Another alternative would be to compare the number of years of education completed to the expected number of years that, in principle, should be completed.
- **Composite indexes of wealth.** An alternative to using a single dimension of poverty could be to combine the information on different aspects of poverty. One possibility is to create a measure that takes into account income, health, assets, and education. It is also possible that information on income is unavailable though other dimensions are covered. Describing the various techniques available goes beyond the scope of this chapter, but technical note A.14 describes the use of Demographic and Health Surveys. It is important to note that a major limitation of composite indexes is the difficulty of defining a poverty line. Analysis by quintile or other percentile remains possible, however, and offers important insights into the profile of poverty.

Other measures can also be based on subjective assessments of one's poverty, or on self-reporting, as presented in box 1.2.

Choosing and estimating a poverty line

Once an aggregate income, consumption, or nonmonetary measure is defined at the household or individual level, the next step is to define one or more poverty lines. Poverty lines are cutoff points separating the poor from the nonpoor. They can be monetary (for example, a certain level of consumption) or nonmonetary (for instance, a certain level of literacy). The use of multiple lines can help in distinguishing among different levels of poverty. There are two main ways of setting poverty lines—relative and absolute.

- **Relative poverty lines.** These are defined in relation to the overall distribution of income or consumption in a country; for example, the poverty line could be set at 50 percent of the country's mean income or consumption.
- **Absolute poverty lines.** These are anchored in some absolute standard of what households should be able to count on in order to meet their basic needs. For monetary measures, these absolute poverty lines are often based on estimates of the cost of basic food needs, that is, the cost of a nutritional basket considered minimal for the health of a typical family, to which a provision is added for nonfood needs. Considering that large parts of the populations of developing countries survive with the bare minimum or less, reliance on an absolute rather than a relative poverty line often proves to be more relevant. Technical note A.2 presents the process for setting a poverty line in Bangladesh. Box 1.3 summarizes alternative methods of setting absolute poverty lines.

Alternative poverty lines are also sometimes used. They can be set on the basis of subjective or self-reported measures of poverty (see box 1.2). Moreover, absolute and relative poverty lines can be combined. This technique allows for taking into account inequality and the relative position of households while recognizing the importance of an absolute minimum below which livelihood is not possible. When deciding on the weight to give to the two lines when combining them, one can use

Box 1.2. Subjective Measures of Poverty

Subjective perceptions can be used to measure poverty. Such measures of poverty are based on questions to households about (a) their perceived situation, such as, “Do you have enough?” “Do you consider your income to be very low, rather low, sufficient, rather high, or high?” (b) a judgment about minimum standards and needs, such as, “What is the minimum amount necessary for a family of two adults and three children to get by?” or “What is the minimum necessary for your family?” or (c) poverty rankings in the community, such as “Which groups are most vulnerable in the village?” On the basis of the answers to these questions, poverty lines can be derived. Answers to the second group of questions could provide a line for different types of reference households, and answers to the first group of questions can be compared with actual income to infer the income level that households judge to be sufficient. This income level could then be used as the poverty line.

Subjective measures can be used not only to assess the situation of a particular household but also to set or inform the choice of poverty lines, equivalence scales, economies of scale, and regional cost-of-living differences. It can also be useful to compare subjective and self-reported measures of well-being to objective measures based on observed income and consumption data.

Self-reported measures have important limitations, however. Subjective measures might reproduce existing discrimination or exclusion patterns if these patterns are perceived as normal in the society. This might be the case in discrimination against girls or other particular groups in society. Subjective assessments could then fail to capture discrimination, which should be addressed by public policy. More generally, the observed perceptions of poverty need not provide a good basis to establish priority public actions. This may be the case if policymakers have a different time horizon or a different understanding of the determinants of social welfare from the population providing the subjective measures of poverty. It might also be the case that people perceive the elderly to be those most in need, but that public policy aimed at improving nutrition practices or providing preventive health care would have a higher impact on poverty.

For more information, refer to Goedhart and others (1977). For an application, see Pradhan and Ravallion (2000).

information contained in the consumption or income data and information from qualitative data (if the qualitative data show that people consider a specific good to be a basic need, the elasticity of ownership of that good to income can be used [see Madden 2000]).

The choice of a poverty line is ultimately arbitrary. In order to ensure wide understanding and wide acceptance of a poverty line, it is important that the poverty line chosen resonate with social norms, with the common understanding of what represents a minimum. For example, in some countries it might make sense to use the minimum wage or the value of some existing benefit that is widely known and recognized as representing a minimum. Using qualitative data (see section 1.5.3) could also prove beneficial in deciding what goods would go in the basket of basic needs for use in constructing an absolute poverty line.

Choosing and estimating poverty measures

The poverty measure itself is a statistical function that translates the comparison of the indicator of household well-being and the chosen poverty line into one aggregate number for the population as a whole or a population subgroup. Many alternative measures exist, but the three measures described are most commonly used (see technical note A.1 for the formulae used to derive these poverty measures):

- *Incidence of poverty (headcount index).* This is the share of the population whose income or consumption is below the poverty line, that is, the share of the population that cannot afford to buy a basic basket of goods. An analyst using several poverty lines, say, one for poverty and one

Box 1.3. Methods of Setting Absolute Poverty Lines

Different methods have been used in the literature to define absolute poverty lines (see Deaton 1997; Ravallion and Bidani 1994; Ravallion 1994; and Wodon 1997a). The choice of method can greatly affect poverty measures and who is considered poor. It is important to derive poverty lines that provide consistency in welfare measurement in space and time: two people with the same real consumption should be considered either poor or nonpoor. As discussed in Ravallion and Bidani (1994) and Wodon (1997a), the food-energy intake method defines the poverty line by finding the consumption expenditures or income level at which a person's typical food energy intake is just sufficient to meet a predetermined food-energy requirement. If applied to different regions within the same country, the underlying food consumption pattern of the population group consuming only the necessary nutrient amounts will vary. This method can thus yield differentials in poverty lines in excess of the cost-of-living differential facing the poor. An alternative is the cost of basic needs method, where an explicit bundle of foods typically consumed by the poor is first valued at local prices. To this a specific allowance for nonfood goods, consistent with spending by the poor, is added. However defined, poverty lines will always have a high arbitrary element; for example, the calorie threshold underlying both methods might be assumed to vary with age. Ordinal ranking of welfare—crucial for the poverty profile—is more important than cardinal ranking, with one household above and another below the line. For comparisons over time, however, the stability and consistency of the poverty line need to be ensured.

for extreme poverty, can estimate the incidence of both poverty and extreme poverty. Similarly, for nonmonetary indicators the incidence of poverty measures the share of the population that does not reach the defined threshold (for instance, the percentage of the population with less than three years of education).

- **Depth of poverty (poverty gap).** This provides information regarding how far off households are from the poverty line. This measure captures the mean aggregate income or consumption shortfall relative to the poverty line across the whole population. It is obtained by adding up all the shortfalls of the poor (assuming that the nonpoor have a shortfall of zero) and dividing the total by the population. In other words, it estimates the total resources needed to bring all the poor to the level of the poverty line (divided by the number of individuals in the population). This measure can also be used for nonmonetary indicators, provided that the measure of the distance is meaningful. The poverty gap in education could be the number of years of education needed or required to reach a defined threshold (see technical note A.6 for a discussion of this and other examples of the application of poverty measurement tools to nonmonetary indicators). In some cases, though, the measure does not make sense or is not quantifiable (for example, when indicators are binary, such as literacy, in which case only the concept of the headcount can be used). Note also that, as discussed in technical note A.1, the poverty gap can be used as a measure of the minimum amount of resources necessary to eradicate poverty, that is, the amount that one would have to transfer to the poor under perfect targeting (that is, each poor person getting exactly the amount he/she needs to be lifted out of poverty) to bring them all out of poverty.
- **Poverty severity (squared poverty gap).** This takes into account not only the distance separating the poor from the poverty line (the poverty gap), but also the inequality among the poor. That is, a higher weight is placed on those households further away from the poverty line. As for the poverty gap measure, limitations apply for some of the nonmonetary indicators.

All of these measures can be calculated on a household basis, that is, by assessing the share of households that are below the poverty line in the case of the headcount index. However, it might be better to estimate the measures on a population basis—in terms of individuals—in order to take into account the number of individuals within each household.

The measures of depth and severity of poverty are important complements of the incidence of poverty. It might be the case that some groups have a high poverty incidence but low poverty gap (when numerous members are just below the poverty line), while other groups have a low poverty incidence but a high poverty gap for those who are poor (when relatively few members are below the poverty line but with extremely low levels of consumption or income). Table 1.1 provides an example from Madagascar. According to the headcount, unskilled workers show the third highest poverty rate, while this group ranks fifth in poverty severity. Comparing them with the herders shows that they have a higher risk of being in poverty but that their poverty tends to be less severe or deep. The types of interventions needed to help the two groups are therefore likely to be different.

Depth and severity might be particularly important for the evaluation of programs and policies. A program might be very effective at reducing the number of poor (the incidence of poverty) but might do so only by lifting those who were closest to the poverty line out of poverty (low impact on the poverty gap). Other interventions might better address the situation of the very poor but have a low impact on the overall incidence (if it brings the very poor closer to the poverty line but not above it).

This section has discussed how to define income and consumption as well as the cutoff point of the poverty line and how to use this information for poverty measurement. Some basic questions that must be asked by the poverty analysts in the process of producing a poverty profile or trend are outlined box 1.4 below.

1.2.2 Poverty analysis

Once the indicator, line, and measures have been chosen, the various characteristics of the different poverty groups (poor and nonpoor) can be compared to shed light on correlates of poverty. One can also

Table 1.1. Poverty Groups by Socioeconomic Groups (Madagascar 1994)

Socioeconomic group	Headcount	Rank	Poverty gap	Rank	Poverty severity	Rank
Small farmers	81.6	(1)	41.0	(1)	24.6	(1)
Large farmers	77.0	(2)	34.6	(2)	19.0	(2)
Unskilled workers	62.7	(3)	25.5	(4)	14.0	(5)
Herders/fishermen	61.4	(4)	27.9	(3)	16.1	(3)
Retirees/handicapped	50.6	(5)	23.6	(5)	14.1	(4)

Source: World Bank (1996b, p. 21).

compare poverty measures for groups of households with different characteristics or over time. Tools to analyze the determinants of poverty and poverty changes are presented in the section below headed “The correlates of poverty.”

When comparing, it is important to test whether the observed differences in characteristics among different poverty groups, or the differences in poverty incidence among specific groups or over time, are statistically significant. All measures from household surveys are only estimates of “true” poverty because they are derived from a population sample, not a population census. All estimates therefore carry margins of error that must be computed in order to provide an indication of the precision of the estimates. Moreover, since poverty measures are sensitive to the assumptions made by analysts in the estimation (see box 1.1), it is important to test whether the poverty rankings obtained among household groups or periods of time are robust to these assumptions.

Characteristics of individuals and households in different poverty groups

A first step in constructing a poverty profile is to analyze the characteristics of the different socioeconomic income or consumption groups in the country. This allows for a better understanding of who are the poor and what are the differences between the poor and the nonpoor. The profile may include information on the identity of the poor in addition to their locales, habits, occupations, means of access to and use of government services, and their living standards in regard to health, education, nutrition, and housing, among other topics. It is important that the data gathered in the profile to describe the living conditions of the poor be placed in the political, cultural, and social context of each country. In other words, qualitative and historical information as well as institutional analysis are necessary to complement and give meaning to the profile.

When doing such analysis, it might be useful to separate the tabulations for those groups that are expected to be very different. In table 1.2, we present information on households’ education,

Box 1.4. Key Questions to Ask When Measuring Poverty

Income or consumption aggregate:

- Which module of the household survey is better developed, income or consumption?
- Does the household survey include the necessary price data for spatial and intertemporal deflation of the welfare aggregate? If not, are there other price data available that can be used? Does this price information truly reflect price variations by, for instance, agroclimatic zone?
- Are certain markets rationed? Do certain consumption or income components have to be shadow-priced?
- Which consumption or income series is incomplete for households? What information must be imputed?

Poverty line:

- Does a poverty line already exist in the country? If so, is it well accepted?
- If a new poverty line is derived, should international standards of setting the poverty line be followed?
- Can a basic nutritional basket underlying poverty line computations be derived from the existing household survey?

Poverty measure:

- Are poverty comparisons by region stable across different measures, such as headcount, gap, and severity?
- How do estimated poverty measures change with small alterations in the poverty line (sensitivity test)?
- Which poverty measure, and at which aggregation level, is most used in a country?
- Is it important for the national debate on poverty to focus more on distribution-sensitive forms of income-poverty measurement?

Table 1.2. Some Characteristics of the Poor in Ecuador (1994)

	<i>Urban</i>		<i>Rural</i>		<i>Total</i>	
	<i>Poor</i>	<i>Nonpoor</i>	<i>Poor</i>	<i>Nonpoor</i>	<i>Poor</i>	<i>Nonpoor</i>
Education						
Education of head (years)	5.2	9.1	3.2	4.7	4.0	7.5
Employment						
Informal sector	54.6	44.1	27.9	35.8	39.2	41.7
Regulated sector	15.5	35.3	3.4	9.9	8.6	26.7
Access to basic services						
Sewerage connection (%)	57.3	83.4	12.4	28.2	29.6	63.8
Electricity supply (%)	97.8	99.5	62.0	75.8	75.8	91.1
Water from public net (%)	61.2	78.8	18.3	23.0	34.8	59.3
Waste collection (%)	59.7	76.7	1.1	5.6	23.5	51.5

Source: World Bank (1996a).

employment, and access to services in Ecuador by urban and rural areas. The table shows that the poor have, on average, lower education levels and less access to services. However, on average, the same proportion of households is engaged in the informal sector among the poor and the nonpoor (although patterns differ in urban and rural areas). When looking at urban and rural areas separately, it appears that access to services such as electricity is very similar for the poor and nonpoor in urban areas. Thus, it can be concluded that this dimension is not a correlate of urban poverty. When carrying out such an analysis, one should remember that we are looking at averages only, which can hide very large variations; for instance, some of the poor might be highly educated, while some of the nonpoor may be minimally educated.

The analysis can also be carried out by quintiles or deciles of the selected indicator rather than simply by poor and nonpoor. This is particularly relevant in the case of those indicators for which a poverty line cannot be drawn. Table 1.3 presents some results from Senegal for a composite welfare indicator derived from a Demographic and Health Survey (see technical note A.14). The table distinguishes among five wealth quintiles of the population and reveals that those in the lower quintiles have higher mortality, higher fertility, and have less likelihood of receiving care from trained persons when giving birth. The table also reports the ratio of the poorest to the richest, a measure allowing an appreciation of the size of the gap between the two groups (this measure of inequality is similar to the decile dispersion ratio presented later in section 1.3.1).

Poverty comparisons between groups and over time

Poverty comparisons between groups

The poverty profile focuses on presenting the poverty characteristics of various household groups. The choice of the types of groups will be driven by some ex ante knowledge of important dimensions (where qualitative data can help) or by dimensions that are relevant for policies. For instance, geographic location, age, or gender might be dimensions along which policies can be developed. Another dimension that can provide useful insights for policy elaboration is the link between employment and poverty. This

Table 1.3. Socioeconomic Differences in Health (Senegal 1997)

<i>Indicator</i>	<i>Quintiles</i>					<i>Population Poorest/Richest</i>	
	<i>Poorest</i>	<i>Second</i>	<i>Middle</i>	<i>Fourth</i>	<i>Richest</i>	<i>Average</i>	<i>Ratio</i>
Infant mortality rate	84.5	81.6	69.6	58.8	44.9	69.4	1.9
Total fertility rate	7.4	6.8	6.2	5.2	3.6	5.7	2.1
Deliveries attended by medically trained person (%)	20.3	25.4	45.3	69.3	86.2	46.5	0.2

Source: Gwatkin and others (2000), based on the Demographic and Health Survey of 1997.

could indicate which sectoral pattern of growth would have the highest impact on poverty (see section 1.3.3 for techniques to simulate changes in poverty that result from growth in various sectors).

The three main ways to present a poverty profile follow.

- **Poverty measures according to household groups.** The first and most common method of presenting poverty data is to give poverty measures for various household groups. For example, table 1.4 shows that, in Malawi, households without education have higher poverty incidence than those with higher levels of education. Table 1.5 presents another example that shows households living in Barisal in Bangladesh had a poverty incidence of 60 percent in 1996 as compared to 53 percent for the country as a whole.
- **Contribution of various household groups to poverty measures.** An alternative way to present a poverty profile is to assess how various household groups contribute to the overall poverty of the country. The contribution of a household group to overall poverty is a function of that group's population share and the incidence of poverty in the group. Table 1.5 shows that the population living in the Barisal division represents 7 percent of the population, and the headcount index is 60 percent, against a national average of 53 percent. Therefore, the share of all the poor living there is 8 percent ($8 = 7 * 60/53$). In the case of Madagascar, the table shows that 14 percent of the country's poor live in urban areas ($14 = 21 * 47/70$).
- **Relative risk.** Poverty measures can be translated into relative risks of being poor for different household groups. These risks estimate the probability that the members of a given group will be poor in relation to the corresponding probability for all other households of society (all those not belonging to the group). In Madagascar, the table indicates that urban households are 39 percent less likely to be poor than nonurban (that is, rural) households ($0.39 = 1 - 47/77$), while rural households are 63 percent more likely to be poor than nonrural (that is, urban) households ($0.63 = 1 - 77/47$). Similar calculations could be carried out relative to the entire population or to a select group.

The extent to which a detailed poverty profile can be constructed depends on the type of data available. Multitopic surveys are ideal for developing detailed poverty profiles, but many other types of surveys can be used as well. For example, Demographic and Health Surveys can be used to relate household characteristics with household wealth (see technical note A.14). Monitoring surveys can also

Table 1.4. Poverty Incidence Among Various Household Groups in Malawi (1997/98)

<i>Characteristics of household or household head</i>	<i>Poverty incidence</i>	<i>Poverty depth</i>	<i>Poverty severity</i>
Southern region	68.1	0.254	0.134
Central region	62.8	0.212	0.105
Northern region	62.5	0.231	0.111
Rural	66.5	0.239	0.122
Urban	54.9	0.191	0.097
Male	57.9	0.22	0.11
Female	65.6	0.28	0.15
Under 20	40.7	0.17	0.09
20 to 29	49.6	0.18	0.08
30 to 44	61.2	0.25	0.13
45 to 64	61.5	0.25	0.13
65 and older	66.9	0.25	0.12
No education	70.6	0.31	0.17
Less than standard IV	63.2	0.25	0.13
Standard IV	58.1	0.22	0.11
Primary school	47.2	0.15	0.06
Secondary school	29.8	0.08	0.03
University	15.5	0.07	0.04

Source: National Economic Council, Malawi (2000).

Table 1.5. Geographic Poverty Profile for Bangladesh (1995–96) and Madagascar (1994)

Bangladesh (1996)	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	National
Population share	7	26	31	12	24	100
Headcount index	60	45	52	52	62	53
Share of all poor	8	22	30	12	28	100
Relative risk	+14%	-20%	-3%	-3%	+24%	
Madagascar (1994)	Total urban	Capital city	Major urban	Other urban	Rural	National
Population share	21	10	5	7	79	100
Headcount index	47	41	43	59	77	70
Share of all poor	14	6	3	6	86	100
Relative risk	-39%	-44%	-41%	-17%	+63%	

Source: From various resources developed by authors.

be used to establish links between income or wealth and variables such as school enrollment rates, access to basic services, and satisfaction with service delivery.

While certain variables like education, health, and access to service will almost always be part of a poverty profile, the relevance of many variables will depend on country circumstances and on the data source available. The profile should, if possible, identify the major production and consumption characteristics of the poor: whether the rural poor farm their land, function as agricultural wage laborers, or work in various nonfarm activities, or whether the urban poor work as wage employees or as microentrepreneurs in the informal sector. Data on asset holdings by the poor are also relevant, as are their production technologies, use of inputs, and access to social and infrastructure services. Information on the composition of poor people's consumption, including their access to public goods, is also valuable. Cross-links to other forms of poverty, such as lack of education, health care, and security, can also be established. Box 1.5 summarizes key questions to ask when constructing a poverty profile.

If the surveys were designed to be representative of relatively small geographic areas (the district level, for example), the various measures could also be presented graphically on a poverty map. More than one poverty measure could be presented on the map (child malnutrition incidence and income poverty incidence could be presented simultaneously). A particularly useful combination would be to include indicators of outcomes and indicators of access to services to study the correlation and to guide the allocation of resources among local administrative units.

If the survey's design is not representative at a level that is sufficiently small—for instance, at a level larger than the administrative area covered by a ministry (some surveys are representative at the regional level only, while ministries operate at the district level), census and survey data can then be combined to predict poverty measures at the municipal level, using a model for the determinants of poverty estimated with the household survey and comprising variables in the census itself (see technical note A.4).

Poverty comparisons across countries are difficult for several reasons. The best option would be to use a fixed poverty line, since households would then uniformly be labeled “poor” if they consume less than a fixed bundle of goods. However, both absolute and relative prices of different goods and services differ across countries. In order to allow comparison, one can develop conversion factors, which reflect how many goods the local currency buys within each country. On the basis of information on prices, gross domestic product (GDP) structure, population figures, and exchange rates, a set of purchasing power parity (PPP) conversion factors have been developed to allow such comparisons. However, even once PPP factors are used (and assuming they reflect reality), cross-country comparisons still rely on the assumption that consumption and income are measured homogeneously across countries. Significant distortions can be introduced if survey instruments differ from each other or purchasing power parities do not reflect the actual price differentials between a basket of goods important to the poor. Comparing national poverty rates based on nationally derived poverty lines—those anchored in nationally specific consumption patterns and food requirements—is a feasible alternative only to the extent that the

Box 1.5. Key Questions to Ask When Preparing a Poverty Profile

- How robust is a ranking of poverty by area or group to variations in the poverty line?
- How is income poverty correlated with gender, age, urban and rural, racial, or ethnic characteristics?
- What are the main sources of income for the poor?
- On what sectors do the poor depend for their livelihood?
- What products or services—tradables and nontradables—do the poor sell?
- To what extent are the rural poor engaged in agriculture? In off-farm employment?
- How large a factor is unemployment? Underemployment?
- Which are the important goods in the consumption basket of the poor? How high is the share of tradables and nontradables?
- How is income poverty linked with malnutrition or educational outcomes?
- What are fertility characteristics of the poor?
- To what public services do the poor have access? What is the quality of the service?
- How important are private costs of education and health for the poor?
- Can the poor access formal or informal credit markets?
- What assets—land, housing, and financial—do the poor own? Do property rights over such assets exist?
- How secure is their access to, and tenure over, natural resources?
- Is environmental degradation linked to poverty?
- How variable are the incomes of the poor? What risks do they face?
- Does poverty vary widely between different areas in the country?
- Are the most populated areas also the areas where most of the poor live?
- Are certain population groups in society at a higher risk of being poor than others?
- If so, can those groups be defined by age, gender, ethnicity, place of residence, occupation, and education?

Source: Based in part on World Bank (1992).

poverty lines estimated in the various countries represent similar welfare levels (see [http:// www.worldbank.org/data/ppp/](http://www.worldbank.org/data/ppp/) and <http://pwt.econ.upenn.edu/>).

Poverty comparisons over time

If consecutive rounds of a household survey, several separate surveys, or a survey with a panel component are available, changes in income poverty over time can be assessed (see section 1.5.2 for definitions). (A survey with a panel component is a survey with consecutive rounds during which the same households or individuals are interviewed at different points in time.) This requires poverty measures comparable with and reflective of differences over time in the cost of living across regions. The standard method for preparing comparisons over time consists of converting nominal income or consumption data from different surveys and regions into real income and consumption by deflating the indicators in space and time. A constant poverty line can then be applied to these real values to infer poverty measures. Ideally, to obtain robust poverty comparisons over time, one would want to use surveys with similar sampling frame and methods, with corrections for price differences, and with similar definitions of consumption or income. In practice, however, differences exist in some of these dimensions. This does not imply that no comparison can be made; it simply means that the analyst will need to:

- correct for major differences in the sampling frame and sampling method for the different surveys or the different rounds of a panel survey;
- use regional and temporal price indexes to ensure a similar definition of the poverty line over time and across regions; and
- adjust the definition of consumption or income aggregates over time to ensure a similar definition is used. Changes in definitions, particularly in the degree to which home production is included in the definition, can lead to important distortions of poverty measurement. Technical note A.3 presents an example of the types of adjustments that can be made.

Box 1.6 highlights key questions to be considered before proceeding with comparisons over time.

When several rounds of a survey are available, the analyst can investigate changes in the regional distribution of poverty or in the major characteristics of the poor, such as ethnicity, gender, age, urban and rural location, employment, access to social programs and basic services, and so forth. Although the various population groups identified in the first period of time should clearly form the basis of the analysis over time, it is also important to investigate whether or not “new” groups of poor people have appeared. This is particularly relevant for countries that undergo rapid changes linked to such factors as economic reforms, conflicts, natural disasters, and epidemics such as HIV/AIDS. For example, figure 1.1 compares the headcount indexes of poverty by sector of employment in Burkina Faso in 1994 and 1998. The incidence of poverty declined for those employed in export agriculture and for households without working members, and it increased for all other categories. These types of results can provide insights into the stability of poverty characteristics and the relevance of various policies, including the use of targeting devices.

One can also look at changes in the characteristics of different poverty groups (along the lines of tables 1.2 and 1.3). For example, the distribution of access to services in the base year can be compared with the distribution of services in the second year. The patterns can then be compared to uncover whether changes made in the supply of the services have been pro-poor. In Ghana, as shown in figure 1.2, while the nonpoor saw their access to services increase over time (those with access to electricity increased from 73 to 85 percent), the situation of the very poor and poor did not improve over the period. In some cases, it even worsened. This information, and further disaggregation by locality, can help improve the provision of services.

The concept of relative poverty risk introduced above can also be applied to the analysis of changes in poverty over time using repeated cross-section surveys. The objective is to examine whether the relative poverty risk of specific population groups increases or decreases over time. Table 1.6 compares the relative poverty risk of various groups in Peru in 1994 and 1997. It shows, for example, that the poverty risks of households of seven persons or more increased over time (from 71 percent to 106 percent), while that of households where the spouse of the head is working diminished (from -11 percent to -21 percent).

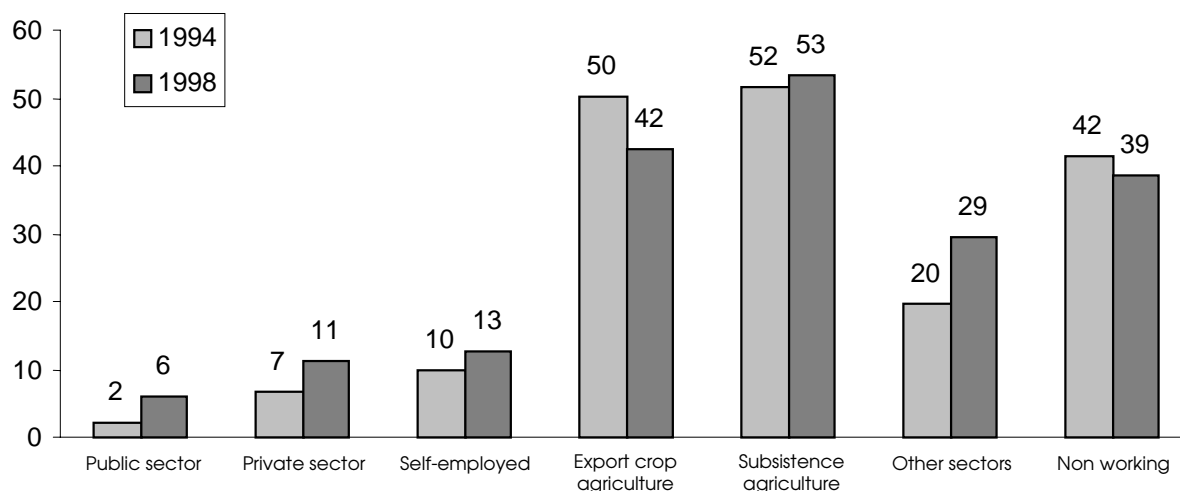
It is also possible to decompose a national change in poverty into the effects of changes in poverty within groups or among groups or sectors. This allows the analyst to assess whether poverty has changed because poverty within certain groups has changed or because people have moved to more affluent or poorer groups. More specifically, the national change in poverty is decomposed into intrasectoral effects (changes in poverty within sectors), intersectoral effects (changes in population shares across sectors), and interaction effects (correlation between sectoral gains and population shifts—

Box 1.6. Key Questions to Ask When Comparing Poverty Measures Over Time

When comparing poverty over time, the indicators of well-being should be identical to avoid distortions. The distortions can result from changes in the questionnaire.

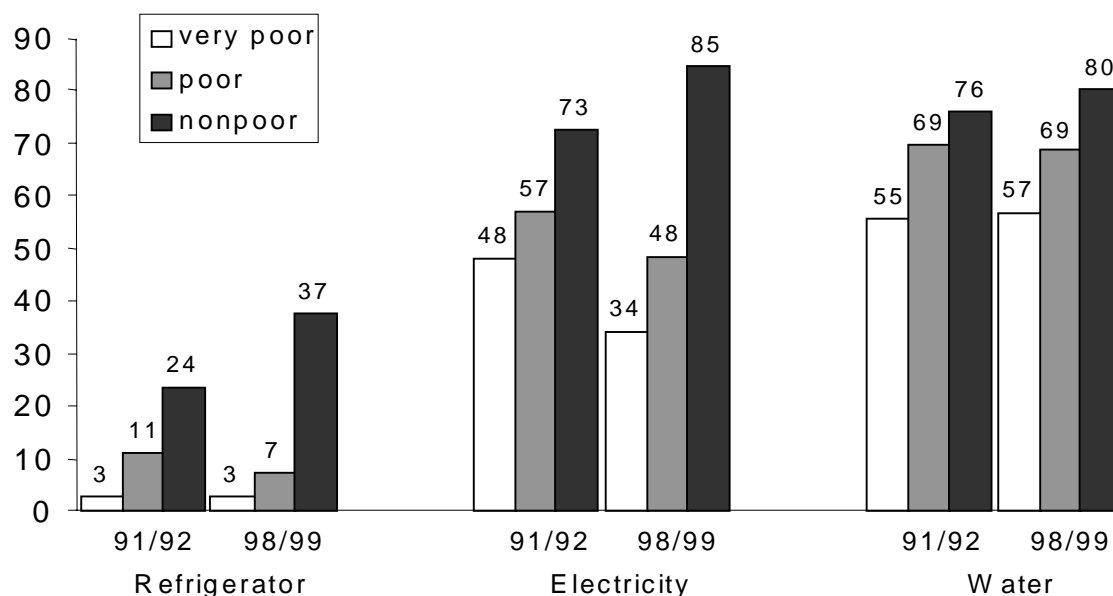
- 3 Are the number of items covered in the surveys the same? For example, the indicator in the second survey might include expenditures and auto-consumption of a specific food item that was not included in the first survey round. In this case households with the same true consumption in the two periods will appear to have higher measured consumption in the second period. If the poverty line is fixed, the computations will report a reduction in poverty even though there may not have been any real improvement.
- 3 Is the level of detail for specific items the same? This is especially important when prices for different types of the same item are likely to be different; for example, when only one type of flour is subsidized or when some goods are available only in urban areas.
- 3 Are questions phrased in an identical way? Different phrasing can influence the level and structure of responses.
- 3 Is the recall period the same? It has been shown that the accuracy of reporting varies with the length of the recall period.
- 3 Is the method used for estimating specific items identical across surveys? Differences might arise, for example, when consumption from self-production is given either in monetary terms or by quantities.

Since the distortions can be substantial, the questionnaires and definitions should be carefully examined. When indicators are not comparable, specific approaches can still permit poverty comparisons. These approaches may involve assumptions that the consumption measures are monotonically increasing in total expenditure, that relative prices do not change dramatically over time, and that the data contain no measurement errors. Then robust poverty comparisons can be made by using the headcount measure and a poverty line based on the cost of basic needs method (Lanjouw and Lanjouw 1997).

Figure 1.1. Poverty Incidence Across Sectors of Employment (Burkina Faso), 1994–98

Source: Institut National de la Statistique et de la Démographie, Enquête Prioritaire (1999).

depending on whether or not people tend to move to sectors where poverty is falling). This poverty decomposition for Uganda shows that 54 percent of the total change in poverty is the result of poverty reduction in the cash crop sector alone (table 1.7). Interaction effects are small but positive, showing that those who moved tended to enter sectors where poverty was falling faster. Population shifts between sectors explain only 2 percent of total change in poverty, suggesting the relative immobility of the workforce in terms of employment sectors. This might reveal barriers to entry into some sectors. Either such barriers would need to be removed if the poor are to benefit from growth in the more promising sectors, or interventions would have to focus more on generating growth in the sectors where the poor work (see technical note A.1 for technical details).

Figure 1.2. Percentage of Households, by Poverty Group, with a Refrigerator, Access to Electricity, and Access to Water (Ghana 1991/92–1998/99)

Note: Access to water denotes access to water from private pipe, neighbor/private source, or public pipe.

Source: Ghana Statistical Service (2000).

**Table 1.6. Poverty Risks for Selected Groups of Households
(Peru 1994 and 1997) (percent)**

<i>Household characteristic</i>	<i>1994</i>	<i>1997</i>
Households using house for business purposes	-28	-29
Rural households with at least one member in off-farm employment	-24	-23
Households with head's spouse working*	-11	-21
Households without water or sanitation	+54	+50
Households without electricity	+63	+69
Households with head having less than a secondary education	+73	+72
Households of seven persons or more	+71	+106

*Engaged in remunerated work for at least seven days before the survey was conducted.

Source: World Bank (1999b, p. 25).

The correlates of poverty

Poverty and poverty changes are affected by both microeconomic and macroeconomic variables. Within a microeconomic context, the simplest method of analyzing the correlates of poverty is to use regression analysis to see the effect on poverty of a specific household or individual characteristic while holding constant all other characteristics, which is the focus of this section. Obviously, the overall economic and social development of a country also will be an important determinant of poverty—whether jobs are created through economic growth, in which sectors such growth occurs, and whether the fruits of growth are spread equally or benefit certain groups in society more than others. Section 1.3.3. explores simple models for assessing the impact of growth and inequality on poverty.

Table 1.7. Sectoral Decomposition of Changes in Poverty (Uganda 1992/93–1995/96)

<i>Sector</i>	<i>Poverty incidence (headcount)</i>			<i>Population share</i>			<i>Contribution to change in total poverty incidence (percentage)</i>
	<i>1992/93</i>	<i>1995/96</i>	<i>Change (percentage point)</i>	<i>1992/93</i>	<i>1995/96</i>	<i>Change (percentage point)</i>	
Food crop	64	62	-2	47	44	-3	10
Cash crop	60	44	-16	23	27	3	54
Noncrop agriculture	53	40	-13	3	2	-1	5
Mining	32	74	43	0	0	0	-1
Manufacturing	45	27	-17	4	3	0	9
Public utilities	34	11	-23	0	0	0	0
Construction	38	35	-4	1	1	0	1
Trade	26	19	-7	7	7	0	6
Hotels	30	20	-11	1	1	1	1
Transport/communication	32	15	-17	2	2	0	4
Government services	26	29	3	2	2	1	-1
Other services	35	28	-7	7	6	-1	7
Not working	60	63	3	4	5	1	-2
<i>National total</i>	56	49	-7	100	100	0	
<i>Total intrasectoral</i>							94
<i>Total intersectoral</i>							2
<i>Total interaction</i>							4

Source: Appleton (1999).

Analysis of correlates of poverty can be carried out if a multitopic household survey is available, using multivariate income and consumption regressions (see technical note A.8). In these regressions, the logarithm of consumption or income (possibly divided by the poverty line) is typically used as the left-hand variable. Right-hand explanatory variables span a large array of possible poverty correlates, such as education of different household members, number of income earners, employment characteristics, household composition and size, and geographic location. Special care must be taken when including variables that themselves are likely a function of income or consumption availability—for example, access to basic services. The regressions will return results only for the degree of association or correlation, not for causal relationships.

Before proceeding, it is important at this stage to note that numerous correlates or determinants of poverty are not quantifiable. For some other variables, one might only be able to use a proxy, which might not fully reflect the underlying dimensions. The method used here is able to take into account only those dimensions that are quantifiable or for which a proxy is available. It is also important that the various coefficients obtained from a regression will have different degrees of significance.

These multivariate regressions will estimate the partial correlation coefficient between income or consumption per capita and the included “explanatory” variables while holding all other impacts constant. For example, the results could tell us how strongly an additional year of education for the household head or his spouse is associated with a change in income or consumption per capita while holding gender, employment, age, location, and all other possible influences constant. The results can tell us, then, much more than the simple relative poverty risks discussed in the previous section, since high relative poverty risk of a specific population group could indeed be attributable to individual characteristics, such as education, rather than to a group characteristic.

Table 1.8 shows an example of such a regression in Côte d’Ivoire. It indicates that education plays a different role in urban and rural areas (where it does not seem to significantly influence consumption), as do different types of assets. In rural areas, infrastructure has substantial predictive power—households located in villages that are nearer to both paved roads and public markets are better off, as are households located in areas with higher wage levels. The results pose further questions that could be addressed in putting together a poverty reduction strategy—questions about the quality of education in rural areas and the importance of rural infrastructure in helping families out of poverty.

The information obtained from multivariate regression can be used to construct easy-to-use software that permits simulations of the impact of changes in household characteristics on the expected per capita income of a household and its probability of being poor or extremely poor. Technical note A.8 details an example of such software.

Several variations of these multivariate income regressions can be used to examine the correlates of the income of the poor. Poverty analysis focuses on correlates of income and expenditure at the lower end of the distribution rather than the correlates at the top end. One can then perform different regressions for each quintile, or quartile, of the population. Whether these regressions can be conducted will depend partly on the sample size of the survey. Alternatively, the regression can examine structural differences in parameter estimates for different income or expenditure groups. Box 1.7 describes types of regression analysis.

When multiple cross-sectional surveys are available, the same regression can be repeated for different years to see how the association of certain correlates with income or consumption varies over time. Variations over time will be reflected in changes in coefficients or parameters. The results of repeated cross-section regressions can also be used to decompose changes in poverty between changes in household characteristics and changes in the returns to (or impact of) these characteristics (see, for example, Wodon 2000). Another possibility is to use parameters from the regression model obtained for year 1 in order to predict household income or consumption in year 2, and to compare this prediction with the prediction obtained using the regression estimates for year 2 applied to the data for year 2. The differences in the predictions with the two models can then be analyzed, and one can test whether changes in income between years is due to changes in structural conditions or changes in the behavior of households between the two years.

Table 1.8. Determinants of Household Spending Levels in Côte d'Ivoire

	<i>Urban</i>	<i>Rural</i>
Education level of most educated male		
Elementary	.38 (5.3)	0.04 (0.6)
Junior secondary	.62 (8.6)	0.08 (0.9)
Senior secondary	.80 (9.6)	0.05 (0.4)
University	.93 (9.4)	–
Education level of most educated female		
Elementary	.11 (1.7)	0.07 (1.0)
Junior secondary	.24 (3.1)	0.27 (2.2)
Senior secondary	.34 (3.4)	–
University	.52 (4.1)	–
Value of selected household assets		
Home	.06 (5.3)	–
Business assets	.04 (3.3)	0.16 (4.9)
Savings	.08 (4.7)	–
Hectares of agricultural land		
Cocoa trees	–	0.17 (4.3)
Coffee trees	–	0.04 (1.3)
Distance to nearest		
paved road	–	-0.04 (-2.9)
market	–	-0.09 (-3.3)
Unskilled wage (males)	–	0.37 (6.4)

– = Not applicable.

Note: T-statistics are in parentheses.

Sources: Adapted from Grosh and Munoz (1996, p. 169), based on Glewwe (1990).

Apart from income and consumption regressions, several other types of multivariate regressions can provide additional insights into the determinants of poverty. These can be applied particularly to other dimensions of poverty, such as child nutrition, mortality, morbidity, literacy, or other measures of capabilities. Box 1.8 highlights key questions that can be addressed. The techniques are also sometimes applied to understand the determinants of employment and labor income and to estimate the returns to education (technical note A.10). They can also be used to better understand agricultural production patterns by estimating agricultural production functions (which relate production to information on type of crops grown per area, harvest, inputs into agricultural production, and input and output prices).

Tests for the robustness of poverty comparisons

Poverty comparisons inform policy design and the evaluation of poverty reduction strategies. For example, if poverty decreases from one year to the next, this may suggest a good performance of the

Box 1.7. Income Regressions versus Probit/Logit/Tobit Analysis

An alternative to exploring the correlates of poverty by using the logarithm of income per capita as the endogenous variable is to run a probit, logit, or tobit regression. In a probit or logit, the endogenous variable is a dummy variable, with 1 representing the individual being poor, and 0 the nonpoor. Probits and logits have been used in many poverty assessments. However, the underlying variable with which the dummy for poverty is constructed is income or consumption per capita. The probit/logit uses an artificial construct as the endogenous variable. Much of the information about the actual relationship between income and determining factors is lost. In addition, probit/logit regressions are much more sensitive to specification errors than linear regressions. Since there is no difficulty in predicting poverty from a linear regression, this type of regression should be used instead of probits/logits. The same argument holds for tobit models in which the poverty gap (difference between the poverty line and a household's per capita income) is the endogenous variable. Again, the use of a tobit implies that the income distribution is artificially truncated.

There are, however, some appropriate uses of probit or logit regressions. First, for targeting analysis, probit and logit regressions can be used to assess the predictive power of various variables used for means testing (see technical note A.9). Second, when panel data are available, probit or logit regressions can be used to analyze the determinants of transient versus chronic poverty. The use of panel data for poverty analysis will be discussed later.

Box 1.8. Key Questions in Addressing Multiple Correlates of Poverty

- **Building on the poverty profile, what are the important variables correlated with income and expenditure levels that can be included in regression analyses?**
- **Are such factors directly linked to income and expenditures, or are other, nonmeasurable factors responsible?**
- **Which factors cannot be captured directly or indirectly through surveys but are likely to determine income and expenditure levels of households?**

authorities in charge of poverty reduction. However, due to the many assumptions involved in poverty measurement, it is important to test these assumptions for the robustness of poverty comparisons between groups or over time. Three main ways of testing for robustness are described below.

- **Standard errors.** The fact that poverty calculations are based on a sample of households, or a subset of the population, rather than the population as a whole, has implications. Samples are designed to reproduce the whole population, but they can never be exact because the information does not cover all households in a country. Samples carry a margin of error, and so do the poverty measures calculated from household surveys. The standard errors, which most statistical packages will easily calculate, depend on the sample design—essentially stratification and clustering—and the sample size in relationship to the size of the total population (see Deaton 1997 and Ravallion 1994 for a description of the standard errors of various poverty measures). When the standard errors of poverty measures are large, it may be that small changes in poverty, although observed, are not statistically significant and, thereby, cannot be interpreted for policy purposes.
- **T-statistics.** When carrying out multivariate regressions, it is also important to compute the T-statistics or standard errors, which inform the degree of significance of the various coefficients. It might be the case that the coefficient on a specific variable is large but not significantly different from zero. Attention should be paid to these significance levels when interpreting the results.
- **Sensitivity analysis.** Apart from taking into account standard errors when comparing poverty measures between groups or over time, it is important to establish the robustness of the poverty comparisons to the assumptions made by the analyst. This may call for repeating the analysis for alternative definitions of the income aggregate and alternative ways of setting the poverty line. The sensitivity analysis, for example, may focus on the impact of changes in the construction of the income or consumption aggregate when imputations for missing values or corrections for underreporting of income in the surveys are implemented. Alternatively, one can test results with various lines—for instance, the base poverty line plus and minus 5 percent in monetary value. Tests can also be conducted for checking the sensitivity of poverty comparisons to the assumptions regarding economies of scale and equivalence scales within households.
- **Stochastic dominance.** Profiles allow a ranking of various household groups (or various time periods) in terms of their level of poverty. However, it is important to test whether the ranking is robust to the choice of the poverty line. This leads to a special type of robustness test, referred to as stochastic dominance, that deals with the sensitivity of the ranking of poverty levels between groups or between periods of time to the use of different poverty lines. The simplest way to do this (for the robustness of poverty comparisons based on the headcount index of poverty) is to plot the cumulative distribution of income for two household groups or two periods of time, as shown in figure 1.3 and box 1.9. One can then see whether the curves intersect. If they do not intersect, then the group with the highest curve is poorer than the other group. If they do intersect, then for any poverty line below the intersection, one group is poorer, and for any poverty line above the intersection, the other group is poorer. For further details on stochastic dominance tests, see technical note A.5.

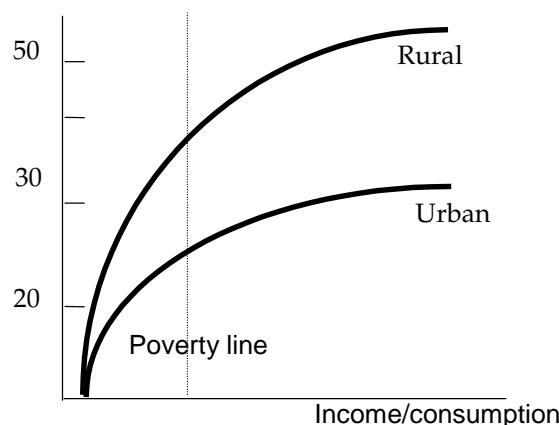
1.3 Inequality Measurement and Analysis

A second definition of welfare often considered in analysis is that of “relative” poverty, defined as having little in a specific dimension compared to other members of society. This concept is based on the idea that the way individuals or households perceive their position in society is an important aspect of

Box 1.9. Cumulative Distribution Functions

Cumulative distribution functions indicate the change in poverty incidence resulting from changes in the poverty line. In figure 1.3, the horizontal axis shows monetary values while the vertical axis shows cumulative percent of the population. If the poverty line intersects a steep part of the distribution function, small variations in the poverty line will cause large variations in the calculated poverty rates. Distribution functions are also powerful tools to compare well-being in different areas of the country as, for example, between rural and urban areas (figure 1.3). Another way of testing the sensitivity of calculated poverty measures is simply to calculate the various poverty indexes for various lines, such as the base poverty line plus and minus 5 percent in monetary value. One can then compare the results across different groups or periods of time.

**Figure 1.3. Cumulative Distribution Functions
(percent population)**



their welfare. To a certain extent, the use of a relative poverty line in the previous sections does capture this dimension of welfare by classifying as “poor” those who have less than some societal norm.

The overall level of inequality in a country, region, or population group—and more generally the distribution of consumption, income, or other dimensions—is also an important dimension of welfare in that group. This section summarizes the concept and the most commonly used inequality measures (section 1.3.1) and then turns to some analysis that can be carried out on the basis of these indicators (section 1.3.2). Finally, section 1.3.3 ties together our discussions about inequality in this section with the definitions and measurement of poverty in section 1.2. It explores how inequality, growth, and poverty are linked and presents simple simulations that can help to assess the likely impact of future growth and its distribution on poverty.

1.3.1 Inequality concept and measurement

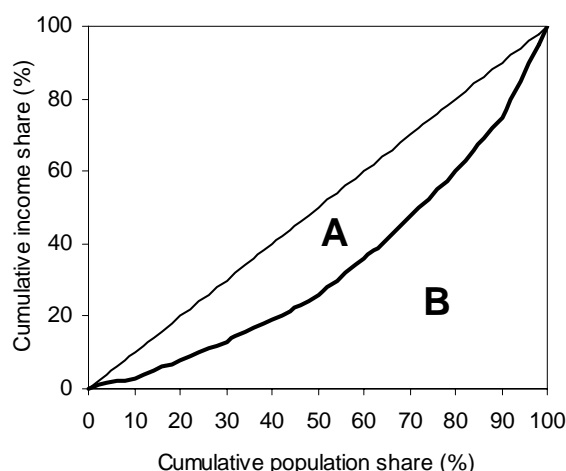
Poverty measures depend on the average level of income or consumption in a country and the distribution of income or consumption. Based on these two elements, poverty measures therefore focus on the situation of those individuals or households at the bottom of the distribution. Inequality is a broader concept than poverty in that it is defined over the entire population, not only below a certain poverty line. Most inequality measures do not depend on the mean of the distribution (at least this is considered to be a desirable property of an inequality measure). Instead, inequality is concerned with distribution.

Inequality indicators can be harder to develop than income poverty indicators because they essentially summarize one dimension of a two-dimensional variable. Note that inequality measures can be calculated for any distribution—not just for consumption, income, or other monetary variables—but also for land and other continuous and cardinal variables.

Some commonly used measures are provided in the list below. (The formulas for the computation of these indicators are presented in technical note A.7. A more detailed analysis of inequality and its impact on well-being, with many policy applications, is provided in chapter 2, “Inequality and Social Welfare.”)

- Gini coefficient of inequality.** This is the most commonly used measure of inequality. The coefficient varies between 0, which reflects complete equality, and 1, which indicates complete inequality (one person has all the income or consumption; all others have none). Graphically, the Gini coefficient can be easily represented by the area between the Lorenz curve and the line of equality. In figure 1.4, the Lorenz curve maps the cumulative income share on the vertical axis against the distribution of the population on the horizontal axis. In this example, 40 percent of the population obtains around 20 percent of total income. If each individual had the same income, or total equality, the income distribution curve would be the straight line in the graph—the line of total equality. The Gini coefficient is calculated as the area A divided by the sum of areas A and B. If income is distributed equally, then the Lorenz curve and the line of total equality are merged, and the Gini coefficient is 0. If one individual receives all the income, the Lorenz curve would pass through the points (0, 0), (100, 0), and (100, 100), and the surfaces A and B would be similar, leading to a value of 1 for the Gini coefficient. It is sometimes argued that one of the disadvantages of the Gini coefficient is that it is not additive across groups; that is, the total Gini of a society is not equal to the sum of the Ginis for its subgroups.
- Theil index.** While less commonly used than the Gini coefficient, the Theil index of inequality has the advantage of being additive across different subgroups or regions in the country. The Theil index, however, does not have a straightforward representation and lacks the appealing interpretation of the Gini coefficient. The Theil index is part of a larger family of measures referred to as the general entropy class.
- Decile dispersion ratio.** The decile dispersion ratio is also sometimes used. It presents the ratio of the average consumption or income of the richest 10 percent of the population divided by the average income of the bottom 10 percent. This ratio can also be calculated for other percentiles (for instance, dividing the average consumption of the richest 5 percent—the 95th percentile—by that of the poorest 5 percent—the 5th percentile). This ratio is readily interpretable by expressing the income of the rich as multiples of that of the poor.
- Share of income and consumption of the poorest x percent.** A disadvantage of both the Gini coefficients and the Theil indexes is that they vary when the distribution varies, no matter if the change occurs at the top, the bottom, or the middle (any transfer of income between two individuals has an effect on the indexes, irrespective of whether it takes place among the rich, among the poor, or between the rich and the poor). If a society is most concerned about the share of income of the people at the bottom, a better indicator may be a direct measure, such as the share of income that goes to the poorest 10 or 20 percent. Such a measure would not vary, for example, with changes in tax rates resulting in less disposable income for the top 20 percent to the advantage of the middle class rather than the poor.

Figure 1.4. Lorenz Curve of Income Distribution



1.3.2 Inequality analysis

Inequality comparisons

Many of the tools used in the analysis of poverty can be similarly used for the analysis of inequality. One could draw a profile of inequality that would look at the extent of inequality among certain groups of households. This provides information on the homogeneity of the various groups, an important element to take into account when designing interventions.

Analysis of changes in inequality over time can also be carried out. One could focus on changes for different groups of the population to show whether inequality changes have been similar for all or have taken place, say, in a particular sector of the economy. While rural incomes increased substantially in rural Tanzania between 1983 and 1991, inequality also increased (with a Gini coefficient increasing from 0.52 to 0.72), especially among the poor. This can be linked to important reforms that took place in the agricultural price policy, which has intensified inequalities, with the poor and less efficient farmers unable to participate in the growth experienced by wealthier, more efficient farmers (Ferreira 1996).

Another aspect of inequality analysis is the comparison of the level of inequality in different dimensions. In a country where public health provision is well developed and reaches all strata of the population, one could expect to see lower levels of inequality in health outcomes than in income levels. This comparison can be done using tabulations along the lines of table 1.3, presenting measures of inequality (in table 1.3, the ratio of the average for the higher quintile to that of the lower quintile) for different dimensions and comparing the value of the measures.

Analysis could also focus on the inequality of different consumption categories or income sources. In Egypt it was found that agricultural income represents the most important inequality-increasing source of income, while nonfarm income has the greatest inequality-reducing potential. Table 1.9 presents the decomposition and shows that, while agricultural income represents only 25 percent of total income in rural areas, it contributes to 40 percent of the inequality.

Decomposition of income inequality

The common inequality indicators mentioned above can be used to assess the major contributors to inequality, by different subgroups of the population and regions as well as by income source. In static decompositions, household and personal characteristics—education, gender, occupation, urban and rural, and region—are determinants of household income. If that is the case, then at least part of the value of any given inequality measure must reflect inequality between people with different educational levels, occupations, genders, and so on. This inequality is referred to as the between-group component.

For any such partition of the population, whether by region, occupation, sector, or any other attribute, some inequality will also exist among people within the same subgroups; this is the “within-group” component. The Theil index and those of the generalized entropy class can be decomposed across these partitions in an additive way (see technical note A.7). Using the Theil coefficient, the within-area (within rural areas and within urban) contribution to inequality in Zimbabwe in 1995/1996 was 72

Table 1.9. Decomposition of Income Inequality in Rural Egypt (1997)

<i>Income Source</i>	<i>Percentage of households receiving the income source</i>	<i>Share in total income (percent)</i>	<i>Gini coefficient for the income source</i>	<i>Percentage contribution to overall income inequality</i>
Nonfarm	61	42	0.63	30
Agricultural	67	25	1.16	40
Transfer	51	15	0.85	12
Livestock	70	9	0.94	6
Rental	32	8	0.92	12
<i>Total</i>	100	100		100

Note: The Gini coefficient for agricultural income is high because of the numerous negative incomes in that category.
Source: Adams (1999).

percent, while the between-area (between urban and rural areas) component was 28 percent. In other words, differences among residents living within rural or within urban areas were much larger relatively than differences between rural and urban areas. In many Latin American countries, the between-area component of inequality has a much higher share in explaining total inequality.

In Ghana, both poverty and inequality decreased between 1988 and 1992. Table 1.10 shows an increase in mean expenditure and a decrease in inequality, mainly at the lower end of the distribution [GE(0) decreased by 5.6 percent]. However, when focusing on income and inequality levels in different localities, analysis shows that improvements in terms of income only took place in cities other than Accra and in rural areas. In Accra, poverty actually increased, from 9 to 23 percent, even if it still has the lowest poverty incidence in the country. In terms of inequality, the situation worsened in Accra for both measures. On the contrary, other cities improved throughout the distribution (for both measures), while in rural areas improvements were noted at the lower end of the distribution [decrease in GE(0) by 7.7 percent], with a very small overall deterioration. A more detailed analysis showed that all socioeconomic groups within each region had similar patterns. In Accra, the decline was linked to the important downsizing in the public sector (which employed 50 percent of the population), but in other cities, where a similar downsizing occurred, the development of the informal sector seems to have allowed the retrenched civil servants to find alternative sources of income.

Of equal interest is the question of which of the different income sources, or components of a measure of well-being, are primarily responsible for the observed level of inequality. For example, if total income can be divided into self-employment income, wages, transfers, and property income, one can examine the distribution of each income source. If one of the income sources was raised by 1 percent, what would happen to overall inequality? Table 1.11 shows the results for the Gini coefficient for both income and wealth sources in Peru (1997). As the table shows, self-employment income is the most equalizing income source, while agricultural property is the most equalizing wealth asset. Increase in some income sources would actually lead to increased inequality (when these sources are less equally distributed than overall income). The results depend on two factors: (1) the importance of the income source in total income (for larger ones, 1 percent increase is larger in absolute terms), and (2) the distribution of that income source (if it is more unequal than overall income, it will lead to a reduction; if

Table 1.10. Within-Group Inequality and Contribution to Overall Inequality by Locality (Ghana)

	<i>Accra</i>			<i>Other cities</i>		
	1988	1992	Change (%)	1988	1992	Change (%)
Mean expenditure	314	260	-17.1	206	225	9.0
Poverty incidence	9	23		33	28	
GE(0)	18.5	21.4	15.7	20.2	18.9	-6.4
Contribution (%)	7.9	9.5	20.3	26.8	25.6	-4.5
GE(1)	20.9	23.6	12.9	21.6	20.2	-6.5
Contribution (%)	13.4	11.5	-14.2	28.4	25.8	-9.2
	<i>Rural</i>			<i>All Ghana</i>		
	1988	1992	Change (%)	1988	1992	Change (%)
Mean expenditure	181	206	13.9	198	215	
Poverty incidence	42	34				
GE(0)	19.4	17.9	-7.7	19.5	18.4	-5.6
Contribution (%)	65.3	64.9	-0.6			
GE(1)	19.9	20.0	0.5	20.5	20.4	-0.5
Contribution (%)	58.2	62.7	7.7			

Note: Expenditure in thousand 1992 Accra Cedis. GE(0) and GE(1) are inequality measures of the general entropy family (see technical note A.3). E(0), the mean log deviation, is sensitive to changes at the lower end of the distribution. E(1), the Theil index, is equally sensitive to changes across the distribution.

Source: Canagarajah, Mazumdar, and Ye (1998).

it is less unequal, it will result in an increase in overall inequality). The size of impact will be greater the greater the distance from the overall level of inequality. A more detailed discussion of these types of simulations and their relevance for the analysis of well-being can be found in the chapter 2, “Inequality and Social Welfare.”

1.3.3 Inequality, growth, and poverty

Given that poverty is fully determined by the mean income or consumption and the inequality in income or consumption, it is feasible to simulate the impact of growth (an increase in mean income or consumption) and changes in inequality (a shift in the distribution across the population) on poverty. This type of analysis can be used to set targets for poverty reduction and to simulate the impact of various policy changes (which affect growth and/or distribution) on poverty levels. (Alternative methods for simulating the impact on poverty of economic growth and changes in inequality are presented in chapter 4, “Development Targets and Costs.”)

It is important to note that these techniques have important limitations, linked to the underlying strong assumptions. For example, if per capita GDP growth is used as a proxy for the growth in disposable income or private consumption, the implicit assumption is that GDP growth translates directly into household income or consumption. Also, when sectoral decompositions are used to analyze the poverty reduction impact of growth in various parts of the economy, the simulations typically assume that sectoral growth rates translate directly into household consumption and income growth rates in the same sectors; that is, that sectoral growth raises the wages of workers affiliated with the sector. Labor movements and secondary effects are also typically assumed to be absent. Growth in exports, for example, could have a positive technology spillover in other sectors of the economy. Thus, the tools presented in this section should be used with caution.

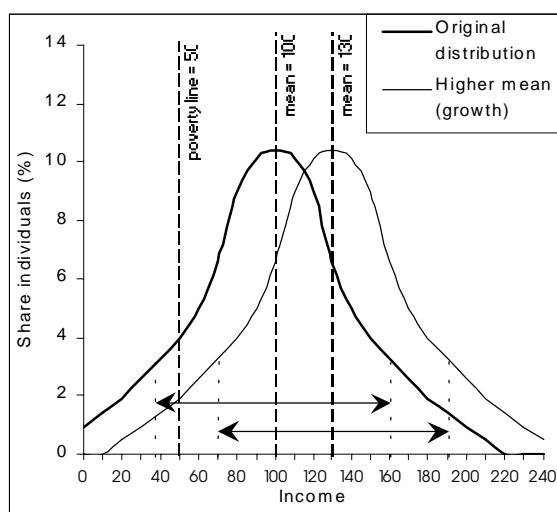
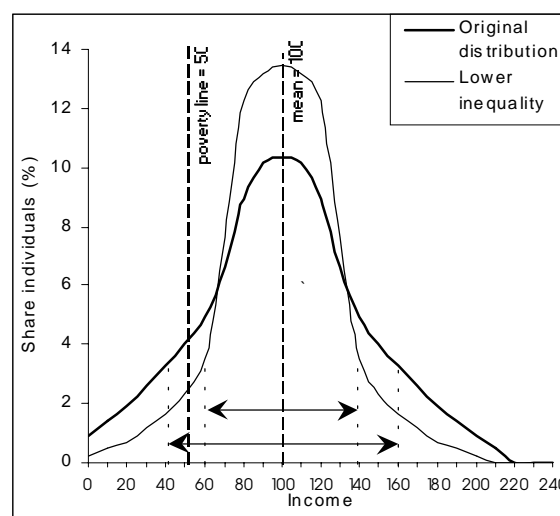
Figure 1.5 shows the difference between growth effects and inequality effects. The figure presents the distribution function of income or consumption (that is, the vertical axis shows the percentage of households with incomes of different levels, represented on the horizontal axis). The vertical dotted lines represent the means of the distribution and the poverty lines (set in this example at 50). The lines that link the distributions to the horizontal axis represent the 5th and the 95th percentiles of the population, that is, 5 percent of households have incomes below the left line, and 5 percent of households have incomes above the right line. The arrows between these lines give a measure of inequality (see section 1.3.1). The higher the dispersion between the 5th and the 95th percentile, the higher the inequality.

Figure 1.5a shows the impact of a uniform growth (where all individuals get an increase in income by 30), without any change in inequality. The entire distribution is simply shifted to the right. Figure 1.5b shows the impact of a decrease in inequality with constant mean (no growth). The two distributions have an equal mean, but the lower inequality distribution has lower dispersion (distance between 5th and 95th percentile). The impact on poverty is measured by the share of households below the poverty line (that is, the part of the distribution to the left of the line). In both cases, poverty is reduced. The purpose of this section is to distinguish between these two effects in order to better understand past changes or to design various simulations of future poverty levels.

Table 1.11. Peru: Expected Change in Income Inequality Resulting from 1 Percent Change in Income Source (1997) (percent of Gini change)

<i>Income source</i>	<i>Expected change</i>	<i>Wealth sources</i>	<i>Expected change</i>
Self-employment income	-4.9	Housing	1.9
Wages	0.6	Durable goods	-1.5
Transfers	2.2	Urban property	1.3
Property income	2.1	Agricultural property	-1.6
		Enterprises	0

Source: World Bank (1999b, p. 16).

Figure 1.5. Effect of Income/Consumption Growth and Inequality Changes on Poverty Levels**Figure 1.5a. Effect of Growth (higher mean)****Figure 1.5b. Effect of Reduced Inequality**

Simulations of future poverty with a single household survey

A single household survey with income and/or expenditure modules can be used to simulate the effect of growth and inequality on poverty. Such simulations can make different assumptions about inequality (it may remain constant, increase, or decrease), the sectoral distribution of growth (agriculture may be the engine of growth, in which case the population linked to agricultural activities would have a higher growth rate in personal incomes and expenditures than other groups), or the geographic distribution of growth.

Using 1993 as a baseline for Tanzania, table 1.12 shows how per capita growth rates and changes in inequality would translate into changes in poverty over a 20-year period. With a zero real per capita growth rate and no change of inequality, the poverty rate would remain unchanged. A 1.5 percent sustained per capita growth rate with no change in the distribution of income (all households get a 1.5 percent income gain per year) would yield a substantial reduction in poverty. If inequality were to improve at the same time, the poverty reduction would be greatly accelerated, even with a similar growth level (see section 1.3.1 for concept and measures of inequality).

The technique can be further refined to assess the impact of growth in different parts of the country—urban versus rural areas or by different sectors of the economy. Table 1.13 shows simulations for Peru. The simulations calculate how much severe poverty would change from 1997 to the year 2002 under different scenarios in terms of the growth of different sectors: first, it is assumed that the high-poverty sectors grow by 6 percent, then the medium-poverty sectors are assumed to grow at 6 percent, and the low-poverty sectors are assumed to grow at 6 percent (for each of these scenarios, the rest of the economy is assumed to grow at a much lower rate so that the overall growth rate is always 3 percent).

Table 1.12. Poverty, Inequality, and Growth in Tanzania

	1993	2005	2015
Poverty rate with			
0 percent growth, no change in Gini	50	50	50
1.5 percent growth, no change in Gini	50	35	18
1.5 percent growth, Gini reduction by 0.5 percent/year	50	30	3
3.0 percent growth, no change in Gini	50	25	5

Source: World Bank (1996d, p. 76).

Table 1.13 shows that pro-poor growth in Peru would mean especially that the economic upturn materializes in the agriculture and construction sectors. Similarly, a 6 percent growth is assumed to take place first in Lima, then in other urban areas, and, finally, in rural areas (while the growth in other regions is much lower, such that overall growth is 3 percent). Geographically, rural growth would result in larger poverty reduction.

Decomposition of changes in poverty with two or more surveys

When successive surveys are available, it is feasible to find how much of observed changes in poverty over time can be attributed to changes in distribution and to changes in mean income or consumption (see section 1.2.2 and technical note A.3 for limitations and difficulties in comparability). For example, lower poverty could result either from a general increase in the income of all households (without change in the income distribution) or from a decrease in inequality (redistribution from the rich to the poor without change in mean income or consumption). A change in poverty can always be decomposed into a growth component, a redistribution component, and a “residual” component (see technical note A.1 for details of the methodology).

An example can be taken from rural Tanzania, which experienced a decrease in poverty but an increase in inequality (see section 1.3.2). Decomposing changes in poverty incidence (headcount) and depth (poverty gap) reveals that, while the poor benefited from growth over the period, the rich captured a much greater share of economic improvement. If the distribution of income hadn’t changed, the reduction in poverty incidence would have been much larger and the poverty gap would have also decreased. Table 1.14 presents the results of the analysis and show that, using a high-poverty line, the head count would have decreased by 38 percent and the poverty gap by 24 percent. The changes in distribution (and interaction factors) resulted in a decrease in the head count of only 14 percent and in the poverty gap of only 2 percent.

Figure 1.6 provides another illustration that further distinguished among various locations. It shows that the greatest part of the overall reduction in poverty in Ghana in the 1990s was the result of growth in mean consumption (responsible for a drop of 7 percentage points in poverty). A small reduction in inequality contributed to an additional poverty reduction of 2 percentage points. A similar pattern was observed in the regions with the largest reduction in poverty (Accra and rural forest). In other regions, however, the pattern was different, because an increase in inequality reduced to a certain extent the gains in poverty reduction due to growth (in the rural coastal region, poverty reduction would have reached 6 percentage points with growth only, but an increase in inequality reduced that to only 4 percentage points). The policies to pursue in the different regions will have to take these differences into account.

Table 1.13. Poverty, Inequality, and Growth in Peru

	1997	2002
Extreme poverty rate at per capita growth rate of 3 percent with growth in:		
high-poverty sectors (agriculture, construction)	14.8	7.5
medium-poverty sectors (mining, petroleum, manufacturing, trade, transport, communication)	14.8	10.7
low-poverty sectors (services)	14.8	11.1
Lima	14.8	11.5
other urban areas	14.8	10.9
rural areas	14.8	7.8

Source: World Bank (1999b, p. 35).

Table 1.14. Decomposition of Changes in Poverty in Rural Tanzania (1983–91)

<i>Poverty line</i>	<i>Growth component</i>	<i>Redistribution component</i>	<i>Residual</i>	<i>Total change in poverty</i>
Head count index				
High	-38.5	11.8	12.6	-14.1
Low	-34.4	16.7	5.7	-12.0
Poverty gap index				
High	-23.7	20.5	1.6	-1.6
Low	-19.0	22.9	-1.9	2.0

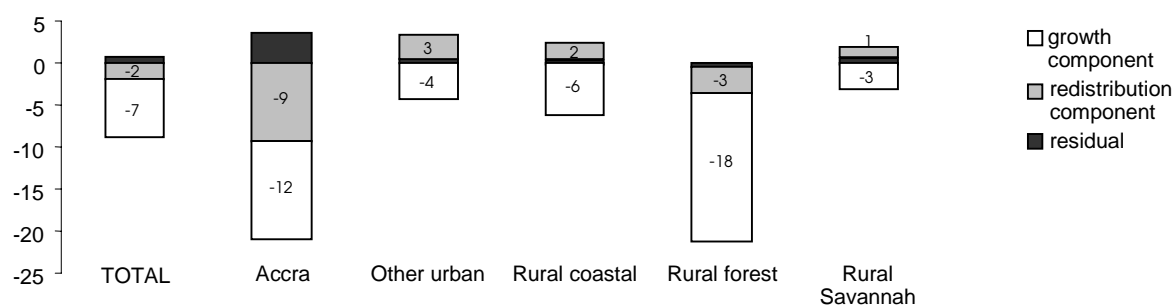
Source: Ferreira (1996).

1.4 Vulnerability Measurement and Analysis

Insecurity is an important component of welfare and can be understood as vulnerability to a decline in well-being. The shock triggering the decline can occur at the microeconomic (household) level (for example, illness or death), at the meso or community level (pollution or riots), or at the national or international level (national calamities or macroeconomic shocks). In poor rural areas, the most common risks are those affecting the harvest (see chapter 15, “Rural Poverty”). Vulnerability is not necessarily unexpected but could be seasonal. The risk of illness is a prime concern of the poor everywhere (see chapter 18, “Health, Nutrition, and Population”). The chapters on macroeconomic and structural issues (see chapters 12–13) and the private sector and infrastructure (see chapters 20–25) discuss the types of economic shocks that lower the living standards of the poor. Structural reforms could be associated with increased short-term vulnerability for certain groups. Declines in income are more devastating for the poor than for the better off because the poor are less likely to have the assets they need or to have access to insurance or credit to hedge against income shocks. In addition, even a small change is likely to have a substantial impact on their ability to meet their basic needs.

1.4.1 Vulnerability concept and measurement

Vulnerability is defined here as the probability or risk today of being in poverty or of falling into deeper poverty in the future. It is a key dimension of welfare, since a risk of large changes in income may constrain households to lower investments in productive assets—when households need to hold some reserves in liquid assets—and in human capital. High risk can also force households to diversify their income sources, perhaps at the cost of lower returns. Vulnerability may influence household behavior and coping strategies and is thus an important consideration of poverty reduction policies. The fear of bad weather conditions or the fear of being expelled from the land they cultivate can deter households from investing in more risky but higher productivity crops and affect their capacity to generate income.

Figure 1.6. Decomposition of Changes in Poverty by Location (Ghana 1991/1992–1998/99)

Source: Ghana Statistical Service (1999)

Section 1.4.1 presents some of the measures that can be used to capture or proxy vulnerability. Section 1.4.2 then turns to the analysis of determinants of vulnerability.

Vulnerability is difficult to measure: anticipated income or consumption changes are important to individuals and households before they occur—and even regardless of whether they occur at all—as well as after they have occurred. The probability of falling into poverty tomorrow is impossible to measure, but one can analyze income and consumption dynamics and variability as proxies for vulnerability. Such analysis could be replicated for specific nonmonetary variables likely to fluctuate—for instance, health status, weight, asset ownership, and so forth.

Measuring income and consumption dynamics and variability requires specific types of data as described below.

- In countries where only one cross-sectional survey is available, quasipanel data can sometimes be derived if income and consumption are recorded at different points in time. Surveys sometimes record information on demographics, activities, and income in a first visit, and repeat for one year thereafter the income module quarterly. Also, some surveys ask households to recollect their income or consumption for previous time periods. Even when no quasipanel components are available, it may be possible to build measures of household vulnerability that rely on the variation within communities or other subgroups, or on external information on the seasonality of prices and production.
- When two or more cross-sectional surveys are available, changes and trends in levels and patterns of poverty over time can be analyzed. Comparison over time requires careful techniques and analysis but allows insights into the dynamics of poverty and its determinants. Repeated cross-sections reveal trends for population groups but do not allow tracking of individuals or households within groups over time. They reveal only net aggregate changes; they would not capture large movements into or out of poverty.
- Panel data follow the same households over time and relate their patterns of consumption and income to changes in other characteristics, such as demographics, migration, labor market situation, durable goods ownership, access to services, and health and education status. The welfare and income variability of households can be followed only when panel data are available. Panel data allow the analyst to determine factors that underlie mobility and estimate changes at the individual level (see section 1.5.2 for a discussion of panel data).
- Alternatively, qualitative information can complement the picture by allowing the analysis of important aspects of vulnerability, such as the following (see technical notes A.12 and A.13):
 - households' participation in informal networks;
 - variation patterns in household income and consumption (seasonal variations, for example);
 - people's perceptions of their vulnerability and its determinants; and
 - various strategies households put in place to reduce their vulnerability: households can engage in depletive strategies—selling their productive assets diversify their income sources to reduce the probability of income changes, reduce their consumption in case of income change, or find new means to increase their income—by, for instance, changing their labor supply.

Some measures that can be used as proxies for vulnerability are discussed below.

Movements in and out of poverty, entry and exit probability

When two observations in time are available (in a panel or in a cross-section that contains a quasipanel component), transition matrices can be used to map changes—improvement or decline—in household welfare.

Table 1.15 presents a transition matrix depicting the movements in and out of poverty for households in rural Ethiopia between 1989 and 1995. The headcount index of poverty declined from 61 percent to 46 percent. This type of information would be revealed by an analysis based on two cross-sections of data. The use of panel data provides a more revealing picture. Despite poverty reduction between the two years, half of those that were poor in 1989 remained poor in 1995 (31 out of 61). The other

**Table 1.15. Movements In and Out of Poverty in Rural Ethiopia
(cell percentages)**

<i>Status in 1989</i>	<i>Status in 1995</i>		<i>Total</i>
	<i>Poor</i>	<i>Nonpoor</i>	
Poor	↔ 31	↑ 30	61
Nonpoor	↓ 15	↔ 24	39
<i>Total</i>	46	54	100

Source: Dercon (1999).

half of the population that was poor in 1989 had emerged from poverty by 1995, but more than one-third of the nonpoor in 1989 had fallen into poverty by 1995 (15 out of 39). The data still suggest significant flows in and out of poverty, a sign of vulnerability.

When data are available for several periods within the same year, the analysis can also distinguish between seasonal and nonseasonal poverty. Table 1.16 presents results of quarterly panel data from rural Rwanda in 1983, which shows that while some households appear to be poor all year round, others fall into poverty only at the end of the dry season, when food stocks are almost exhausted, and then recover later. These households can be said to be vulnerable to seasonal risk. Such data identify periods of hardship, and the groups most at risk and can suggest specific interventions (see chapter 17, “Social Protection”).

Another way to look at flows into and out of poverty is to compute poverty entry and exit rates—the probability that a household enters in, or emerges from, poverty. Table 1.17 shows that in rural Pakistan the probability of entering poverty increased over the years of the panel, while the probability of escaping fluctuated. Altogether, the ratio of the entry to exit probabilities increased, leading to an increase in the poverty headcount. This probability can then be computed for different groups in order to assess their vulnerability.

Length and frequency of poverty spells

When several years of panel data are available, it becomes possible to distinguish households according to the time they spend in poverty and the frequency of their poverty spells. There are many different ways of naming these groups, and we present only one of them here. Some households will have a very low probability of falling below the poverty line (some time referred to as the transiently poor); they are not very vulnerable, even if they do experience poverty every now and then. Others will have a higher probability of falling into poverty (sometimes referred to as the chronic poor); they are vulnerable. Some households will typically spend most of their time in poverty and have a high probability of falling into poverty (the persistently poor); they are very vulnerable.

Definitions and names can vary from one example to the other. In the example from rural China presented in table 1.18, households have been classified as “very vulnerable” or “persistently poor” when

**Table 1.16. Transition Matrices in Rural Rwanda (1983)
(row percentages)**

		<i>Second quarter</i>				
		1	2	3	4	5
<i>First quarter</i>	1	50	14	24	4	7
	2	30	31	27	10	3
	3	30	35	16	12	7
	4	13	23	21	27	16
	5	10	8	23	15	43

		<i>Third quarter</i>				
		1	2	3	4	5
<i>Second quarter</i>	1	52	21	12	7	8
	2	19	18	28	13	21
	3	28	13	20	17	22
	4	5	24	12	27	32
	5	2	11	12	19	56

		<i>Fourth quarter</i>				
		1	2	3	4	5
<i>Third quarter</i>	1	66	21	8	4	1
	2	40	30	17	7	6
	3	29	26	27	12	7
	4	15	15	22	19	29
	5	9	15	24	16	32

Source: Muller (1997).

Table 1.17. Entry and Exit Probabilities (Rural Pakistan, 1986–91)

	<i>Probability of entering poverty, for nonpoor households (percentage)</i>	<i>Probability of escaping poverty, for poor households (percentage)</i>
From year to year:		
1986/87 – 1987/88	15	51
1987/88 – 1988/89	17	43
1988/89 – 1989/90	20	51
1989/90 – 1990/91	20	46
Over entire period:		
1986/87 – 1990/91	24	49

Source: Baulch and McCulloch (1998).

their income is always below the poverty line; as “vulnerable” or “chronically poor” when their income is on average below the poverty line but sometimes above it; and as “not very vulnerable” or “transiently poor” when their income is on average above the poverty line but sometimes below the line. Table 1.18 shows that, over the period 1985–90, 33 percent of households were not very vulnerable, 14 percent vulnerable, and 6 percent very vulnerable. Analysis of the characteristics of these groups would inform on the determinants and correlates of vulnerability and on the policy options.

In practice, surveys often suggest that the group of “not very vulnerable” or “transiently poor” households is larger than the group of the “very vulnerable” or “chronically poor.” For instance, 60 percent of households were found to be transiently poor and 11 percent chronically poor in Zimbabwe over the period 1992–96. In South Africa, 32 percent of households were found to be transiently poor and 23 percent chronically poor over the period 1993–98.

Income variability and mobility

A last measure that can sometimes be used to proxy vulnerability is that of income variability. Some households may be, on average, slightly below the poverty line and experience low income variability—an unskilled wage worker in an urban area, for example. Other households may be on average slightly above the poverty line but experience higher income variability, such as a rural agricultural household. Standard static poverty analysis might classify the first type of household as poor and the second as nonpoor. However, both types experience some form of poverty, and if the second type of household does not have access to instruments to smooth its consumption, it may need some form of temporary support from the state. In contrast, the first type of household may need a very different type of support on a more regular basis. The first group could be considered nonvulnerable while the second group is vulnerable. The analysis of income variability thus reveals alternative policy options for alternative groups of households (see technical note A.11 on the use and limitations of variability measurement).

Information on the movements in and out of poverty can be combined with measures of income variability. The results for rural Pakistan given in table 1.19 show that the chronically poor have, on

**Table 1.18. Classification of Households in Rural China, 1985–90
(percent)**

	<i>Persistently poor</i>	<i>Chronically poor</i>	<i>Transiently poor</i>	<i>Never poor</i>
Guangdong	0.4	1.0	18.3	80.3
Guangxi	7.1	16.1	37.4	39.4
Guizhou	11.9	21.2	40.2	26.7
Yunnan	4.9	18.0	35.6	41.5
<i>Full Sample</i>	6.2	14.4	33.4	46.0

Source: Jalan and Ravallion (1999).

average, lower income levels than the transiently poor, but that the transiently poor have a higher coefficient of variation (a variability measure) and are therefore more exposed to shocks. The coefficients of variation of the chronically and the transiently poor are higher than those of those people who are never poor. This means that those who are better off not only have higher incomes levels, but also more stable incomes, so that they are less vulnerable to shocks.

1.4.2 Vulnerability analysis

In addition to some of the analysis presented earlier (“Poverty comparisons between groups and over time,” section 1.2.2, on changes over time and their determinants) that looks at aggregate changes for groups of the population, one can carry analysis on changes of households or individuals. As was the case for poverty and inequality analysis, different types of analysis can be done: vulnerability profile and regression analysis of changes in consumption over time and of movements in and out of poverty.

Vulnerability comparisons across groups

With panel data, poverty profiles can also prove a powerful tool to reveal differences in poverty dynamics between various household groups. For example, one may analyze the movements in and out of poverty of population groups defined according to various characteristics such as demographics and place of residence. This approach answers such questions as: are female-headed households more likely to remain poor and are households in specific regions more likely to escape poverty? In the case of China, the answer to that question is provided in table 1.18 above, which shows that most of those who experienced poverty in Guangdong were transiently poor, while a larger share were persistently poor in Guizhou. Such differences suggest different underlying characteristics of poverty and, therefore, different policy responses.

In the same way that a static poverty profile can be presented in two different ways (see “Characteristics of individuals and households in different poverty groups” and “Poverty comparisons between groups and over time,” section 1.2.2), when long observation periods are available, one may compare the characteristics of the “vulnerable,” “very vulnerable,” and “nonvulnerable,” and how these change over time.

Determinants of vulnerability

In the same way that regressions can be used to assess the determinants of poverty at any given point in time, regressions can also be used to assess the determinants of changes in income or poverty over time. Again, the advantage of panel data is that they go beyond finding the static correlates of poverty to identify the determinants of income or spending changes over time. Some of the problems of mutual causality with cross-sectional data do not arise in this case, since the initial conditions of households cannot be caused by the changes in household welfare. There are different ways to address the issue. First, when data are observed for two periods, one can run regression of income or consumption in the second period on household and individual characteristics in the first period. This permits estimation of the households’ ex ante distribution of future consumption or income and, therefore, the estimation of each household’s probability of falling into poverty in the future. An alternative would be to relate change in household welfare over time to exogenous variables and to initial starting conditions of the household. Regressions could also be run to explain entry and exit rates and the duration of poverty.

Table 1.19. Poverty Type and Income Variation in Rural Pakistan (1986–91)

	Chronically poor	Transiently poor	Never poor
Mean income	1,594	3,148	5,998
Standard deviation	716	1,715	2,482
Coefficient of variation	0.449	0.545	0.414

Source: McCulloch and Baulch (1999).

Finally, the analyst can carry out regressions of low vulnerability (in the sense of transient poverty) and high vulnerability (in the sense of chronic poverty).

Ex ante distribution of consumption

Vulnerability is defined as the risk today of falling below the poverty line tomorrow. One way to analyze the determinants of poverty is to see which factors influence the probability of low income in the future. When two observations are available, one can carry out a regression of income in the second period on household characteristics observable in the first period. This will allow the analyst to see which characteristics influence ex ante distributions of future consumption. The methodology has been developed and applied to consumption in Northern Mali (Christiaensen and Boisvert 2000). The methodology could easily be adapted to study vulnerability regarding other dimensions of well-being, such as nutrition or income. Table 1.20 presents the results and shows that female-headed households have, on average, a larger expected consumption and a smaller variance, suggesting they are less vulnerable to drought shocks. This might be explained partly by the existence of community solidarity actions to help those in greatest need. Results also show that ownership of productive assets increases expected consumption and decreases variability, because fishing and transport equipment provide a relatively secure source of income when agricultural production is low.

Changes in consumption or income over time

One can also carry out a regression analysis of the determinants of changes in consumption or income over time. This approach does not capture vulnerability in the sense used above (that of probability of falling into poverty), but rather focuses on explaining absolute changes in consumption. (In order to focus on vulnerability, one could carry out the regression only with those households that fell into poverty in the second period of observation.) Table 1.21 presents results of a regression on changes in consumption in Peru in the period 1994–97. It reveals that the household head's education is not only an important determinant of consumption levels but also results in a higher probability of welfare growth in the future. Female-headed and migrant households also have a higher probability of increase, that is, lower vulnerability, and access to financial savings has the expected positive influence. Interestingly, households that used at least one room in their house for business purposes, most of them in the informal sector, also have lower vulnerability (significantly higher growth rates). Moreover, the results suggest that access to public services, such as water, electricity, sanitation, and telephone, may be important factors in reducing vulnerability and promoting consumption growth, especially when there is access to several services.

The analysis can also be based on initial conditions and changes in conditions, allowing the analyst to identify the changes that influence increases and decreases in welfare. In the analysis in Côte d'Ivoire, a regression explained the change in per capita spending. The regression included base-year conditions, as in the case of Peru, such as income, human capital, physical capital, region, socioeconomic status and income composition, and change in these variables over the period of analysis. Not only was human capital found to be a key factor explaining welfare, it was also found to be the most important endowment that explains welfare changes over time in urban areas. In rural areas, physical capital, especially the amount of land and farm equipment, had a significant impact. The results also show that households with more diversified income sources managed better.

Determinants of movements in and out of poverty

The analysis of entry and exit rates, particularly the analysis of poverty duration, usually requires long panels, which are not as common in low-income countries. Therefore, only a brief description of these techniques is given here. Regression models can explain the probabilities of entering, exiting, staying in, or staying out of poverty. One way to analyze these issues entails using logit and probit regressions of the probability of each event (see box 1.7). These regressions can help explain the triggers that cause households to fall into poverty, such as death of a family member, illness, or unemployment, and the triggers that pull them out of poverty. They also allow the analyst to test the impact of potential alternative policies; for example, social protection interventions, on the probability of exit from and entry

Table 1.20. Estimates of Conditional Mean and Conditional Variance of Consumption During the Hunger Season (Northern Mali), 1997/98

<i>Dependent variable: Log calorie intake per capita at t+1</i> <i>Explanatory variables</i>	<i>Conditional Mean</i>		<i>Conditional variance</i>	
	<i>Coefficient</i>	<i>t-statistic</i>	<i>Coefficient</i>	<i>t-statistic</i>
Intercept	7.4839	29.05	-0.4132	-0.26
Human capital				
No. adult male at t	-0.0165	-0.94	-0.0812	-0.65
No. adult female at t	0.0082	0.36	-0.2106	-1.35
No. children at t	-0.0837	-6.40	0.2205	2.54
No. children * potential to send children away (interaction)	0.0289	1.87	-0.0380	-0.40
No. elderly at t	0.0126	0.25	0.1122	0.34
Age household head	0.0081	0.81	-0.0987	-1.60
Age household head squared	-0.0001	-0.67	0.0008	1.39
Female headed household	0.0823	1.17	-0.8055	-1.55
Productive capital				
No. draft animals at t	0.0648	1.53	0.0856	0.31
Value agric., fishing, and transport equipment at t	0.0005	1.60	-0.0061	-2.34
Access to perimeter	0.0577	0.91	-0.7403	-1.69
Income diversification				
% income from migrant remittances at t-1	-0.0713	-0.77	-106820	-2.22
Savings/credit				
Value food stock carried over at t	0.0028	2.89	0.0112	1.63
Value food stock * % agric. Income at t-1 (interaction)	-0.0031	-2.45	-0.0077	-0.82
No. goat/sheep at t	0.0029	1.15	0.0072	0.49
No. cattle at t	-0.0002	-0.04	-0.0193	-0.65
Value of consumer durables at t	0.0008	3.58	0.0005	0.38
Insurance				
Official food aid received between t and t+1	0.0248	0.44	-0.8956	-1.86
Official food aid * migration of household head or main adults between t and t+1 (interaction)	–	–	1.5425	2.05

– = Not applicable.

Note: Value in 1,000 CFA francs. Survey carried out in Zone Lacustre, northern Mali. The model estimate values for the Hunger period of August 1998 (t+1) on the basis of information from the preceding post-harvest season (t).

Source: Christiaensen and Boisvert (2000).

into poverty. Other models rely on duration analysis. These techniques, which are frequently used in the study of unemployment, aim to find the characteristics of households and their environment, which explains the length of time they spend in poverty. They can be useful in identifying the policy actions that could act on the characteristics that determine whether a household is likely to be able to exit poverty quickly or is likely to be trapped in poverty for a long period of time. Duration analysis, however, requires long and large panels that are not often available.

Determinants of vulnerability as measured in terms of transient and chronic poverty

Using data for rural China and probit regressions for the determinants of transient and chronic poverty, Jalan and Ravallion (1998, 1999) suggest that both “acute vulnerability” or “chronic poverty” and “vulnerability” or “transient poverty” are reduced by greater command over physical capital, such as wealth and land, and certain demographic characteristics. These are, however, the only similarities. Smaller and better educated households, and those who live in areas with better attainments in health and education, have lower chronic poverty, but these factors have little influence on transient poverty. Thus interventions aimed at reducing chronic poverty may have little impact on transient poverty.

Table 1.21. Consumption Change Regression in Peru (1994–97)
(dependent variable: change in household consumption per capita)

<i>Variable</i>	<i>Parameter</i>	<i>t-statistic</i>
Constant term	5.11	(18.4)
Initial consumption per capita in 1994	-.68	(-21.6)
Years of education of the household head in 1994	.03	(7.1)
Quechua speaking households in 1994	-.10	(-2.4)
Age of the household head in 1994	.01	(4.6)
Female-headed households in 1994	.11	(2.4)
Household size in 1994	-.10	(-3.7)
Household size (squared) in 1994	.01	(2.3)
Households that used at least one room in their house for business purposes in 1994	.15	(3.7)
Households with financial savings in 1994 and 1997	.20	(2.2)
Migrant households in 1994	.05	(1.4)
Dependency ratio in 1994	-.01	(-0.9)
Households with one basic service in 1994	.04	(0.8)
Households with two basic services in 1994	.05	(0.9)
Households with three basic services in 1994	.16	(3.2)
Households with four basic services in 1994	.28	(3.9)

Source: World Bank (1999b, p. 52).

Similar regressions for Pakistan (McCulloch and Baulch 1999) also revealed interesting results, since some of the variables that influence the probability of entry or exit were different from those that explained poverty and income levels in a standard (static) regression analysis.

1.5 Data

Before applying the analysis tools described above, the analyst will first have to assess all available data sources and then plan accordingly for the analytical work to be done. Each data source tends to have particular strengths. After broadly reviewing the different aggregation levels and collecting agencies, different types of data sources are examined (section 1.5.1). Special attention is devoted to the various types of household surveys (section 1.5.2) and to the use of qualitative tools (section 1.5.3).

1.5.1 Types of data

As indicated in table 1.22, many sources of data can be useful for poverty analysis and the evaluation of policy interventions. Some data, such as central public finance data and national accounts, exist only at the national level. Often, these data are collected centrally by the statistical institute or the central bank. Local-level data—for example, by region, province, or district—often include availability and use of services, such as education, health, water, and electricity, and may include economic and price information, such as regional inflation, and are often collected through local offices of the statistical institute or the Ministry of Finance. Few countries produce national accounts at the subnational level. Household or individual-level data on welfare components, such as income, consumption, illness patterns, and household priorities and perceptions, present the most disaggregated data. These data are typically gathered through household surveys, and they can be summarized at higher levels (at the local or national level) to produce aggregate statistics. For example, household-level data are needed to determine whether the members of a particular household are income-poor. Aggregation across households will provide regional or national estimates of poverty. Along with providing national averages, local-level data can be important because local realities vary, and so do the key dimensions of poverty and the indicators that are useful to analyze and monitor. Moreover, some decisions—increasingly more as decentralization advances—are made at the local-level and require local information. In many

Table 1.22. Data Types and Agencies

<i>Data</i>	<i>Agency</i>	<i>Source</i>	<i>Frequency</i>
National-level data			
National accounts: GDP, consumption, investment, exports, imports, and so on	Central statistical agency	System of National Accounts, trade statistics	Monthly or quarterly where possible—trade statistics, for example; at least yearly
Public finance data: revenues, spending by category	Ministry of Finance, central statistical agency, sectoral ministries	Budgets and actuals	Monthly or quarterly where possible—trade statistics for example; at least yearly
Consumer and producer prices	Central statistical agency, central bank	Price surveys	Monthly; consumer price index basket updated at least every five years
Social Indicators	Management information systems of sectoral ministries	Administrative systems	Yearly where possible
Local-level data			
Consumer and producer prices, climatic data, national accounts at regional level	Central statistical agency, central bank	Price surveys, systems of national accounts	Monthly; consumer price index basket updated at least every five years
Availability of services	Local administration, sectoral ministries	Multitopic household surveys; employment surveys, qualitative studies	Yearly
Use of services	Local service providers	Rapid monitoring and satisfaction surveys	Yearly
Individual and household-level data			
Household consumption and income; living conditions, social indicators	Central statistical agency, Ministry of Labor/Employment	Household budget, expenditure, income surveys, multitopic household surveys, Demographic and Health Surveys	Every three to five years
Population statistics, access to services—no consumption or income; literacy	Central statistical agency	Population census	Every 5 or 10 years
Household living standards—no detailed consumption or income; illness patterns, malnutrition, education profile	Central statistical agency, Ministry of Labor/Employment, others	Rapid monitoring surveys, Demographic and Health Surveys	Yearly
Household priorities, perceptions of well-being, user satisfaction	Central statistical agency, sectoral ministries, others	Qualitative studies; rapid monitoring surveys	Every one to three years

Source: From various resources developed by authors.

instances, however, the collection and monitoring of local level data will be set up differently, since local capacities and community involvement vary.

The following describe the role of administrative data and the population census:

- 3 **Administrative data.** In many countries, administrative data are the most accessible data source. Usually provided by line ministries and specialized agencies, these data describe specific activities and programs such as school enrollment, disease prevalence, malnutrition information, hospital expenses, road network information, and income and expenditure for decentralized units. This information is important in assessing levels of public and private inputs, outputs, and outcomes, as well as their distribution within the country. For example, it is possible to compare how the distribution of enrollment rates matches spending on primary schools; how the structure of health

spending—primary versus tertiary care—reflects disease patterns; or how agricultural productivity of main crops varies with land tenure patterns. Administrative data can often provide an important entry into poverty analysis, especially if such data are used to compare need and demand for services. Administrative data, however, do not allow for cross-tabulating or analyzing poverty across different dimensions. For example, it is generally not possible to look at enrollment rates of children by the income group of their parents. (Multitopic household surveys, which are discussed below, differ from administrative systems in that they allow the analyst to relate indicators with each other.)

- 3 **Population census.** A population census contains basic information on all citizens of a country. The census is carried out for all households to obtain basic information on the population, its demographic structure, and its location. The census is typically carried out by the national statistics institute, which then provides data to lower levels of government tailored to local information needs. Since the census covers the whole population, it is costly, and most countries conduct a census only once a decade. The census can provide policymakers with important data for planning in the years directly following its implementation, but its usefulness diminishes afterward. Since the census is carried out across millions of households, the information gathered is, by necessity, limited. Information on household income, consumption, disease patterns, and poverty perceptions are generally not included. However, the census usually contains descriptive statistics of the housing stock; access to basic services such as water, electricity, and sanitation; information on education and employment patterns; and population statistics. The census has the advantage of being able to provide information at low levels of aggregation, such as the municipality level. Census data are also an important tool to check the representativeness of other surveys. The usefulness of sample surveys can be increased substantially if they are combined with census information, such as for providing poverty maps.

1.5.2 Household surveys

Household surveys are essential for the analysis of welfare distribution and poverty characteristics. At the same time, aggregate household-level analysis can provide only limited understanding of the intrahousehold distribution of resources, especially of income and consumption. Moreover, while the census covers the whole population in the country, surveys interview only a subset, generally a small fraction, of all households. This sample of households must be carefully chosen so that the results of the survey nevertheless accurately describe living conditions in the country and in different parts of the country. Sampling should be based on mapping of actual settlements, including newly formed informal urban ones. Sampling is most often informed by a recent population census. The sample size—the number of households interviewed—will vary with several factors, including the indicator to be measured. A survey that aims to measure countrywide averages of income, for instance, may require a larger sample than a survey designed to measure the percentage of the population with water connection, partly because the latter is easier to measure. Another variable may be the level at which the policymaker needs the information. A national electricity connection rate, for example, will require fewer households to be interviewed than regional or district rates. Different types of household surveys exist (table 1.23):

- 3 **Living Standard Measurement Study (LSMS) surveys and other multitopic surveys.** Multitopic welfare surveys, like the LSMS, are geared toward measuring and analyzing poverty and are important instruments for poverty diagnostics. LSMS surveys collect information on household expenditures and income, health, education, employment, agriculture, the ownership of assets such as housing or land, access to services, and social programs. Dozens of countries have implemented multitopic surveys and many now have several rounds of surveys that allow rich comparisons across time. Multitopic surveys can also be used to measure the impact of public policies and programs on poverty.
- 3 **Expenditure and income surveys.** Contrary to multitopic surveys, expenditure and income surveys are narrower in scope. They are useful instruments to measure different dimensions of poverty—such as income or education poverty—but are limited in their ability to relate household well-being to underlying causes such as asset distribution or productive activities.

Table 1.23. Household Survey Types

Household Survey	Advantage	Limitations
Multitopic surveys	Measurement and analysis of different poverty dimensions, their interrelationships, and correlates	Time-intensive (collection and evaluation)
Demographic and Health Surveys	Health-poverty measurement, health behavior analyses, basic poverty diagnostics	Measurement of other dimensions of poverty limited, diagnostics limited
Employment surveys	Analysis of employment patterns, wage income analysis (link to education)	Limited use for poverty measurement and diagnostics
Single-topic surveys	Income-poverty measurement (or one other dimension)	Limited diagnostics possible
Rapid monitoring surveys and service satisfaction surveys	Quick and cost-effective monitoring of key welfare indicators	Income-poverty measurement not possible, limited diagnostics

Source: From various resources developed by authors.

- 3 **Employment surveys.** Labor ministries use employment surveys to gather information on employment and wages. These surveys include questions about household income, demographics, and housing features. They can be good sources for employment statistics, income-based poverty indicators—if the income module is good—and input indicators such as access to basic services. Employment surveys tend to be more important information sources for heavily urbanized countries.
- 3 **Demographic and Health Surveys.** These are special household surveys geared to exploring the incidence of diseases and use of health facilities. They collect anthropometric data—height, weight, and age of children, that can be used to calculate malnutrition rates—and many other health and health behavior variables that enable such factors as survival rates, birth histories, and disease incidences to be computed. The surveys also contain basic data about housing conditions, educational attainments, and employment patterns. Although they do not include income or expenditure data, they can be used to calculate household wealth and carry out important poverty diagnostics (see technical note A.14).
- 3 **Rapid monitoring and satisfaction surveys.** These surveys are generally large, contain relatively short questionnaires, and include predetermined data entry packages. They are easy to implement and have a rapid turnaround time. The Core Welfare Indicator Questionnaire (CWIQ)—widely applied in Africa—is one example. Unlike other surveys, the CWIQ is not designed to serve as a tool for measuring whether poverty levels are increasing or decreasing. It is intended to measure only whether or not public services and development programs are reaching and benefiting the poor and to monitor selected indicators—those that contain advance warnings of the future impact of policies and events—and assess household living conditions, access to basic social and infrastructure services, and the satisfaction of the population with these services. Satisfaction surveys are best viewed as complements to multitopic household surveys and have been used in many countries to monitor access to and quality of basic services.
- 3 **Specialized surveys.** Many other specialized surveys exist that can be used for poverty diagnostics. These can range from violence surveys—for example, in Lima, Peru—to opinion surveys such as those conducted by the Social Weather Station in the Philippines. Several countries also have surveys of health centers, schools, or other public institutions. Firm surveys can be essential to understanding the impact of crisis on employment and specific groups at risk and were used extensively in understanding the impact of the East Asian crisis. Food security assessments identify high-risk groups and are often used by relief organizations. Typically, the Web sites of national statistical institutes and international organizations will provide information about the availability of such data.

It is clear from the list above that a number of different surveys and other data sources can be used for analyzing income poverty and its correlates. Table 1.24 distinguishes cases of severe data limitation (1) to a good data situation (9). The data sources discussed and ranked include the population census,

rapid monitoring surveys, income and expenditure surveys, Demographic and Health Surveys, and multitopic surveys. Based on data availability, table 1.24 identifies which tools among those reviewed in the previous sections can be used for poverty analysis. Income poverty measurement is possible only if at least one multitopic or income and expenditure survey exists. Other data sources—such as a population census, Demographic and Health Surveys, and rapid monitoring surveys—do not lend themselves to poverty measurement. Even in cases where income and consumption poverty measurement is not possible, as table 1.24 illustrates, several analysis tools can be applied that are important for policymaking. For example, spatial poverty maps can in most cases be developed using proxies for income or consumption. Rapid monitoring surveys and Demographic and Health Surveys also lend themselves to developing a basic profile of the poor. Still, although many different surveys can be and are used for poverty and welfare analysis, it should be emphasized that a multitopic survey is a key tool for measuring and understanding a wide range of issues related to poverty. In the short run, Demographic and Health Surveys or more specialized surveys can supply important information but, in the long run, the availability of a multitopic survey is essential.

Apart from the type of survey available, it matters whether analysts have access to only one single cross-section of data, several cross-sections, or panel data. In principle, insights into the dynamics of poverty require the availability of several multitopic household datasets collected at different times. Such information allows for measuring changes in poverty as well as the underlying characteristics causing these changes (cases 8 and 9). In countries where only one cross-sectional survey is available (5 and 7 in table 1.24), quasipanel data can sometimes be derived if income and consumption are recorded at different points in time. Surveys sometimes record information on demographics, activities, and income in a first visit, and repeat the income module quarterly for a year thereafter. Some surveys also ask households to recollect their income or consumption for previous time periods. Even when no quasipanel components are available, it may be possible to build measures of household vulnerability that rely on the variation within communities or other subgroups, or on external information on the seasonality of prices and production. More can be done when two or more cross-section surveys are available (6 and 8 in table 1.24) because changes in the levels and patterns of poverty over time can be analyzed. As mentioned earlier, poverty comparisons over time require careful analysis, but they give insights into the dynamics of poverty and its determinants, and they can be used for evaluation. While repeated cross-sections reveal trends for population groups, they do not allow the tracking of individuals or households over time. They reveal aggregate changes, but they do not capture individual movements into or out of poverty.

Box 1.10 summarizes key questions in assessing data availability for poverty analysis. Panel data (9 in table 1.24) follow the same individuals or households over time, so that one can relate their patterns of consumption and income to changes in other characteristics, such as demographics, migration, labor market situation, durable goods ownership, access to services, and health and education status. Panel data have advantages over repeated cross-sectional surveys. They permit the analysis of the factors that underlie mobility. They also record information on past events more precisely than the retrospective questions sometimes included in cross-sectional surveys, and they help in assessing the impact of public programs and services on poverty outcomes. Only panel data allow analysis of the determinants of poverty, while cross-sectional data are limited to revealing correlates of poverty. Correlates are characteristics that are found to be closely linked to poverty—for example, family size might be linked to poverty—but no causality pattern can be inferred from their analysis. For example, it is impossible to say whether a family is poor because it is large or whether a family is large because it is poor. On the contrary, determinants of poverty provide information on the causes of poverty and can be analyzed by looking at households over time and analyzing their welfare changes in light of their characteristics.

Some limitations of panel data are that households can change over time, disappear entirely from the sample (because of death or migration), or split or regroup because children grow up or household members are married or divorced. If the disappearance from the panel (attrition) is linked to certain characteristics—for example households with good education move away from poor neighborhoods—then the estimation results of panel regressions have to be treated with care. Furthermore, as time passes panel surveys can become less representative if they fail to include new members of the population—new births or immigrants. As with other surveys, panel data can also suffer from measurement errors, especially those related to household income and consumption, which can affect the quality of mobility statistics.

Box 1.10. Questions for Assessing Quantitative Data Availability for Poverty Analysis

Is a recent multitopic household survey available? Is the survey representative in the most important areas in the country? Can the survey be used to learn about gender, urban and rural, racial, or ethnic dimensions of poverty?

Are single-topic surveys available that could be used in measuring and analyzing income and consumption poverty? Has one Demographic and Health Survey been conducted, or have repeated surveys been conducted?

How old is the census? Can it still be used to derive a map of service access?

Are poverty monitoring surveys executed or planned?

1.5.3 Qualitative data

Qualitative data and research (technical notes A.12 and A.13) can be very useful to complement a quantitative poverty analysis. Qualitative techniques have been used to analyze household participation in informal networks; patterns in household income and consumption, particularly seasonal variations; people's perceptions of poverty and vulnerability; the strategies put in place by households to reduce their vulnerability to income changes; and so forth. In the latter case, it is important to see whether households engage in depletive strategies—when they sell their productive assets; diversify their income sources to reduce the probability of income changes; reduce their consumption in case of income change; or manage to find new means to increase their income—for instance, by changing their labor supply.

Qualitative techniques help in understanding household behavior, and the interpretation of quantitative results can be complemented, triangulated, and enriched with qualitative work. Institutional, political, and sociological analysis is needed to understand many issues, such as:

- why the informal sector might play a minor or major role in absorbing the labor supply of the poor. The determinants of the role of the informal sector can be legal (regulations), economic (entry costs), sociological (stigma effects, gender bias), and so on;
- why certain factors are correlates of poverty. For example, certain groups in society, as classified by gender or by ethnicity, may be poorer than others because they are discriminated against. Qualitative work can help uncover such discrimination;
- what factors influence poverty outcomes that are not easily quantifiable—for example, the degree to which trust in institutions or corruption undermine the working of education and health programs; and
- how the intrahousehold distribution of resources is structured along gender or age lines, that is, whether intrahousehold poverty is hidden in households that theoretically have sufficient resources (see chapter 10, “Gender”).

Qualitative research tools range from participatory assessments (see technical note A.13) to ethnographic and sociological case studies, to institutional political investigations. Some of these tools are described in table 1.25. These tools help in gathering information that household surveys cannot capture, or can capture only in part (for instance, subjective dimensions of poverty and variations in perceptions along gender, urban/rural, or ethnicity lines; barriers that poor people themselves believe are stopping them from advancing; intrahousehold inequalities; poor people's priorities for action; cultural factors determining poverty, such as gender roles and some traditional beliefs; political factors determining poverty, such as trust, corruption, and conflict; certain social factors determining poverty, such as the role of community networks, and so on). The tools may also help in the design appropriate to household survey questionnaires—for example, in the section on reasons for use or nonuse of health and education facilities. Finally, the tools may help to assess the validity of survey results at the local level and evaluate how much general policy design should consider the heterogeneity of local conditions.

Participatory assessments can help policymakers determine the type of indicators important for the poor—is it housing, employment, or income? They can also capture information other sources cannot, such as the incidence and effect of domestic violence (see chapter 7, “Participation” and technical note A.13). Beneficiary and participatory assessments also involve the population more than household surveys. They can take different forms. In townhall or village meetings, citizen groups or their representatives can discuss poverty problems and policies, rank what they consider the causes of poverty, and map out new infrastructures in actual planning exercises. Individual interviews can investigate the

1	No surveys (multi- or single-topic surveys) exist. Only census data or administrative data available	IPM not possible	<ul style="list-style-type: none"> Geographic maps: access to services; housing deficit; literacy, GDP per capita but not income poverty Geographic incidence: of spending or enrollment in relation to access maps
2	One round of rapid monitoring surveys exists (CWIQ), priority survey	IPM not possible; wealth index can be calculated as proxy for income (but no absolute line applied)	<p>By wealth quintile:</p> <ul style="list-style-type: none"> geographic maps (depends on size of survey) using poorest 20 or 40 percent of wealth indicator risk of being in bottom 20 percent wealth quintile (by group, characteristic) profile of wealth relationship with education, enrollment, access, and satisfaction with services; basic service access; basic labor market statistics incidence analysis (distribution of health, education, specific program spending by area and wealth quintile)
3	One cross-section Demographic and Health Survey	IPM not possible; wealth index can be calculated as proxy for income (but no absolute line applied)	<p>By wealth quintile:</p> <ul style="list-style-type: none"> geographic maps (depends on size of survey) using wealth indicator (20 or 40 percent poorest) risk of being in bottom 20 percent wealth quintile (by group, characteristic) profile of wealth relationship by quintile with education, enrollment, health outcome indicators; basic service access; basic labor market statistics incidence analysis (distribution of health, education, specific program spending by area and wealth quintile)
4	Repeated cross-section Demographic and Health Surveys	IPM not possible; wealth index can be calculated as proxy for income (but no absolute line applied)	<p>As above, plus the following:</p> <ul style="list-style-type: none"> changes in risks, profile, incidence (by wealth quintile)
5	One cross-section single-topic survey (with income/consumption variable)	IPM possible—one time period	<p>By poor/nonpoor groups or by using income variable:</p> <ul style="list-style-type: none"> geographic maps (depends on size of survey) profile (limited) of poverty group and quintile to labor market, education risk analysis (limited) incidence (limited) static decomposition (inequality) correlates (limited)

6	Repeated cross-section single-topic surveys (with income/consumption variable)	IPM possible—several time periods	As above, plus the following: <ul style="list-style-type: none"> ▫ dynamic decomposition analysis (inequality and growth) ▫ risk, profile, correlates, incidence, welfare changes over time (limited)
7	One cross-section of multitopic survey	IPM possible—one time period	By poor/nonpoor groups or by using income variable: <ul style="list-style-type: none"> ▫ geographic maps (depends on size of survey) ▫ profile ▫ risk analysis ▫ correlates ▫ static decomposition (inequality) ▫ incidence
8	Repeated cross-section of multitopic survey	IPM possible—several time periods	As above, plus the following: <ul style="list-style-type: none"> ▫ dynamic decomposition of poverty changes ▫ repeated cross-section regression ▫ map, profile, risk, incidence, welfare changes in time
9	Repeated multitopic survey with panel component	IPM possible—several time periods	As with case 7 plus case 8, plus the following: <ul style="list-style-type: none"> ▫ panel growth regressions (determinants) ▫ mobility/vulnerability analyses, entry/exit modeling, duration analysis

Table 1.25. Data Collection Methods for Qualitative and Participatory Assessments

<i>Data collection</i>	<i>Methods</i>
Beneficiary assessments	Participant observation and more systematic data collection methods like structured interviews over a limited time span
Ethnographic investigations	Anthropological research techniques, especially direct observation, to analyze the influence of ethnicity, gender, and village stratification on the household and group well-being and behavior
Longitudinal village studies	Wide variety of methods ranging from direct observation and recording (tabulation), periodic semistructured interviews with key informants (for example, health center staff) and village population, to survey interviews in several different observation periods
Participatory assessments	Ranking, mapping, diagramming, and scoring methods are prominent together with open interviews and participant observation. The time horizon of participatory assessments is often short. They build on local populations describing and analyzing their own reality surrounding poverty and well-being.

problems of women or children in households. Participatory methods do not necessarily guarantee, however, that all groups in the community are given an equal voice. There is a danger that women may be underrepresented. This danger may be even more present for the very poor. Box 1.11 summarizes key questions to consider in assessing qualitative data availability.

Whenever possible, it is important to link participatory and qualitative investigations with household surveys and population censuses in a formal way. This can be done by collecting variables in participatory studies that allow for easy comparison with regional or national averages obtained from quantitative sources; designing qualitative case studies so that they are done on subsamples of larger surveys; and following formal sampling and data recording procedures that allow for systematic analysis and replicability of qualitative results. Technical note A.13 suggests ways to assess whether sufficient qualitative and participatory information is available to inform poverty analyses and antipoverty policy formulation.

1.6 Conclusion

This chapter focused on analytical techniques to measure and understand the income or consumption dimension of poverty, inequality, and vulnerability. The techniques described ranged from developing a simple poverty profile to conducting panel regressions to examine vulnerability, and from using transition matrixes to examine the stability of welfare rankings to a decomposition of inequality measures. However, the range of tools that can be applied to better understand poverty will depend crucially on data availability. The richest understanding of income poverty can be gained if several rounds of multitopic household surveys are present, especially if they contain a panel component of identical households being visited at different points in time. The analysis of income poverty presented here should ideally be complemented with an examination of other dimensions of poverty and how the dimensions are related to each other. Determinants of different dimensions of poverty can then be compared and common factors singled out for policy interventions. For example, health poverty analysis of the determinants of malnutrition often reveals that a mother's education is a key determinant of the nutritional status of her children. Income poverty can also be closely associated with the same variable so that policies that aim to improve female education can have important synergistic effects on both malnutrition and income poverty. However, analyzing the determinants of various aspects of poverty can also reveal important differences in the determinants, which would then imply that policymakers would have to make important choices as to which dimension of poverty they would want to tackle first.

Box 1.11. Questions for Assessing Qualitative Data Availability for Poverty Analysis

Are community case studies, ethnographic studies, and participatory assessments available to complement the household survey results? Are they recent?

Have the qualitative studies been properly integrated in survey findings and design?

Do qualitative studies uncover additional factors linked to income and consumption poverty? How can these be addressed at the political level?

Guide to Web Resources

United States Census Bureau: List and links to statistical agencies worldwide. These provide information on the latest census, household surveys, and specialized datasets. Available at http://www.census.gov/main/www/stat_int.html.

Core Welfare Indicators Questionnaire—joint initiative by World Bank, UNDP, and UNICEF to monitor social indicators in Africa. Available at <http://afr.worldbank.org/aft2/cwiq/overvw.htm>.

World Bank *Research Observer*, master list of articles. Available at <http://www.worldbank.org/research/journals/wbromast.htm>.

World Bank Web site on Inequality: Measurement and Decomposition. Available at <http://www.worldbank.org/poverty/inequal/methods/index.htm>.

World Bank Web site on Living Standards Measurement Study—a household survey in measuring and understanding poverty. Available at <http://www.worldbank.org/lsm>

Demographic and Health Surveys—complete list of surveys available and description of data. Statistics on population, health, and nutrition in developing countries. Available at <http://www.macrout.com/dhs>.

Philippine social weather surveys—data on Philippine economic and social conditions. Available at <http://www.sws.org.ph/swr.htm>.

Web site of International Food Policy Research Institute, a member of the Consultative Group on International Agricultural Research. Available at <http://www.cgiar.org/ifpri/index.htm>.

World Bank Web site on Geographic Aspects of Inequality and Poverty. Available at <http://www.worldbank.org/poverty/inequal/povmap/index.htm>.

Web site of United Nations Environment Program's Global Resource Information Database, use of Geographic Information System for agricultural research and poverty mapping. Available at <http://www.grida.no/prog/global/poverty/index.htm>.

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Chapter 2

Inequality and Social Welfare

Quentin Wodon and Shlomo Yitzhaki

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2.1 Introduction

High levels of inequality contribute to high levels of poverty in several ways. First, for any given level of economic development or mean income, higher inequality implies higher poverty, since a smaller share of resources is obtained by those at the bottom of the distribution of income or consumption. Second, higher initial inequality may result in lower subsequent growth and, therefore, in less poverty reduction. The negative impact of inequality on growth may result from various factors. For example, access to credit and other resources may be concentrated in the hands of privileged groups, thereby preventing the poor from investing. Third, higher levels of inequality may reduce the benefits of growth for the poor because a higher initial inequality may lower the share of the poor's benefits from growth. At the extreme, if a single person has all the resources, then whatever the rate of growth, poverty will never be reduced through growth.

The rationale of this chapter is not principally related to the arguments above regarding the impact of inequality on growth. We argue that, independent of inequality's impact on poverty, inequality has a direct, negative impact on social welfare. According to the theory of relative deprivation, individuals and households do not assess their levels of welfare in terms of their absolute levels of consumption or income only. Individuals also compare themselves with others. Therefore, for any given level of income in a country, high inequality has a direct, negative effect on welfare. There are good reasons to be interested in inequality and social welfare from the perspective of a comprehensive evaluation of public policies and social programs that go beyond their impact on poverty.

Policymakers constantly confront the problems inherent in evaluating social programs and policies. With an emphasis on poverty reduction, the countries preparing Poverty Reduction Strategy papers (PRSPs) may rely on poverty-derived distributional weights for assessing the effects of social programs and other public policies on welfare. The problem with distributional weights based on standard poverty measures is that they place no weight at all on the welfare of the nonpoor, even though those just above the poverty line may be highly vulnerable. The framework presented in this chapter provides an alternative in which the gains to all members of society are taken into account, although such gains are weighted differently. Using a flexible social welfare function, two summary parameters (one for growth, one for redistribution) can be estimated to assess the impact of a program or policy on social welfare. The parameters are flexible enough to take into account weighting schemes with various degrees of emphasis placed on poorer members of society. Decompositions of the distributional parameter provide insights into the targeting mechanisms of programs and policies. In other words, this chapter provides a simple yet flexible framework for evaluating social programs and public policies that differs from the traditional approach based on poverty measurement.

The chapter has four main sections. Section 2.2 presents the extended Gini index used for measuring inequality. It also presents and illustrates the source decomposition of the Gini used to analyze how changes in income and consumption sources affect overall inequality. Sections 2.3 and 2.4 provide a wide range of policy applications of the source decomposition of the extended Gini index. Section 2.3 shows applications of the basic framework. Section 2.4 presents extensions for testing the robustness of evaluation results for the social preferences implicit in the choice of a specific inequality measure. It also provides techniques for analyzing the impact on inequality of the targeting of programs as opposed to the rules for the allocation of benefits among program participants. Section 2.4 further presents extensions for analyzing the impact of programs on the poor and the nonpoor separately.

In very poor countries, economic growth rather than income redistribution is the key for long-term poverty reduction. Evaluating programs and policies according to their impact on distribution alone may lead to the rejection of interventions that may not be highly redistributive yet have strong growth potential. This may be detrimental not only to poverty reduction but also to the overall level of well-being in society. Section 2.5 demonstrates how to take into account the impact of programs and policies on growth while still considering their impact on inequality. The section introduces a flexible social welfare function for evaluating public policies. Section 2.5 analyzes changes in social welfare by distinguishing between the impact of programs and policies on the level of well-being achieved in a society (growth component) and the inequality in well-being among society's members (redistribution component). The

section also discusses the issues related to the financing of public interventions. This discussion is based on the concept of the marginal cost of funds used in public finance.

Section 2.6 summarizes the main advantages and potential drawbacks of the evaluation framework proposed in this chapter. Because the preparation of this chapter was funded in large part by the Regional Studies Program of the Office of the Chief Economist for the Latin America Region at the World Bank, many of the illustrations are based on data from Latin America. Yet examples from other regions are provided as well, and the tools can be applied to any region or country. Technical notes to this chapter detailing the methodologies are given in the annex to volume 1 of this book.

2.2 Inequality Measures and Decompositions

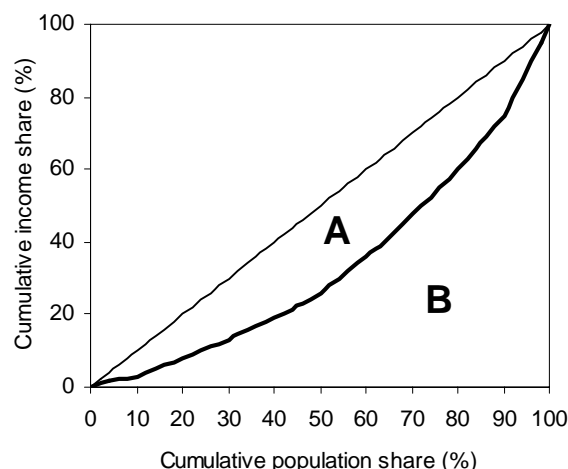
Inequality in income, consumption, and other indicators of well-being is a concern for policymakers. After introducing the inequality measure we rely on in this chapter—the extended Gini index—we present the Gini source decomposition that has been used in the literature to analyze the determinants of inequality and the policies that can be implemented to reduce it. The decomposition reviews the impact of various income or consumption sources on the overall level of inequality. Using the decomposition, we explain how to assess the impact at the margin of social programs and public policies on the distribution of income and consumption. An illustration is provided for Mexico. Section 2.5 extends the framework to take into account the impact of programs and policies on both the distribution of income and on growth, which enables us to look at the overall effects on social welfare.

2.2.1 Inequality measures and the extended Gini

As with poverty, various inequality measures are used in the literature. Practitioners use three main inequality measures: the Gini, Theil, and Atkinson indexes. Chapter 1, “Poverty Measurement and Analysis,” defines these three measures. In this chapter, we extend the discussion to focus on policy applications. This chapter focuses exclusively on the Gini index, or coefficient (we use the terms “index” and “coefficient” interchangeably), not only because the Gini index is the most commonly used measure of inequality, but also because it has attractive properties that inform the policy analysis.

The Gini coefficient is a summary statistic that in most cases varies between zero and one.¹ A Gini index of zero implies complete equality of incomes: all individuals or households have exactly the same income per capita or per equivalent adult. A Gini index of one implies complete inequality; that is, one individual or household has all the income, and the others have no income at all. As noted in chapter 1, “Poverty Measurement and Analysis,” the Gini can be represented graphically as a function of the Lorenz curve. In figure 2.1, the horizontal axis gives the cumulative share of the population ranked by increasing

Figure 2.1. Lorenz Curve and Gini Coefficient



per capita income. The interval 0–10 corresponds to the bottom income decile, while the interval 90–100 corresponds to the top income decile. The vertical axis represents the share of income enjoyed by the corresponding percentage of the population. It can be seen, for example, that the bottom 20 percent of households has about 5 percent of the total income in the sample. The Lorenz curve goes through the points (0, 0) and (100, 100). Perfect equality is represented by the diagonal line. The Lorenz curve is always below the diagonal line. A Lorenz curve farther away from the diagonal indicates a higher level of income inequality. A curve going through the points (0, 0), (100, 0) and (100, 100) would represent perfect inequality, with one household having all of the income in the sample. The Gini coefficient is equal to the area *A* divided by the sum of *A* and *B* (see technical note B.1 for a formal definition of the Gini index).

There are several intuitive interpretations of the Gini that make it easy to understand the meaning of what is measured. We give two such interpretations below.

- 3 The value of the Gini represents the expected difference in incomes of two individuals or households randomly selected from the population as a whole. For example, a Gini index of 0.60 implies that if the mean per capita income in the population is \$1,000 (all dollar amounts are current U.S. dollars), the expected difference in per capita income of two randomly selected households will be \$600 (60 percent of mean income of \$1,000).
- 3 In terms of social welfare (this concept is discussed in more detail in section 2.5.1), if individuals or households assess their level of well-being not only in absolute terms (that is, how much income or consumption they have), but also in relative terms (that is, how much do they have in comparison to how much others have), the level of social welfare (*W*) in a society can be represented as the product of the mean income (μ) times one minus the Gini (*G*)—that is, $W = \mu (1 - G)$. With a Gini index of 0.60, a society with mean per capita income of \$1,000 would have a level of social welfare of \$400. This would be lower than the level of social welfare of a society with mean per capita or equivalent income of \$800 and a Gini index of 0.40, yielding a social welfare level of \$480. While this type of comparison of social welfare in two societies depends on the distributional weighting structure implicit in the use of the Gini, it can be generalized to other weighting structures or social preferences when using the “extended” Gini instead of the standard Gini. (The extended Gini provides flexibility in social preferences and is discussed below.)

The Gini coefficient is both a purely statistical measure of variability and a normative measure of inequality. The main advantages of the Gini over alternative inequality measures are as described below.

- 3 As a statistical measure of variability, the Gini can handle negative income, a property some other inequality measures do not possess. This is important when dealing with the impact of a change in policy on inequality in income because the income of some households can be negative. Another advantage of the Gini and related concepts (such as the Gini income elasticity, defined below) is that these measures have statistical properties that are better known than those of other inequality measures. It is thus feasible to assess whether the impact of a change in policy on inequality in income or consumption is statistically significant at the margin.² This is currently not feasible for most other inequality measures. As shown in figure 2.1, the Gini has a geometrical representation, so that one can visualize differences in inequality among alternative distributions, as well as the differential impact of various income or consumption sources.
- 3 The Gini index has solid theoretical foundations, which is not the case for some other inequality measures. As a normative index, the Gini represents the theory of relative deprivation (Runciman 1966), which is a sociological theory explaining the feelings of deprivation among individuals in society (Yitzhaki 1979, 1982). The Gini can also be derived as an inequality measure from axioms on social justice (Ebert and Moyes 2000).

As will be shown in section 2.4.1, the standard Gini index is a special case of a more general family of inequality measures known as the extended Gini.³ The extended Gini can reflect different preferences among policymakers (that is, more or less pro-poor) when assessing the extent of inequality and the impact of various programs and policies on inequality. Specifically, the extended Gini can take into account various social preferences in terms of the weights placed on various parts of the distribution of income or consumption when measuring inequality. This is important to provide flexibility in the evaluation of development programs and policies. For example, when the emphasis is placed on poverty reduction, policymakers

using poverty-derived distributional weights for assessing the impact of social programs and other public policies on welfare are implicitly placing no weight at all on the welfare of the nonpoor. A similar lack of flexibility arises with the standard Gini coefficient, whose weights are fixed and largest at the mode or midpoint of the distribution. To provide an evaluation framework in which the gains to all members of society are taken into account, although weighted differently, policymakers may use the extended Gini instead of the standard Gini. The weights placed on various members of the population can then vary from a situation in which only the welfare of the poorest members of society matters (this is referred to as Rawl's maximin) to complete indifference toward inequality. As with the Gini, the extended Gini is based on the area between the 45 degree line and the Lorenz curve.

2.2.2 Source decomposition of the Gini and the Gini income elasticity

Source decompositions of the (extended) Gini have been used extensively⁴ to analyze the determinants of inequality by income or consumption source—that is, to analyze how various sources of income or consumption affect the inequality in total income or consumption per capita (or per equivalent adult if the user relies on a specific equivalence scale, as discussed in chapter 1). Technical note B.1 presents the source decomposition in which a distinction is made between the absolute and the marginal contribution of an income or consumption source to inequality in total income or consumption. For policy simulations, it is the *marginal* contribution that matters.

The marginal impact on inequality of a change in income or consumption from a specific source depends on the source's Gini income elasticity (GIE). The formula for computing the change in inequality following a small proportional change in one income or consumption source is very simple (by proportional, we mean that all households with that particular income or consumption source are similarly affected in percentage terms). Specifically, the change in the Gini as a proportion of the initial Gini resulting from a 1 percent increase in income or consumption from source k , denoted by $\Delta G/G$, is equal to the share of source k in total income or consumption, denoted by S_k , times the GIE minus one.⁵ The share of the source in total income or consumption matters because, all other things being equal, a 1 percent change in income or consumption from a large source is bound to have a larger impact on inequality than a 1 percent change from a smaller source. As for the GIE, it is an elasticity that tells us how much the overall Gini is affected by a small change in overall mean income or consumption resulting from a small proportional change in a particular income or consumption source. This type of change occurs, for example, when there is a change in the price of a commodity.

When an income or consumption source has a GIE of one, it means that it moves perfectly in sync with total income or consumption, so that a change in the source does not affect the overall inequality. A source with a GIE larger than one affects the richer part of the population more in percentage terms, while a source with a GIE smaller than one affects the poorer part more (the meaning of "richer" or "poorer" depends on the parameter chosen for the extended Gini). A source with a GIE equal to zero is not correlated with total income or consumption—for example, a universal allocation or a lump-sum tax identical for all would have a GIE of zero.

As mentioned above and described in more detail in technical note B.1, on a proportional basis (for instance, for a change in tax rate or interest rate applied to a given income or consumption base), the magnitude of the impact on inequality of a marginal change in a specific income or consumption source depends on the product of the share of total income or consumption represented by the source and its GIE minus one. On a per dollar basis, it can be shown that the magnitude of the impact on inequality of a marginal change in a source depends only on the GIE of the source minus one, and not on the share of the source in total income or consumption. In both types of simulations, the direction of the change in inequality depends solely on whether the GIE is smaller or larger than one. Table 2.1 gives the basic rules for interpreting the value of a GIE for income and consumption sources as well as taxes.

- **Income or consumption source.** When an income source has a GIE larger than one, a marginal increase in the income of that source results in a higher level of inequality. The larger the GIE, the larger the increase in overall inequality. The explanation for this result is that a GIE greater than one means that the share of the income source in a household's total income increases as total income rises. Hence, increasing the income source further will increase inequality. If the income

from a source with a GIE larger than one is reduced, inequality will be reduced at the margin. Income sources with a GIE close to one have no or little impact on inequality, whether the income from these sources is increased or reduced. A GIE smaller than one implies that increasing at the margin the income from the source reduces inequality (and, similarly, reducing the income from the source will increase inequality). The same rules apply for consumption. Sources with a GIE larger than one increase inequality at the margin as consumption from the source increases, while sources with a GIE below one reduce inequality at the margin. Sources with a GIE near one are inequality neutral.

- 3) **Income or consumption tax.** The interpretation of the GIE is reversed when one deals with a tax because a tax reduces the household's income or its ability to consume. When an income tax or a tax on a commodity (a sales tax or a value added tax [VAT]) has a GIE larger than one, a marginal increase in the tax results in a lower level of inequality. The larger the GIE, the larger the decrease in inequality. For example, increasing taxation on luxury goods tends to reduce inequality. By contrast, if a tax with a GIE larger than one is reduced, inequality increases. Taxes on income or consumption goods with a GIE close to one are inequality neutral. Taxes on income or consumption with a GIE smaller than one increase inequality. Thus, reducing the tax on consumption items classified as basic needs reduces inequality.
- 3) **Price subsidies.** A price subsidy is equivalent to a negative tax. Hence, increasing (decreasing) the subsidy for a consumption good with a GIE larger than one increases (decreases) inequality. For an increase (decrease) in the subsidy to reduce (increase) inequality, the good must have a GIE smaller than one. Price subsidies for goods with a GIE close to one are inequality neutral. Since a subsidy is a negative consumption tax, the rules for subsidies are reversed compared to those for consumption taxes.
- 3) **Public good.** When dealing with a public good or any other good provided by the government, one has to look at the GIE of the willingness to pay. If the willingness to pay has a GIE greater (lower) than one, then increasing the quantity of the public good increases (decreases) inequality in real income.

A numerical example may elucidate the mechanics of decomposing the Gini by source and the use of the results of the source decomposition for policy analysis. In order to estimate the change in the Gini (ΔG) following a change in an income source k , we need to compute the value of $G * S_k * (GIE_k - 1)/100$. Assume that a government transfer accounts for 10 percent of total mean per capita income ($S_k = 0.1$) and has a GIE of 0.5. If the Gini is equal to 0.4, a 1 percent increase in the value of the transfer will reduce the

Table 2.1. Interpreting the GIE of an Income or Consumption Source

	<i>GIE smaller than one</i>	<i>GIE larger than one</i>
Income source		
Marginal increase in income from the source	Inequality reduced	Inequality increased
Marginal decrease in income from the source	Inequality increased	Inequality reduced
Consumption source		
Marginal increase in consumption from the source	Inequality reduced	Inequality increased
Marginal decrease in consumption from the source	Inequality increased	Inequality reduced
Tax on income source		
Marginal increase in the tax	Inequality increased	Inequality reduced
Marginal decrease in the tax	Inequality reduced	Inequality increased
Tax on consumption source or change in price		
Marginal increase in the tax or price	Inequality increased	Inequality reduced
Marginal decrease in the tax or price	Inequality reduced	Inequality increased
Price subsidy		
Marginal increase in the price subsidy	Inequality reduced	Inequality increased
Marginal decrease in the price subsidy	Inequality increased	Inequality reduced

Source: Authors.

Gini by $0.4 * 0.1 * (0.5 - 1)/100 = -0.0002$. The impact of an increase of 10 percent in the transfer outlays will be approximately 10 times larger, at -0.002 , resulting in a new Gini of 0.398 . Although this is a small change in the Gini, it was obtained from an increase of only 1 percent in total mean income (since the original transfer represented 10 percent of total income, and it has been increased by 10 percent). If the GIE for the transfer were equal to -0.5 (which would reflect better targeting to the poor), the same 10 percent increase in transfer outlays would decrease the Gini by $0.4 * 0.1 * (-0.5 - 1)/100 * 10 = -0.006$, with a new Gini approximately equal to 0.394 .

Now assume that in order to finance the increase in transfer outlays, the government taxes an income source whose share of total income is 20 percent. To finance the 10 percent increase in transfers for a program that originally represents 10 percent of total income, a 5 percent tax must be imposed on the income source that represents 20 percent of income. If the income source that is taxed has a GIE of 2, the change in inequality due to the taxation of that source is equal to $-0.4 * 0.2 * (2 - 1)/100 * 5 = -0.004$. The minus sign results from a reduction in the incomes of the source being taxed. The total combined impact on inequality of raising transfers and raising taxes is the sum of both impacts ($-0.006 - 0.004$), so that after more taxation and more transfers, the new Gini is equal to 0.39 .

Finally, assume that the policymaker is using the social welfare function $W = \mu (1 - G)$ mentioned in section 2.2.1, whereby social welfare is equal to the mean per capita income times one minus the Gini. If there are no negative or positive incentive effects from the policies,⁶ social welfare will increase by 1 percentage point, since the Gini decreases by 1 percentage point and the mean level of per capita income remains the same. As this example shows, it is easy to use the mechanics of the source decomposition of the Gini to simulate the impact on social welfare of alternative policies. While the example relies on one specific social welfare function, the use of the extended Gini instead of the standard Gini helps in relaxing the assumptions placed on the social preferences of society's members or policymakers.

2.2.3 Application to income and consumption inequality in Mexico

To demonstrate what can be learned from the source decomposition of the Gini index of inequality, tables 2.2 and 2.3 provide the GIEs for a wide range of income and consumption sources in Mexico, with the overall Gini index computed using total per capita income or consumption. The exercise is done at the national, urban, and rural levels.

- ▷ **Income sources in Mexico.** Income sources related to assets (financial assets and ownership of houses, land, machinery, and other assets) tend to increase inequality at the margin; that is, growth in those components will increase inequality, as measured by per capita income. Pensions also tend to increase inequality slightly. Labor income and land rentals are inequality neutral. Gifts (which relate in part to remittances), agricultural and some other types of production, and public transfers tend to reduce inequality. The inequality-reducing effects of stipends from institutions (essentially for education) and of Procampo—a program that gives cash transfer payments to farmers—are strong. The GIE for the Procampo transfers is lower (more inequality-reducing) nationally than in both urban and rural areas, essentially because the majority of the transfers go to rural areas that are poorer than urban areas. In other words, the inequality-reducing impact of Procampo transfers within rural areas is not very large, because those who benefit from the transfers in rural areas are not much poorer than the rural population as a whole. But when those who receive Procampo transfers in rural areas are compared to the national population, they tend to be poorer than the typical Mexican family. As this example shows, the national GIE is not a straight population-weighted average of the urban and rural GIEs, and it is not even bounded by the urban and rural GIEs.⁷ Apart from Procampo, several other income sources have national GIEs outside the range defined by the urban and rural GIEs. This is the case for sale of stocks; sale of houses and land; income from cooperatives, loans, and investments; income from services provided; rent received for land; labor income; and remittances from abroad.

Table 2.2. GIEs for Various Income Sources in Mexico (1996)

	<i>Nation</i>	<i>Urban</i>	<i>Rural</i>		<i>Nation</i>	<i>Urban</i>	<i>Rural</i>
Inequality-increasing sources				Inequality-neutral sources			
Sale of stocks	1.885	1.951	1.991	Small business, commercial	1.055	0.971	1.340
Mortgage and life insurance	1.668	1.662	2.039	Rent received for land	1.023	1.065	1.479
Rent received for housing	1.616	1.611	1.736	Labor income	0.953	0.910	0.928
Sale of houses and land	1.613	1.735	1.797	Other sources of income	0.939	0.953	0.858
Interest income	1.612	1.644	1.274	Inequality-decreasing sources			
Income from cooperatives	1.523	1.561	1.849	Agricultural production	0.903	1.593	0.672
Sale of machinery	1.499	1.636	1.304	Gifts from within the country	0.878	0.945	0.754
Indemnities	1.487	1.420	2.002	Small business, industrial	0.844	0.790	1.047
Other capital income	1.347	0.653	1.953	Remittances from abroad	0.734	0.782	1.218
Loans and investments	1.325	1.378	1.518	Other types of production	0.731	0.665	1.349
Income from services provided	1.176	1.131	1.065	Stipends from institutions	0.123	0.371	0.070
Pension and retirement	1.154	1.055	1.633	Income from Procampo	0.103	0.633	0.607

Source: Wodon and others (2000).

- **Consumption sources in Mexico.** Expenditures for culture and leisure, private transportation, communications, housing expenses, and education tend to be luxury goods, so that reducing their price will be inequality increasing. Water and most food items are normal goods, so that a decline in their price will be inequality decreasing, as are (somewhat surprisingly) health expenditures. Two government-means-tested programs—Liconsa (Leche Industrializada Conasupo)-subsidized milk and Fidelist free tortillas—are redistributive, even though it has been documented that leakage to the nonpoor in the two programs is substantial. Both programs have negative income elasticities in urban areas, which implies that the program benefits are “inferior” goods; that is, goods, whose consumption declines as income per capita increases. The redistributive impact of the programs is lower in rural areas, but the GIEs remain negative nationally. As was the case for various income sources, the GIE of many commodities at the national level are outside the range defined by rural and urban elasticities.

The results from source decompositions of the Gini index of inequality can be depicted graphically. In figures 2.2 and 2.3, the share of income or consumption of a source is represented on the vertical axis.

Table 2.3. GIEs for Various Consumption Sources in Mexico (1996)

	<i>Nation</i>	<i>Urban</i>	<i>Rural</i>		<i>Nation</i>	<i>Urban</i>	<i>Rural</i>
Inequality-increasing sources				Inequality-decreasing sources			
Other expenses	1.578	1.558	1.766	Water	0.918	0.791	0.987
Culture and leisure	1.549	1.456	1.699	Cleaning	0.913	0.867	0.854
Private transport	1.526	1.474	1.806	Meat and fish	0.750	0.605	0.977
Post, telegraph, phone	1.384	1.246	1.605	Health expenditures	0.650	1.144	1.324
Furniture, tools	1.357	1.306	1.738	Public transport	0.612	0.432	0.983
Imputed rent and charges	1.125	0.998	1.019	Cheese, oils, and so forth	0.488	0.419	0.604
Education	1.181	1.082	0.868	Vegetables and fruits	0.478	0.431	0.545
Inequality-neutral sources				Cereals	0.463	0.435	0.580
Other food and drinks	1.072	1.004	1.090	Other kinds of milk	0.398	0.252	0.944
Tobacco and alcohol	1.053	1.090	1.003	Sugar, salt, and so forth	0.340	0.383	0.459
Pasteurized milk	1.044	0.851	1.293	Tortillas	0.120	-0.126	0.732
Auto consumption	1.039	1.005	0.934	Liconsa (subsidized milk)	-0.343	-0.783	0.417
Clothes and shoes	1.008	0.986	1.006	Fidelist (free tortillas)	-0.666	-1.042	0.341
Domestic material	0.991	1.029	1.175	Corn flour	-0.841	-0.262	-0.154
Electricity	0.952	0.842	1.043				

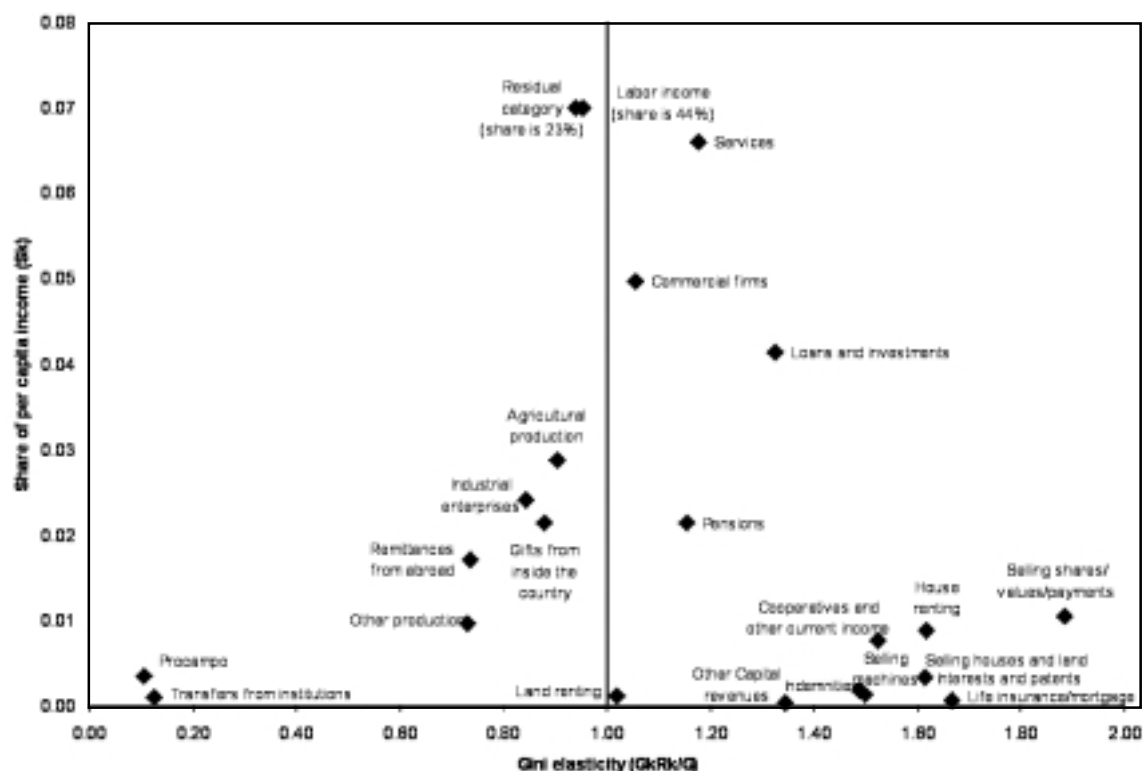
Source: Wodon and others (2000).

The GIE is represented on the horizontal axis. All sources to the left of the vertical line (crossing the horizontal axis at a value of the GIE of one) are inequality decreasing at the margin, while sources to the right of the vertical line are inequality increasing. The farther a source is to the left (right) of the vertical axis, the more it is inequality reducing (increasing) at the margin. Government programs such as Procampo, other public transfers, and food subsidies tend to be on the far left, which indicates their redistributive impact.

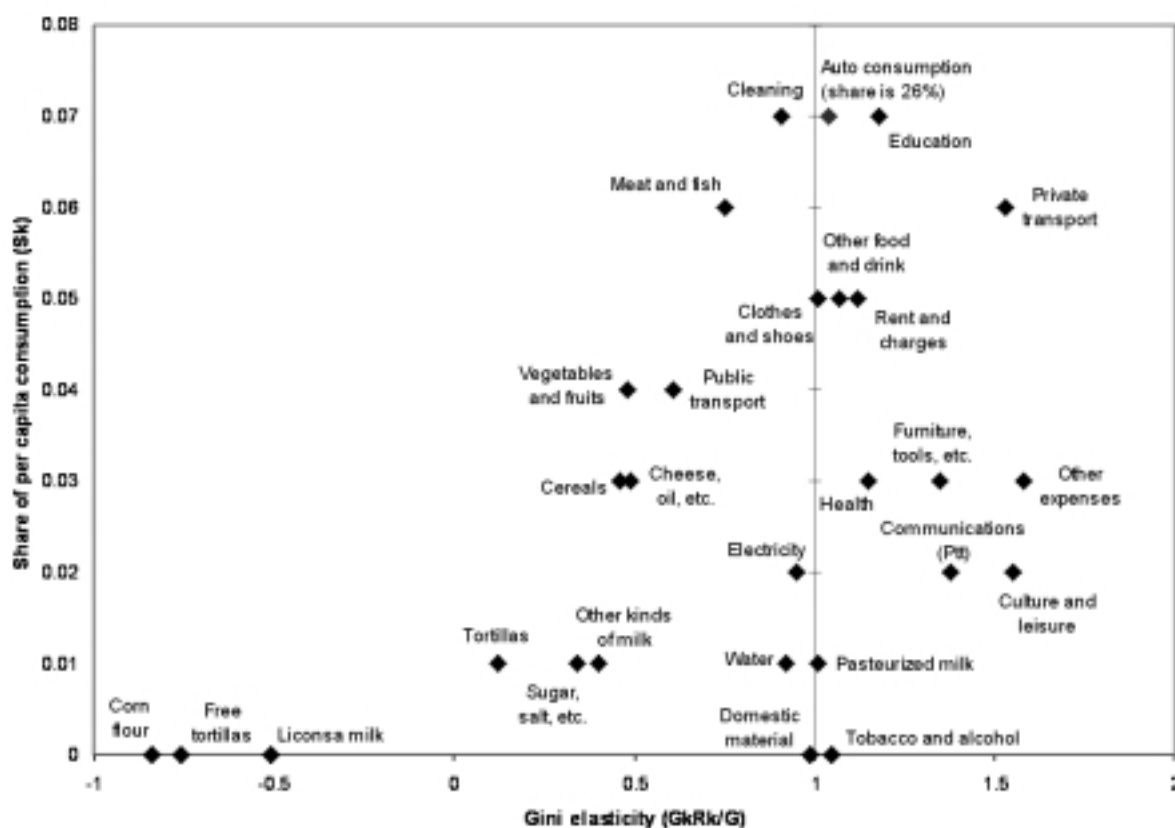
All GIEs are per dollar of income or consumption, so they do not depend on the size of the income or consumption source. Therefore, the GIEs can be used for policy recommendations, because one can compare the GIE of one income or consumption source with the GIE of another source. The following are examples of policy discussions for food subsidies (for more details, see Wodon and Siaens [1999]).

- 3 For many years, the government of Mexico provided general subsidies for tortillas. Part of the rationale was that, since tortillas represented a larger share of the consumption of the poor than the consumption of the nonpoor, the subsidy was to some extent self-targeted. It is true that the tortilla subsidy reduced inequality, since its GIE was well below unity (0.120 nationally). The subsidy was inequality reducing, especially in urban areas (GIE of -0.126 versus 0.732 in rural areas), and its impact was much larger than that of subsidies for utilities such as water (national GIE of 0.918) and electricity (national GIE of 0.952). However, the tortilla subsidy generated price distortions (These cannot be analyzed with the GIE alone; they are discussed conceptually in section 2.5.2), and it was costly. Furthermore, the subsidy was less effective in reducing inequality than would have been a generalized subsidy on corn flour, the basic ingredient used to make tortillas. This can be seen in figure 2.3, where corn flour is to the left of tortillas; that is, the GIE for corn flour is smaller.
- 3 Within food subsidies, means-tested subsidies tend to be better than generalized subsidies. The general subsidy for tortillas was phased out in the first few months of 1999, and the proceeds were used to improve and expand targeted subsidies. A free tortillas program administered by Fidelist

Figure 2.2. National Gini Decomposition by Income Source in Mexico (1996)



Source: Wodon and others (2000).

Figure 2.3. National Gini Decomposition by Consumption Source in Mexico (1996)

Source: Wodon and others (2000)

is currently accessible to families earning less than the sum of two minimum wages. These families are eligible to receive one kilogram of free tortillas per day. Participants use a bar-coded card that is scanned at participating tortillerias. The owner of the tortilleria is later reimbursed for the cost of the free tortillas distributed. Independent of the more fundamental question of whether or not food subsidies are a good policy instrument, the move from generalized to targeted subsidy was a good decision because means-tested food subsidies are more inequality reducing and less costly. Figure 2.3 shows that the reduction in inequality achieved with the generalized tortilla subsidy (represented in the figure by the category “Tortillas”) does not come close to the reduction achieved with the means-tested tortilla subsidy (represented in the figure by “Free tortillas”).

- 3) Within means-tested food subsidies, the various programs have a similar redistributive effect. This can be seen by noting that “Liconsa milk” and “Free tortillas” are close to each other in figure 2.3. Liconsa has been producing milk for Mexico’s poor for the last 15 years. Qualifying families can purchase from eight to 24 liters of milk per week at a discount of roughly 25 percent versus the market price. To qualify, families must earn less than the combined total of two minimum wages and have children under 12 years of age. The ration of milk is determined by the number of children under 12 (eight liters for families with one or two children, 12 liters for three children, and 24 liters for four or more children). About 5.1 million children benefit from the subsidies. Overall, the two programs have similar effects.

2.3 Policy Applications of the Source Decomposition

In this section, we show how to use the concept of the GIE for policy analysis in a wide variety of areas, focusing on the redistributive effects of programs and policies, that is, ignoring their impact on growth (this aspect is discussed separately in section 2.5). Although the tools provided by the source decomposi-

tion of the Gini can be applied to the analysis of inequality over time and the risks faced by households, we do not discuss this here.

2.3.1 Simulations per dollar spent: Transfers in the Czech Republic

The first example deals with income transfers in the Czech Republic. We use GIE estimates from Piotrowska (2000), who used household survey data for 1994 and 1997 to analyze the impact of income taxes and various government transfers on inequality in the Czech Republic. Column 1 in table 2.4 presents some of Piotrowska's results for 1997. Apart from the income tax, four types of transfers are analyzed. All transfers reduce inequality (each GIE is well below one). The ranking of the transfers in terms of their redistributive effect, from the least to the most redistributive, is the following: unemployment benefits, child allowances (means-tested and paid to families with children, with the benefit depending on the age of the child), supplementary benefits (means-tested and given to households with income below the subsistence level), and parental benefits (means-tested and paid to a nonworking parent who takes care of a child under three years of age, or under seven years of age if the child is disabled). Columns 2 and 3 in table 2.4 use the GIEs from column 1 to perform simulations.

- 3 *Balanced budget inequality reduction.* Assume that the government wants to reduce inequality by reallocating expenditures between programs without increasing total outlays. One possibility is to reduce funding for unemployment benefits and increase funding for other programs. The GIE of an intervention shifting \$1.00 from unemployment benefits to child allowances is -0.330.⁸ A more redistributive alternative would be to shift \$1.00 from unemployment benefits to parental benefits (with a resulting GIE of -1.108).
- 3 *Constant inequality budget saving.* Now assume that the government wants to reduce its budget deficit while keeping inequality unchanged. For every dollar of unemployment benefits that is cut, what should be the increase in other transfers needed so that inequality remains constant? It can be shown that inequality will remain intact if a \$1.00 decrease in unemployment benefits is accompanied by an increase in child allowances of \$0.830, which would result in a net savings for the state of \$0.170. For parental benefits, the required increase is only \$0.594, which would result in a savings of \$0.407.⁹

2.3.2 Simulations with percentage changes: The VAT in South Africa

The next example of applying source decomposition to policy modeling is based on South African data. This example reveals the distributional impact of indirect taxes levied on consumption goods and services. The first line in table 2.5 shows the VAT, which represents 6 percent of total income. The VAT is slightly regressive (GIE is smaller than one). The commodities in the rest of table 2.5 have no VAT; that is, they are not taxed. The GIEs for these commodities suggest, for example, that expenditures on sour milk decline with income (negative GIE). By contrast, the GIEs of skim milk, brown bread, fish, and oil are closer to the GIE of the VAT. This means that, although inequality would increase if these commodities were taxed, they might still be candidates for incorporation into the base of the VAT if the government

Table 2.4. Policy Simulations per Dollar Spent: Transfers in the Czech Republic (1997)

	<i>Gini income elasticity</i>	<i>Balanced budget inequality reduction: GIE of a \$1.00 cut in unemployment benefits compensated by an additional \$1.00 in another program</i>	<i>Constant inequality budget saving: Spending needed to offset a \$1.00 cut in unemploy- ment benefits in order to keep overall inequality unchanged</i>
Unemployment benefits	- 0.614	1.000	\$1.000
Child allowances	- 0.944	-0.330	\$0.830
Supplementary benefits	- 1.333	-0.719	\$0.692
Parental benefits	- 1.712	-1.108	\$0.594

Source: Authors' computations based on GIEs from Piotrowska (2000).

deemed a revenue increase necessary. To give another example, table 2.5 suggests that exempting eggs from the VAT is more justified on distributional grounds than exempting vegetables, which itself is more justified than exempting fresh fruits.

If policy simulations were to be conducted on a per dollar basis, one would subtract from each GIE, and the results between commodities would be compared, as was done in the previous section with income sources. If the effect of a reform of the VAT is to be evaluated, however, the change in tax revenue caused by changes in tax rates must be evaluated. The analysis must be conducted on a proportional rather than on a per dollar basis. Assuming that there is no behavioral response to the tax changes, the share of the expenditure on the commodity can serve as a proxy for the revenue collected through the tax. For example, if we assume that a tax is imposed on fresh milk, inequality will increase, because the GIE is less than one. To compensate for that, one could ask what should be the subsidy on rice to keep inequality intact. A 3 percent subsidy on rice would be needed to offset the effect on inequality of a 1 percent tax on fresh milk. Similar exercises could be done to find the effect on inequality of revenue-neutral, indirect tax reforms.

2.3.3 Combining taxes and transfers: Unemployment benefits in Chile

Our third example deals with the proposal to move from unemployment assistance to Unemployment Insurance Savings Accounts (UISAs) in Chile. Although unemployment benefit programs remain rare in very poor countries, a number of middle-income countries have implemented, or at least considered, such programs in recent years, especially in Latin America. These programs have also existed for some time in transition economies.

Under Chile's current system, upon losing their jobs, formal sector workers receive limited unemployment benefits and potentially larger severance payments. The unemployment benefits are financed through general tax revenues (tax revenues from many different sources, including the income tax and the VAT), while the severance payments are paid by firms. The main problem with the current system is not so much that the system might create negative incentives (for the supply of labor among those receiving benefits, for instance) but that unemployment benefits are low, so that the coverage of the program among the unemployed is also low, partly because many workers choose not to apply for benefits.

Under the Chilean UISA system, which has been discussed by the legislature but not yet implemented, each employed worker would make a fixed, mandatory minimum contribution to his or her UISA each month, with the option of voluntary contributions above the minimum level. Upon becoming unemployed, an individual worker would be entitled to withdraw a fixed maximum amount per month from his or her UISA (smaller withdrawals would also be permitted). If the individual's UISA balance were to fall to zero, or become seriously depleted, he or she would be entitled to unemployment assistance financed through a tax levied on all wage earners. If workers retire with a positive balance in their UISA, they can use the balances to supplement their pensions. Overall, the workers themselves would play a much larger role in financing their own support during periods of unemployment.

The main advantage of UISAs is that they would set the right incentives; they would not distort the behavior of employees and firms. This is because the funds taken by an unemployed individual from the

Table 2.5. Policy Simulations on a Proportional Basis: The VAT in South Africa (1994)

	<i>Share</i>	<i>GIE</i>		<i>Share</i>	<i>GIE</i>
VAT	6.00	0.90	Mealie meal	0.02	-0.02
Fresh milk	0.07	0.38	Rice	0.02	0.27
Sour milk	0.0	-0.20	Mealie rice and samp	0.0	-0.01
Skim milk	0.0	0.47	Brown bread	0.02	0.42
Eggs	0.02	0.27	Fish	0.01	0.61
Fresh vegetables	0.09	0.31	Oil	0.01	0.52
Fresh fruit	0.06	0.39	<i>Total</i>	0.30	0.69

Source: Yitzhaki (1999).

UISA directly reduces the individual's personal wealth by an equal amount, so that individuals fully internalize the cost of unemployment compensation. UISA systems are not without risks, however, and one of the risks relates to the distributional implications of moving from the current system to the proposed reform. An analysis of these distributional implications has been done by Castro-Fernandez and Wodon (2001), using information on the GIEs of the two alternative unemployment benefit systems and their financing mechanisms through taxes.

To analyze the distributive impact of the current system, it is necessary to take into account both the benefits provided and the way funds are raised to provide these benefits.

- 3 *GIE for the current system of unemployment assistance.* This GIE was estimated using data from the 1998 *Caracterización Socioeconómica Nacional* (CASEN) survey, which gives information on who benefits from the program and the amount received by program participants. The GIE is equal to -0.84, which is highly redistributive. The low value of the GIE is not surprising because the amount provided by the program is fairly small. Hence, participation in the program is higher among those unemployed who have few other resources on which to rely to cope with the loss of earnings resulting from unemployment.
- 3 *GIE for the general tax revenues used to fund the current system.* The current system of unemployment assistance is funded through general tax revenue. Since each additional dollar provided for assistance must be raised through taxation, we need to take into account the GIE of general tax revenues, which in 1996 was equal to 0.90. Hence, the current tax system is regressive (the GIE is smaller than one).¹⁰
- 3 *Combining both estimates for the current system.* In order to estimate the distributive impact of the current system of unemployment assistance, it is necessary to total the impacts for the unemployment benefits and the taxes. Each marginal impact is equal to the relevant GIE minus one. This yields a marginal impact on inequality proportional to $-0.84 - 1 - (0.90 - 1) = -1.74$. To assess the actual impact on the Gini, we would need to take into account the income share accounted for by the benefits, but this is not necessary here because our objective is only to compare at the margin the current benefits with the proposed UISAs.

To analyze the distributive impact of the proposed UISAs, it is also necessary to take into account both the benefits provided and the way through which funds are raised to provide the benefits. This requires estimates for two GIEs. On the benefits side, we need to estimate the GIE for the unemployment allowance that would be received by workers once they have depleted or exhausted their UISA. On the tax side, we need to estimate the GIE for the tax on formal sector wages that would be used for the unemployment assistance benefits received after the UISA is exhausted. (The part of the levy on formal wages used to fund the UISA of the individual need not be taken into account since this tax is directly returned to the worker.)

- 3 *GIE for the benefits (UISA-based system of unemployment assistance).* To estimate this parameter adequately, we would need to forecast the probability of being unemployed for formal sector workers, the expected balance in their UISA when unemployed, and the expected public

Table 2.6. Assessing the Impact of a Reform of Unemployment Benefits in Chile (1998)

	<i>Impact on inequality</i>
Current system of unemployment assistance	
GIE for benefits minus one	-1.84
Minus (GIE for taxes minus one)	0.10
Combining both GIEs	-1.74
Proposed UISAs reform	
GIE for benefits minus one	-1.46
Minus (GIE for taxes minus one)	0.00
Combining both GIEs	-1.46

Source: Castro-Fernandez and Wodon (2001).

unemployment assistance once they have depleted their UISA. This is a difficult task. As a proxy, we can use a GIE representing the position in the income distribution of those unemployed workers who belonged to the formal sector before becoming unemployed. This information is available in the 1997 National Employment Survey. Using this survey, the GIE was found to be equal to -0.46. Using this GIE is equivalent to assuming that all the workers who are now unemployed, and who belonged to the formal sector before being unemployed, have the same length of unemployment, deplete the funds available in their UISA at the same time, and have the same expected benefit from unemployment assistance after the depletion of their UISA.

- 3 *GIE for the taxes (to fund the UISAs and the proposed public transfers once the UISAs have been exhausted).* Since the taxes that would fund the UISA system are proportional to the wages of formal sector workers, the GIE for the taxes is equal to the GIE for the source of income represented by these wages. It turns out that the GIE is virtually equal to one, so that on the taxation side the taxes for the UISA have no impact on inequality.
- 3 *Combining both estimates for the proposed reform.* Given that under the new system, the GIE for the UISA-based assistance would be -0.46, and the GIE for tax revenues on formal sector wages would be 1.00, the total impact at the margin would be proportional to -1.46.

In comparing the GIE of the benefits under the proposed reform with the GIE of the benefits under the current system, the unemployment assistance provided under the UISA system, although still redistributive (the GIE is less than one), would be less redistributive than the current system per dollar spent, essentially because in the new system we implicitly assume that participation would not be limited to the poorest. On the tax side, however, using a wage tax rather than general tax revenues for financing unemployment benefits would be beneficial from a distributional point of view because the GIE for general tax revenues was found to be equal to 0.90, while the GIE for taxes on formal sector wages is one. Overall, under the simple assumptions made for obtaining the GIE estimates, the new system would be less redistributive than the current system (GIE of -1.46 for UISAs versus -1.74 for the current system), but it would still be highly redistributive.

Although the exercise above provides useful information for policymakers, other considerations would have to be taken into account for evaluating the pros and cons of both types of unemployment benefits. For example, although the redistributive impact per dollar spent on unemployment benefits of a UISA-based system would probably be smaller than the redistributive impact of Chile's current unemployment assistance system, the complementary unemployment assistance component of the new system would likely have a much better coverage because the value of the benefits would be higher.

2.3.4 Beyond taxes and transfers: Basic infrastructure in Honduras

The fourth example deals with the provision of basic infrastructure services to households that currently lack access to these services. Various methods can be used to assess the impact on inequality and social welfare of policies promoting access to basic infrastructure services for the poor. One possibility is to estimate the implicit rental value of access to services and to add this value to the income or consumption of households without access.¹¹ Since the total rent paid by tenants reflects the various dwelling amenities, the willingness to pay for each separate amenity can be retrieved from the estimation of a regression relating the rent paid to the dwelling's characteristics. The implicit rental value of amenities can also be used in owner-occupied houses as a proxy for the willingness to pay for access to basic services, or as a proxy for the value of these services if access is provided by the state or municipality without charge.

The method above was applied by Siaens and Wodon (2001) to data from several Latin American countries. Using a nationally representative survey for September 1998 in Honduras, access to electricity, water within the house, and a sanitary installation were found to increase the rental value of a dwelling by 31 percent, 41 percent, and 36 percent, respectively. The resulting value of access to basic services was added to the income of households to simulate the effect on inequality of the public provision of access to the services. In doing so, it is assumed that the households pay for their consumption of, say, water and electricity, but not for their initial connection to the network; that is, the cost of access is publicly funded.

The GIEs in table 2.7 reveal that providing access to electricity for those who have none would be more inequality reducing (GIE of -0.30) than providing access to sanitation (GIE of -0.15) or water (GIE of 0.07), even though, for all three services, providing access would be inequality reducing at the margin. Table 2.7 also shows the GIE for the existing electricity subsidy in Honduras. The subsidy is given to all households that consume below 300 kilowatt-hours per month (these households represent 85 percent of the population with access to electricity). There is some level of self-selection in the electricity subsidy because of the consumption ceiling above which households are not eligible, but the ceiling is so high that the subsidy is poorly targeted to the poor. This is reflected in the GIE for the subsidy, which is inequality increasing at the margin (value of 2.06, well above the inequality-neutral value of one). Table 2.7 suggests that unless it is prohibitively expensive to provide access to electricity to households currently without access, providing such access would have larger positive effects on social welfare than the current practice of giving consumption subsidies to those with access.

2.4 Extensions to the Source Decomposition Methodology

This section presents three extensions to the GIE method. The first extension assesses the robustness of the results obtained for the GIEs of various social programs to the underlying structure of social preferences implicit in the use of the standard Gini index, as opposed to the extended Gini index. In the second extension, we show how to decompose the GIE of a program or policy into two components: a targeting GIE that reflects who does and does not benefit from the program and an allocation GIE that reflects the impact of potentially different benefit levels for program participants. In the third extension, we show how to decompose the GIE in order to analyze the impact of a program on the poor and the nonpoor.

2.4.1 Robustness test with the extended Gini

The comparison of the redistributive impact of various programs and policies can be sensitive to the weights placed on various segments of the population. The choice of a weighting scheme is inherent in the use of an inequality measure. However, as mentioned earlier, to test for the sensitivity of the policy analysis to the distributional weights implicitly used in the inequality measure, one can use the extended Gini coefficient instead of the standard Gini. The extended Gini depends on one parameter, typically denoted by ν . The standard Gini corresponds to ν equal to two. A lower value places more weight on the top part of the distribution, while a higher value places more weight on the bottom part of the distribution. The higher the value for ν , the larger the weight placed on poorer households or individuals.

To illustrate the use of the extended Gini, we rely on an analysis of income sources in the United States done by Lerman and Yitzhaki (1994). Using the March 1987 Current Population Survey, Lerman and Yitzhaki estimated the GIEs of 22 income sources. As was the case in figure 2.2, the horizontal axis in figure 2.4 represents the GIE of the income source, while the vertical axis represents the source's share in total per capita income. The income sources located farther to the left of the horizontal axis are the most redistributive at the margin.

Consider, for example, the energy voucher Low-Income Home Energy Assistance Program (LIHEAP). The program provides vouchers to low-income households to help them pay for their energy

Table 2.7. Assessing the Impact of Access to Basic Infrastructure in Honduras (1998)

	<i>Impact on inequality</i>
Access to basic infrastructure services	
GIE for water	0.07
GIE for sanitation	-0.15
GIE for electricity	-0.30
Existing consumption subsidies	
GIE for electricity subsidies	2.06

Source: Siaens and Wodon (2001).

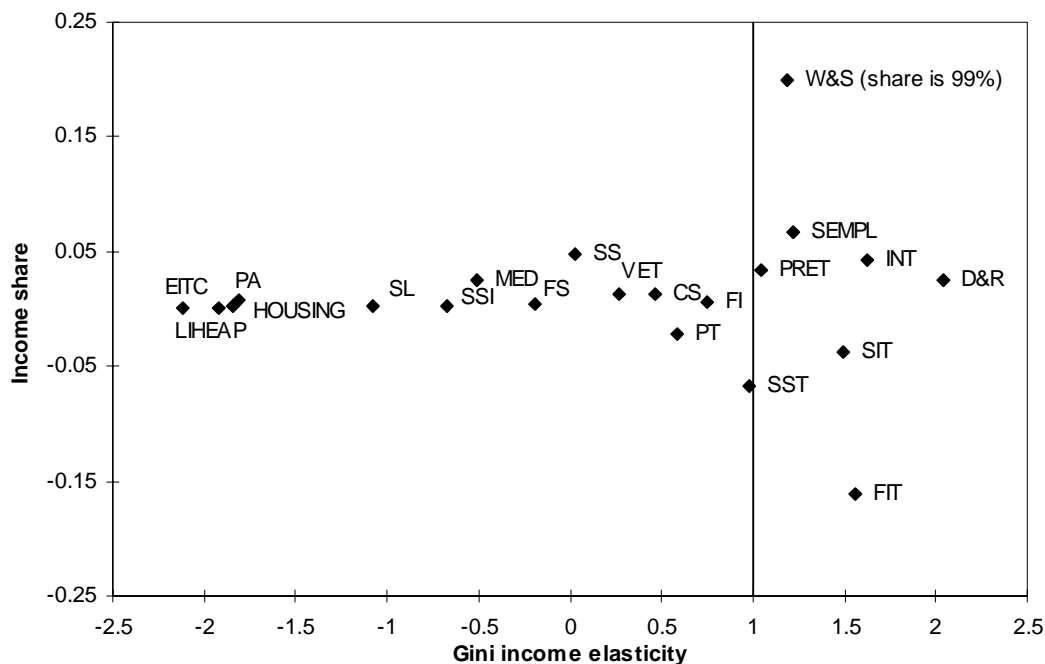
needs. LIHEAP was created in the United States in 1980 following rising energy prices. Today, the program remains means tested, with three main components: (1) a crisis component for preventing utility disconnection in times of high heat and very cold weather, (2) a year-round heating and cooling assistance component for low-income households, and (3) a weatherization component to improve housing quality and reduce energy bills. Although LIHEAP is a small program (small income share), it is fairly good in terms of its marginal redistribution of income toward the poor. There is only one social program more inequality reducing than LIHEAP: the Earned Income Tax Credit, which reduces the tax rate for the working poor. LIHEAP does better in terms of reducing inequality than public assistance (PA), low-income housing (HOUSING), school lunches (SL), Supplemental Security Income (SSI), medical benefits such as Medicare and Medicaid (MED), food stamps (FS), and social security (SS).

In table 2.8 the GIEs computed by Lerman and Yitzhaki are used to answer the question, What would be the magnitude of the change in an income source that would be necessary in order to have the same impact on inequality as a \$1.00 increase in wages and salaries? For the standard Gini ($\nu = 2$), the table shows both the GIE and the change in each income source having the same impact on inequality as a \$1.00 increase in wages. LIHEAP's GIE is -1.924, as opposed to a GIE of 1.192 for wages and salaries. When applying the rules for using GIEs, in order to have the same increase in inequality as that caused by a \$1.00 increase in wages and salaries, it would be necessary to decrease LIHEAP benefits by \$0.066. If more emphasis were placed on the poor by using the extended Gini, a smaller reduction in LIHEAP benefits would have the same impact (\$0.047 for $\nu = 4$, \$0.035 for $\nu = 6$). One can also see from table 2.8 that in most cases, the ranking of the redistributive impact of transfer programs is not sensitive to whether the standard or the extended Gini is used.¹² In normative terms, the use of the extended Gini helps in checking whether the ranking of the redistributive impact of various programs is robust to the social preferences implicitly taken into account when using any one inequality measure.

2.4.2 Targeting versus allocation among program beneficiaries

The rules of operations of social programs often include eligibility mechanisms as well as allocation mechanisms for the distribution of program benefits among the population deemed eligible. The

Figure 2.4. National Gini Decomposition by Income Source in the United States (1987)
(standard Gini with $\nu = 2$; for symbols, see table 2.4)



Source: Adapted from Lerman and Yitzhaki (1994).

Table 2.8. Changes in Income Sources with Equal Effects on Inequality in the United States (1987)

	Change in income source for standard Gini ($v = 2$)		Change in income source for the extended Gini	
	GIE for $v = 2$	Change in income source for $v = 2$ (\$)	Change in income source for $v = 4$ (\$)	Change in income source for $v = 6$ (\$)
Wages and salaries (W&S)	1.192	1.000	1.000	1.000
Self-employment income (SEMPLE)	1.219	0.877	1.801	2.203
Farm income (FI)	0.751	- 0.771	- 0.885	- 3.457
Dividends and rents (D&R)	2.039	0.185	0.283	0.300
Interest income (INT)	1.620	0.310	0.454	0.049
Private retirement income (PRET)	1.041	4.683	2.316	1.407
Child support (CS)	0.461	- 0.356	- 0.263	- 0.201
Social security, railroad retirement (SS)	0.027	- 0.197	- 0.206	- 0.194
Supplemental Security Income (SSI)	- 0.671	- 0.115	- 0.280	- 0.254
Veterans' benefits, unemployment insurance (VET)	0.273	- 0.264	- 0.105	- 0.094
Public assistance (PA)	- 1.808	- 0.068	- 0.050	- 0.038
School lunch benefits (SL)	- 1.083	- 0.092	- 0.075	- 0.060
Medical benefits noninstitutional (MED)	- 0.512	- 0.127	- 0.112	- 0.095
Food stamps benefits (FS)	- 0.190	- 0.161	- 0.048	- 0.036
Housing benefits (HOUS)	- 1.847	- 0.067	- 0.049	- 0.037
Earned Income Tax Credit (EITC)	- 2.112	- 0.062	- 0.041	- 0.028
Energy assistance (LIHEAP)	- 1.924	- 0.066	- 0.047	- 0.035
Property taxes (PT)	0.589	- 0.467	- 0.405	- 0.293
Federal income taxes (FIT)	1.559	0.343	0.628	1.411
Social security taxes (SST)	0.978	- 8.727	- 13.160	- 2.887
State income taxes (SIT)	1.494	0.389	0.613	1.025

Source: Lerman and Yitzhaki (1994).

performance of programs or lack thereof may thus be due to the selection mechanism for determining eligibility and the participation rate of the program among those eligible (this is referred to as targeting), to the rules for distributing benefits among program participants (this is referred to as allocation), or to both. The decomposition of the GIE proposed in this section enables the analyst to measure whether good (bad) performance of a program is due to good (bad) targeting or good (bad) allocation of benefits among participants. Specifically, as discussed in Wodon and Yitzhaki (forthcoming), the GIE of an income or consumption source can be decomposed into the product of a targeting GIE and an allocation GIE (see technical note B.2).

- 3 **Targeting GIE.** The targeting GIE measures what would be the effect of a program on inequality if all those who benefit from the program were receiving exactly the same amount. Because all participants receive the same transfer, this GIE provides the impact of pure targeting (who gets the program and who does not) on inequality.
- 3 **Allocation GIE.** The allocation GIE measures the effect of social welfare of the differences in the benefits received by various program participants, controlling for the existing targeting of the program. If there are no differences in the benefits received by various participants, the allocation GIE is equal to one. If poorer participants receive more, or less, the elasticity will be different from one.

To demonstrate the methodology, we follow Clert and Wodon (2001), who analyzed programs targeted by the government of Chile using a means-testing procedure known as the *ficha* CAS (*ficha de estratificación social*). The *ficha* CAS is a two-page form that households must complete if they wish to apply for benefits. Each household is given a score on the basis of the form, which is used to determine program eligibility. The use of the *ficha* for many programs reduces the cost of means testing. The cost of

the interview needed to complete the CAS is \$8.65 per household. Chile's Ministry of Planning estimates that 30 percent of households undergo interviews, which seems reasonable given that the target group for the subsidy programs is the poorest 20 percent. In 1996, administrative costs represented 1.2 percent of the benefits distributed using the CAS system. If the costs were borne by the water subsidies alone, for example, they would represent 17.8 percent of the subsidies. The main programs targeted with the *ficha* CAS are: (a) means-tested state pensions provided to elderly or disabled individuals through a program called PASIS (*Pensión de Asistencia*); (b) family allowances to help parents cope with the extra expenses of the birth of a child, as well as with the possible reduction in earnings resulting from pregnancy and delivery; (c) water subsidies of 20 to 85 percent of the utility bill for the cost of consuming up to 15 cubic meters per month; (d) subsidies for the construction of new social housing units, or the improvement of existing units; and (e) free childcare for working mothers.

Table 2.9 gives the estimates of the GIEs. Consider the case of the pension assistance provided under PASIS. The table indicates that the GIE for PASIS is -0.58, which is low and, hence, highly redistributive. (Any GIE below one indicates that the corresponding program is redistributive; a negative GIE implies a large redistributive impact.) The GIE for PASIS is equal to the product of the targeting GIE (-0.56) and the allocation GIE (1.05). That the allocation GIE is close to one suggests there are few differences in pension benefits among PASIS participants. In other words, the redistributive impact of the program comes from its good targeting based on the *ficha* CAS. For comparison purposes, table 2.9 includes other sources of pension income even though these are not targeted through the *ficha* CAS and are often provided by private operators. As expected, the pension assistance provided through PASIS is much more redistributive than other pensions.

Two main conclusions can be drawn from table 2.9. First, all the programs targeted with the *ficha* CAS have large redistributive impacts. This is evidenced by the low values of the GIEs for the income transfers and water subsidies and by the low values of the targeting GIEs for the housing and childcare programs. (For these programs, we know only who participates and who does not, so we cannot compute an allocation GIE nor estimate the overall GIE elasticity.) Yet some programs are more redistributive than others. Among transfers and subsidies, family allowances are the most redistributive, while water subsidies are the least redistributive. Among other programs, childcare tends to be slightly better targeted than housing programs, perhaps because of savings requirements for participation in the latter.

The second conclusion drawn from table 2.9 is that the redistributive impact of the programs is essentially because of their good targeting, which is based on the *ficha* CAS. The allocation GIEs are close to one, which suggests few differences in the amount of benefits received from the programs by different households. Only in the case of water is there an allocation GIE well below one, probably because those who consume more water, thereby receiving more subsidies, tend to be richer.

2.4.3 Impact of programs and policies on the poor and the nonpoor

Within the context of a PRSP, it is necessary for the evaluation of programs and policies to give special consideration to the impact on the poor as opposed to the nonpoor. This can be done in two different ways. First, one can use the extended Gini to place a higher weight on the social welfare function of the population at the bottom of the distribution of income or consumption. An alternative is to decompose the GIE for the overall population into three components: the GIE among the poor, the GIE among the nonpoor, and a third term taking into account the impact of programs and policies on the inequality between the poor and the nonpoor (between-group GIE). When the GIEs for the poor and the nonpoor are similar, it is the between-group GIE that is the most important factor that determines the poverty alleviation capacity of a program. The reason is that it shows the ability of the program to transfer resources from the haves to the have-nots. In this section, following Yitzhaki (forthcoming), we illustrate this decomposition of the GIE.¹³ The illustration uses data from Romania's 1993 Family Expenditure Survey. For simplicity, we will assume that the bottom 20 percent of the population is poor.

Table 2.10 gives the results for selected income and consumption sources in Romania. The first column in the table provides the overall GIE, and its decomposition in three terms is given in the other three

Table 2.9. Targeting and Allocation GIEs of Means-Tested Programs in Chile (1998)

	Income transfer programs and water subsidies				
	Non-PASIS pensions (not targeted)	Pension assistance PASIS	Family allowances SUF	Water subsidies	
Overall GIE	0.91	-0.58	-1.03	-0.35	
Targeting GIE	0.47	-0.56	-0.95	-0.43	
Allocation GIE	1.91	1.05	1.09	0.80	
	Other targeted programs				
	Housing Viv. Basica	Housing Viv. Prog I	Housing Viv. Prog II	Childcare JUNJI	Childcare INTEGRA
Targeting GIE					
Actual value at individual (per capita) level	-0.41	-0.68	-0.59	-0.50	-0.71
Actual value at household level	-0.32	-0.54	-0.48	-0.44	-0.65

Source: Clert and Wodon (2001).

columns. The first row in the table shows that although an across the board increase in wage income would mildly increase inequality overall (GIE of 1.05), it would increase inequality among the poor (GIE of 1.85), decrease inequality among the nonpoor (GIE of 0.91), and increase inequality between the poor and the nonpoor. By contrast, an increase in agricultural income would increase overall inequality, decrease inequality among the poor, increase inequality among the nonpoor, and not affect inequality between groups. An increase in pension income would increase inequality in both groups as well as between groups.

The results for income transfers are more interesting because they have direct policy implications. An increase in child allowances would decrease inequality among both the poor and the nonpoor, although the effect would be smaller among the poor than among the nonpoor. Unemployment benefits display a similar pattern: although an increase in benefits would reduce inequality, the impact would be comparatively smaller among the poor than among the nonpoor. The effect of changing social assistance at the margin is almost the same for the poor and the nonpoor.

Now assume that the government could either increase the allowances for children or create a new basic allowance granted on a per capita basis, following the principles suggested for universal allowances in some academic circles in Europe. Under a universal allowance, transfer benefits would be proportional to family size. The last line in table 2.10 presents the overall GIE for family size in addition to its decomposition. The GIEs among the poor and the nonpoor are equal to -0.48, while the GIE between groups is equal to -0.67. If the impact of the whole population were taken into account, when confronted with a choice between increasing child allowances and creating a new per capita universal allowance in order to improve social welfare, the government could choose to increase child allowances because the GIE for child allowances (GIE of -0.70) is lower than the GIE for a universal allowance (GIE of -0.52). If

Table 2.10. Selected GIEs for the Poor and Nonpoor in Romania (1993)

	<i>All households</i>	<i>GIE within the poor</i>	<i>GIE within the nonpoor</i>	<i>GIE for between groups</i>
Wage income	1.05	1.89	0.91	1.21
Agricultural income	1.08	0.45	1.16	0.99
Pension income	1.19	1.61	1.05	1.34
Child allowance	-0.70	0.34	-0.92	-0.64
Unemployment compensation	-0.67	0.42	-0.80	-0.72
Social assistance	0.60	0.67	0.61	0.62
Family size (not an income source)	-0.52	-0.48	-0.48	-0.67

Source: Yitzhaki (forthcoming).

only the impact among the poor is taken into consideration, however, the creation of a universal allowance would have a larger welfare impact (GIE of -0.48) than an increase in the child allowances (GIE of 0.34).

Although these results could be sensitive to the choice of the poverty line (as is always the case when evaluating programs according to a poverty-based method), this sensitivity can be tested by redoing the decomposition with a different poverty line. The method will still be able to identify the impact of programs and policies on the poor only, if this is needed for policy purposes.

2.5 Impact of Policies on Growth and Cost of Taxation

In countries that are preparing a PRSP, economic growth is more important than redistribution for improving well-being and reducing poverty. If programs and policies are evaluated on the basis of their distributional impact only, it may lead to the selection of interventions that are not optimal in the medium to long run. This section shows how to extend the methodologies presented earlier in order to take into account the effect of social programs and policies on growth. This is done by decomposing the marginal impact of programs on social welfare into a growth component and a redistribution component. Section 2.5.1 discusses the issue of the cost of taxation, which must be taken into account when assessing whether it is beneficial to implement a particular redistributive policy.

2.5.1 From inequality to social welfare: Growth and redistribution

To account for the level of well-being (the mean income per capita or per equivalent adult) as well as the inequality in well-being when designing or evaluating social policies, one needs to use a social welfare function. Social welfare functions typically follow a number of basic principles. Three such principles are described below.

- ⊃ Social welfare functions tend to be based on the preferences of the individuals composing society rather than on societal goals. At the same time, it is perfectly valid to weight the welfare of various individuals differently in the social welfare function, provided this is done in an objective way (for example, according to income or consumption or to the rank of the individual or household in the distribution of income and consumption).
- ⊃ Social welfare functions tend to respect the Pareto principle of efficiency, meaning that if one can improve the well-being of one person without decreasing the well-being of any other, it should improve the well-being of the first person (it would be inefficient not to do so). This in turn implies another principle that any action increasing the well-being of one individual without decreasing the well-being of any other yields an improvement in social welfare.¹⁴
- ⊃ For those favoring redistribution toward poorer members of society, a third principle can be added: All other things being equal, a transfer of income or consumption from a richer individual or household to a poorer one should increase social welfare.¹⁵

If we accept these three principles, then we are in the realm of “welfare dominance,” a term signifying that it is feasible for a policymaker to compare one distribution of income or consumption in society with another without using a specific social welfare function. All that is known at this stage is that the social evaluation of the extra income or consumption received by individuals or households—that is, the marginal utility of income or consumption—is positive and declining.

Unfortunately, one can have cases in which one distribution or public policy does not dominate the other, and vice versa, in the general framework above. This means that there are some legitimate social welfare functions that show that the first distribution results in a higher welfare than the second distribution and other legitimate social welfare functions that will show exactly the opposite. When neither distribution dominates the other, it is impossible to rank them, so that the policymaker cannot make a recommendation that obeys the fairly general principles regarding the properties of social welfare. In technical terms, this means there is an incomplete ordering of alternative policies. To avoid such cases, one must impose more structure on the social welfare function.

One possibility for obtaining a complete ordering of policy alternatives is to assume that the marginal utility of income (the increase in well-being that follows from an increase in income, possibly but not necessarily following a social program or public policy) is derived from a specific inequality measure. Then the social welfare W can be written as the product of the mean income μ and one minus the inequality measure I , so that $W = \mu (1 - I)$. An increase in mean income will lead to a higher level of social welfare, while an increase in inequality will reduce social welfare. If the inequality measure is the Gini index, one obtains $W = \mu (1 - G)$, which is the social welfare function that was mentioned previously in providing a numerical example for the interpretation of the Gini index in section 2.2.1 (see also Sen 1976). The rationale for using the Gini as the inequality measure in the social welfare function is that the Gini has several attractive properties, some of which have already been discussed.

- 3 **Welfare dominance.** If two programs or policies are ranked according to the social welfare function $W = \mu (1 - G)$, then the ranking will respect the conditions of welfare dominance that are the three basic principles outlined previously. In other words, ranking the distributions according to the social welfare function will not contradict what would have been obtained under the principles underlying welfare dominance. The main difference is that the social welfare function will be able to rank all distributions, while the conditions for welfare dominance may not be able to yield a ranking among some of the distributions.
- 3 **Relative deprivation theory.** The social welfare function $W = \mu (1 - G)$ is consistent with the relative deprivation theory put forward by Runciman (1966). According to this theory, individuals care not only about their own income but also about how they compare to others. This comparison is captured by the rank of the individual in the distribution of income in the population as a whole. A higher rank implies a lesser feeling of deprivation.
- 3 **Statistical properties and flexible distributional weights.** The Gini and the parameters that are based on it, such as the GIE, provide more robustness in the empirical results than would be the case with some alternative measures of inequality. Because the Gini is based in part on the ranks of the individuals in the distribution of income, it is less sensitive to extreme observations or manipulations of the data. The Gini and its related concepts, such as the GIE, also possess known statistical properties, so that standard errors can be estimated. The corresponding properties for other measures of inequality, such as the Atkinson index or the Theil index, have not yet been developed. Finally, instead of using the Gini, the extended Gini can be used if one wants to place more or less weight on comparatively poorer households or individuals. This provides flexibility in adapting the social welfare function to various types of preferences while keeping the properties of the Gini related to welfare dominance and relative deprivation theory.
- 3 **Ease of manipulation.** In some applications, the Gini is more difficult to use than other inequality measures. For example, it is not decomposable by population subgroups in an additive way. As a result, the Gini does not lead to an additive social welfare function whereby overall social welfare is just a weighted sum of the welfare of all individuals or households. In other ways, however, the Gini is easier to use than other inequality measures because it can be written as a covariance, enabling the analyst to use the linear properties of the covariance operator to analyze the properties of the Gini itself.

From a practical and policy perspective, as shown in technical note B.3, one of the advantages of using the social welfare function $W = \mu (1 - G)$ is that the marginal impact of a program or policy on social welfare (the increase or decrease in social welfare resulting from a marginal change in a program or policy) can be decomposed into two components.

- 3 **Growth component.** The growth component captures the increase in mean income brought about by the program or policy. If a program simply consists of taxing one household to transfer income to another without any changes in behavior on the part of the two households, there may be no growth effect, in which case the growth component is equal to one. The growth component can be larger than one if the program or policy induces behavioral changes conducive to the generation of higher incomes right now or in the future. For example, if the transfer given to a poor household is conditional on having the children in that household enroll in school and attend classes regularly, the transfer may increase the human capital of the children, thereby in-

creasing future expected earnings. After appropriate discounting, the increase in the future stream of income to be earned by the children thanks to the impact of the stipend may be such that each dollar transferred through the program generates two or three dollars of additional (discounted) income. In some instances, the growth term may also be lower than one. This will be the case, for example, if, in order to provide transfers to some households, the taxation of other households creates a distortion (a lower supply of labor from those who are taxed, those who receive the benefits, or both, for instance) that is not compensated for by a positive externality.

- 3) **Redistribution component.** As mentioned, the redistribution component is proportional to the GIE. A GIE well below one, for example, is indicative of a good redistributive capacity and would generate a large gain in social welfare, holding the growth component constant.

Formally, the marginal impact on social welfare, ΔW , of a change in income or consumption from a specific source depends on the source's impact on growth and on its GIE. Specifically, ΔW is equal to the impact of the policy on growth, denoted by Δx , times the impact on inequality, which is itself equal to one minus the product of the GIE and the Gini.¹⁶

The roles of the growth and distribution components can be shown by briefly comparing different types of programs discussed in section 2.2.3 devoted to the application of the source decomposition to per capita income and consumption in Mexico. On the income side, the program is Procampo, which provides cash transfers to farmers. On the consumption side, the two programs are the food subsidies for milk (Liconsa) and the free tortillas of Fidelist. We will assume for the sake of the illustration that we can directly compare the GIEs obtained for these various programs even though they apply to income in one case and to consumption in the other two cases. For the illustration, we use the Gini for per capita income, estimated at 0.510.

While the GIEs of the food subsidies are lower than the GIE for Procampo (-0.543 for Liconsa and -0.666 for Fidelist versus 0.103 for Procampo), it has been suggested that Procampo has positive behavioral effects, while the food subsidies may not have such effects, or at least not to the same extent. According to Cord and Wodon (forthcoming), Procampo appears to have a multiplier effect over time in that a transfer of one peso leads to benefits of two pesos. This multiplier may be Keynesian (higher income leads to higher consumption, which generates employment and more income). It may also be because of the possibility of farmers taking more risks with higher-yielding investments thanks to the security provided by the program. Thus, although different explanations may be at the source of Procampo's multiplier effect, the effect itself could make Procampo a better program for raising social welfare than food subsidies, despite the fact that food subsidies have a lower GIE than Procampo (see table 2.11).

The growth impact of Procampo is estimated at two because of the program's multiplier effect. The growth impact of Liconsa and Fidelist is one (no growth effect but also no negative incentive effects), assuming that these programs do not affect behaviors. Taking into account the GIEs of the various programs and the value for the overall Gini, we find that the welfare impact of Procampo ($\Delta W = 1.895$ per dollar spent) is larger than that of the two food subsidies (1.175 for Liconsa milk and 1.340 for Fidelist free tortillas).

2.5.2 Financing programs and policies: The marginal efficiency cost of funds

Cost constitutes an important consideration in assessing whether to implement a program or policy. When dealing with an individual or household, the cost of a program is the dollar amount that the program costs. When dealing with a society, things are more complicated. Raising taxes may be costly to society because in order to avoid paying taxes, individuals may change their behavior. For example, if fiscal revenues are raised through a VAT, individuals may shift their consumption patterns toward commodities that are taxed less heavily than others. This will generate distortions in the economy and a corresponding welfare loss. Individuals may also try to evade taxes all together, in which case the government must increase its tax administration staff, which is also costly because it diverts workers from the productive sectors of the economy. The concept of the marginal cost of

Table 2.11. Hypothetical Impact on Social Welfare of Alternative Programs in Mexico (1996)

	<i>Growth impact per dollar spent Δx</i>	<i>GIE</i>	<i>Gini</i>	<i>Welfare impact $\Delta W = \Delta x (1 - GIE * Gini)$</i>
Income from Procampo	2	0.103	0.510	1.895
Liconsa milk (subsidized)	1	-0.343	0.510	1.175
Fidelist free tortillas	1	-0.666	0.510	1.340

Note: The growth impacts for Liconsa and Fidelist are not based on detailed evaluations of these programs. They are provided solely for illustration purposes. If these food subsidies were found to generate positive impacts on child nutrition, they would increase the future productivity and earnings of children, thereby yielding growth impacts larger than one.

Source: Authors' calculations.

funds, or in its exact terminology, the Marginal Efficiency Cost of Public Funds (MECF), represents an estimate of the social cost incurred by society when tax revenues are increased by one dollar. That is, the MECF answers the question: What are the costs to the society of increasing the tax revenues by \$1.00 through one of the tax instruments that the government can modify?

One should usually expect that raising revenues through different taxes may result in different cost, so that it is not possible to refer to a unique cost. Rather, one may come with several estimates, representing the cost of raising public funds through several different ways. In practice, these estimates can be obtained through a number of techniques, including computational general equilibrium models. Devarajan and Thierfelder (2000) explain the basic construction of such models. The authors present a list of estimates by other authors for the United States, Sweden, New Zealand, and India. The estimates for the MECF range from \$0.67 to \$4.51 per dollar raised, but a typical value is in the range of \$1.30 to \$1.50 in industrial countries. The values for India provided by Ahmad and Stern (1987) are higher at approximately \$1.60 to \$2.20. Using data for Bangladesh, Cameroon, and Indonesia, Devarajan and Thierfelder find that the MECF varies according to the commodity on which an indirect or import tax is levied. The range is from \$0.48 to \$2.18 (table 2.11). The estimates for the MECF were below \$1.00 only when the economy had a pre-existing distortion that was reduced as a result of the tax change. In more typical circumstances, it may cost more than \$1.00 to raise each tax dollar in a developing country.

The MECF should affect the list of social programs and policies that a government may want to implement. If taxation were to generate relatively high welfare losses of, say, \$0.50 for each dollar in tax revenues, social programs should generate a gain in social welfare (through growth, redistribution, or both) of at least \$1.50 per dollar spent in order to be cost effective. Under such a high MECF, programs such as Liconsa and Fidelist in table 2.12 might not be effective. A lower MECF makes it more likely for redistributive programs to raise social welfare.

Table 2.12. Marginal Cost of Public Funds for Selected Sectors in Selected Countries

	<i>Indirect tax</i>			<i>Import tax</i>		
	<i>Sector with highest tax rate</i>	<i>Sector with lowest tax rate</i>	<i>Uniform adjustment</i>	<i>Sector with highest tariff</i>	<i>Sector with lowest tariff</i>	<i>Uniform adjustment</i>
Bangladesh	1.07 Tobacco	0.95 Fisheries	1.05	2.18 Sugar	1.17 Livestock	1.20
Cameroon	0.48 Cash crops	0.96 Food and forestry	0.90	1.37 Food and consumption	1.05 Intermediate goods	1.05
Indonesia	0.97 Liquid natural gas	1.11 Electricity and gas	1.04	1.18 Other industries	0.99 Business services	0.99

Source: Devarajan and Thierfelder 2000.

2.6 Conclusion

The concept of poverty in developing countries usually refers to the inability of households to meet their basic needs. Although there are differences in terminology in the various regions of the world, one often says that a household is in extreme poverty if it cannot meet its basic food needs, while a household is said to be moderately poor if it can meet its food needs but not its nonfood needs. Other definitions of poverty have been used in the literature, and some of these are “relative” (for example, when the poverty line is defined by the mean or median income of a country). Yet for practical purposes, in a developing context, poverty can be considered an absolute concept. By contrast, inequality deals with the differences in well-being between households (or individuals), not with the level of well-being achieved by these households. Inequality measures capture how far households are from each other in terms of well-being. Indeed, most inequality measures do not depend on the absolute level of well-being achieved in a society. That is, income inequality measures typically do not depend on the mean income observed in a country. It is thus possible for two countries, one very rich and one very poor, to have the same level of income inequality.

Poverty is a condition shared by a segment of the population, not the population as a whole. As a result, the measurement of poverty is not affected by gains or losses in well-being occurring among those who are not poor. The level of inequality in a country applies to the population as a whole, however, and changes in income or consumption will affect the measurement of inequality wherever they occur in the distribution of well-being. While there are ways to place more weight on the poorer segments of the population when measuring inequality, the measurement of inequality will always take into account, at least to some extent, all the changes affecting households, wherever they are located in the distribution of well-being.

Because the concept of inequality tends to be independent of the level of well-being achieved in a society, it is not in itself a good indicator for evaluating social programs and public policies. To evaluate programs and policies, it may be better not to rely on a poverty measure (which will give no value at all to the welfare of the nonpoor) but on a social welfare function that depends in part on the level of well-being achieved by the nonpoor even though more weight may (and probably should) be placed on the poor than on the nonpoor. Although some social welfare functions depend only on the absolute level of well-being observed in a society by various households (both poor and nonpoor) without attempting to compare how far apart the various households are from each other, other social welfare functions depend both on the absolute level of well-being achieved and on the inequality in well-being between households and individuals. Taking inequality into account when measuring social welfare is important because individuals and households do not assess their well-being only with respect to their own absolute levels of consumption or income. They also compare themselves to others. This implies that for any given level of mean income in a country, a high level of inequality reduces the overall level of social welfare. In other words, independent of its impact on poverty—even if there is no poverty at all in a society—inequality has a negative impact on social welfare.

2.6.1 Advantages of the framework presented in this chapter

Many of the tools presented in this book deal with the evaluation of the impact of social programs and public policies on poverty. But even in very poor countries, the concepts of inequality and social welfare used in the formulation of policy can be advantageous beyond poverty analysis. This chapter has provided tools and illustrations to take into account the whole population when analyzing inequality and social welfare. This helps in three areas.

- 3 *Pareto inefficiency.* Focusing on the poor may be reasonable for the evaluation of a number of targeted programs and policies. In practice, however, poverty measures are being increasingly used to evaluate policies that affect the whole population. For example, most countries do not rely exclusively on means-tested programs (instruments directed at the poor) for poverty alleviation. Instead, they use instruments directed at the entire population. When analyzing the effect of a general fiscal instrument or policy, policymakers should take into account not only the impact on the poor, but also the impact on the nonpoor. Truncating the distribution at the poverty line in-

hibits such analysis, and ignoring the nonpoor may lead to the adoption of inefficient policies that violate the Pareto principle. The principle states that if one or several households benefit from one policy more than a second household, and no other household is harmed from adopting the first policy, then the first policy should be adopted. Consider two alternative policies with identical effects on the poor but different effects on the nonpoor. Concentrating exclusively on the poor may lead the policymaker to the conclusion that the two policies are equivalent, leading to the choice of an inefficient overall policy.

- 3 **Discontinuity at the poverty line.** Poverty lines are an administrative necessity, whether explicitly or implicitly, if policymakers are to be able to restrict the eligibility of households to receive benefits according to their income or other indicators. Yet since no substantive difference exists between someone who is just above the poverty line and someone who is just below the line, the discontinuity in the treatment of households inherent in the use of a poverty line may cause problems. For example, consider an economist who advises a government on how to reduce the number of poor people, subject to a budget constraint. The economist may be inclined to recommend helping those who are close to the poverty line and ignoring (or possibly taxing) those who are even worse off, because such an “optimal” policy would yield the largest decrease in the objective, which is to reduce the number of the poor. While this type of problem may be avoided by not using the headcount index of poverty, relying instead on poverty measures that take into account the distance separating each poor household from the poverty line, it is simply not an issue in a social welfare framework.
- 3 **Political economy and taxation.** The most important argument in favor of considering the whole distribution of income when evaluating programs and policies is related to political economy and taxation issues. Since it is generally the nonpoor who pay for the alleviation of poverty, one needs to take into account their interest when designing programs and policies. Failing to consider the nonpoor is likely to lead to a lack of political sustainability for poverty reduction strategies. Moreover, one cannot “close the system” from a fiscal point of view without taking the nonpoor into account. Closing the system requires a model that includes the whole economy and, thereby, the whole population. This is important given that most forms of taxation imply at least some welfare losses somewhere in the distribution of income. This has been highlighted in this chapter through the concept of the MECF. In extreme cases, not taking these losses into account may lead to the adoption of policies with small benefits for the poor, and sizable drawbacks for the nonpoor.

2.6.2 Limitations of the framework

While the framework presented in this chapter has advantages, it also has limitations.

- 3 **Marginal versus discrete changes in policy.** The framework is designed to analyze the impact on inequality and social welfare of “small” changes in programs and policies—that is, the analysis is done at the margin. In many cases, the margin is good enough for policy analysis because most social programs and policies affect only a small share of total per capita income or consumption. In some cases, however, what takes place at the margin may not reflect the full impact of programs. For example, section 2.3.3 discusses the distributional implications in Chile of a shift from state-funded unemployment assistance to individual UISAs. One of the reasons the Chilean legislature is considering such a shift is because the current system of unemployment assistance has low coverage, due in part to low participation among eligible individuals. Low participation is itself due to the low level of the benefits, which are not worth the trouble for those who are not in extreme poverty. Shifting to unemployment insurance, and thereby to higher benefits, might increase participation dramatically, in which case the impact measured at the margin may no longer be a valid representation of the overall impact. Still, even in such a case, the impact at the margin would give a good idea of the direction of the distributional impact of the shift, and thereby be informative for policy.
- 3 **Monetary versus multiple objectives.** Traditional poverty analysis deals with income and consumption, and the same is true for our analysis of inequality and social welfare. Thus the critique

that asserts that the monetary focus of the traditional analytical work on poverty is too limited also applies to the techniques developed in this chapter. While it is difficult to extend the tools developed here to the analysis of nonmonetary indicators, it is feasible to some extent. But even then, many social programs and public policies have multiple objectives that surpass what can be captured through income and consumption, and this is not discussed in this chapter. In practical terms, this implies that the impact of programs and policies on inequality and social welfare should be only one of the parameters to be taken into account when allocating public funds. For example, funding for the arts may not be highly redistributive, but it may still be deemed worthwhile for the purpose of protecting a society's culture and identity.

- ⊃ **Behavioral changes.** Although some behavioral changes can be taken into account in the framework, in most instances behavioral changes are not discussed. The main limitation relates to the inability of the framework to take into account some indirect effects of policies. This weakness is common to much of the traditional work on poverty, and the main line of defense for the methodology consists of emphasizing the fact that, for the most part, the methodology does give the right initial direction for the impact of interventions on welfare. The concept of the MECF, in principle, enables the analyst to take into account behavioral responses to policies, but in practice it is not easy to estimate.
- ⊃ **Externalities.** If public policies and programs have positive or negative externalities, they should be taken into account. Although this can be done in principle, in this framework, as in others, it is difficult to do satisfactorily in practice.

2.6.3 Flexibility to emphasize the poor

We are not suggesting that the framework proposed in this chapter should replace analytical work on poverty or extreme poverty for the design of Poverty Reduction Strategies. Circumstances exist that warrant a strict focus on poverty or extreme poverty. At the same time, much of the analysis typically done within a poverty framework can also be done within an inequality and social welfare framework. Specifically, there are two main possibilities for explicitly considering the poor within a broader social welfare framework.

- ⊃ **Flexible inequality measures and social welfare functions.** A first possibility to emphasize the poor or extreme poor is to use inequality indexes and social welfare functions that stress the lower portion of the distribution of income or well-being. These include Atkinson's index of inequality and the extended Gini coefficient, as well as their associated social welfare functions. The main property of these inequality indices and the associated social welfare functions is that by changing one parameter, one can increase the sensitivity of the index or social welfare function to transfers at the lower end of the income distribution. One can thus place a greater weight on the poor or extreme poor in program evaluations without having to cope with the difficulties inherent in the truncation of the income distribution that occurs with the use of a poverty line. Still, flexible inequality measures and social welfare functions are not going to satisfy analysts who would like to single out the poor as a distinct group. The extended Gini coefficient will still be affected by changes in the incomes of the nonpoor even if the weight placed on them is very small. That is, if the analyst wishes to isolate the impact of a program or policy on the poor alone, the extended Gini will not do the job.
- ⊃ **Decomposing overall impacts into impacts on the poor and the nonpoor.** The second possibility to conduct analytical work on poverty within a framework based on inequality indexes and the associated social welfare functions is to decompose the index of inequality or the social welfare function into its value among the poor and the nonpoor in addition to taking into account the differences between the poor and the nonpoor (the between-group component). If the inequality or welfare among the nonpoor is not a consideration, one can simply work with the first component, which captures the effect of programs and policies on the poor only. Yet the analyst's ability to rely on the various components of the evaluation has several advantages. First, the informational content provided when using the whole population is richer than that provided by the use of poverty measures alone because the investigator can take into account the nonpoor if he or she desires.

Second, the approach avoids some of the arbitrariness and measurement errors involved in the use of poverty lines. Under the poverty measurement approach, whether an observation is above or below the poverty line is crucial. Under the inequality and social welfare approach, the poverty line only determines the classification of the observation into poor or nonpoor. An error in misclassification does not affect the overall impact on inequality or welfare and, therefore, the analysis is less sensitive to the poverty line.

Notes

1. When the distribution of (per capita) income or consumption includes negative values, which may be the case if self-employed workers or farmers suffer a net loss in income over the period considered in a household survey, the Gini index may be larger than one.
2. To date, the most interesting decompositions for policymakers have been worked out only for the extended Gini. Although the decompositions and policy applications that we present in this chapter could in principle be developed for the Atkinson and general entropy indexes, the tools necessary to carry out the analysis have not yet been developed for these measures. Because the extended Gini has properties similar to those of the Atkinson index, there is no real gain in investigating both of them.
3. The Theil and Atkinson indexes also belong to more general families of inequality measures in which it is feasible to put more or less weight on various parts of the distribution of income or consumption when computing the inequality index.
4. See, for example, the papers by Lerman and Yitzhaki (1985) and Garner (1993) for the United States.
5. In formal terms, $\Delta G/G = Sk * (GIE_k - 1)/100$. The division by 100 is a normalization. For a numerical illustration, see the example provided at the end of the section.
6. We assume no change in the behavior of individuals and households, so that the mean per capita income remains the same after the policy. As discussed in section 2.5, this assumption may not be valid.
7. The property that national GIEs can be outside the range of the rural and urban GIEs is a property shared by all types of income elasticities, not only those related to the Gini.
8. This is simply the difference between the GIE for child allowance and the GIE for unemployment benefits; that is, $-0.330 = -0.944 - (-0.614)$.
9. The estimate of \$0.594 for parental benefits in column 3 is obtained by dividing two numbers: the GIE minus one for unemployment benefits and the GIE minus one for parental benefits. That is, $0.594 = (-0.614 - 1)/(-1.172 - 1)$. The reason for subtracting one from the two GIEs is that the marginal impact on the Gini on a per dollar basis of a change in each income source is proportional to its GIE minus one.
10. The estimate of the GIE for overall tax revenues was obtained by combining information on the income tax, the VAT, and other taxes. Although the income tax is progressive (GIE of 1.73), the VAT is regressive (GIE of 0.79), and other taxes are also regressive (GIE of 0.90). The combination of the GIEs weighted by their tax base yielded the overall GIE of 0.90.
11. In practice, to estimate the implicit rental value of access to basic services, one uses hedonic semi-log rental regressions with the logarithm of the rent (for those households paying rent) expressed as a function of the characteristics of the dwelling and its location. Using the parameter estimates from the regressions, the impact of access to, say, electricity on the rent for those who pay a rent (and on the imputed rental value of the house for home owners) is computed as the expected percentage increase in the rent paid. To use this hedonic regression method, one must assume that the rental housing market is in equilibrium, with the rents paid by tenants reflecting the amenities provided in their dwelling.
12. The constancy of the results for the change of the parameter of the extended Gini means that the Engle curves of benefits from the various programs tend to be approximately linear. If a Gini income

elasticity were increasing with v , then one would conclude that the corresponding Engle curves are concave; that is, their slopes decline with income. In this sense, changes in the GIEs, depending on the values chosen for the parameter of the extended GIE, enable us to learn about the pattern of the distribution of the underlying income source.

13. The methodology is not summarized in the technical notes, but it is described in Yitzhaki (forthcoming).
14. In technical terms, this means that the social evaluation of the marginal utility of income (or consumption) is positive for all individuals or households. If well-being is measured through income (or consumption), all other things being equal (that is, if nobody else suffers a loss), an increase in income (or consumption) for one individual must increase the utility of that individual and, thereby, social welfare.
15. In technical terms, this is referred to as the Dalton principle, and it is equivalent to assuming that the social evaluation of the marginal utility of income or consumption is positive (due to Pareto) but declining with the level of income or consumption of the individual.
16. That is, $\Delta W = \Delta x * (1 - \text{GIE} * \text{Gini})$.

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Chapter 3

Monitoring and Evaluation

Giovanna Prennushi, Gloria Rubio, and Kalanidhi Subbarao

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3.1 Introduction

This chapter assists countries in developing a system to monitor and evaluate whether a poverty reduction strategy is effective in reducing poverty. How do we know if a poverty reduction strategy is effective?

First, a poverty monitoring system is needed to track key indicators over time and space and to determine if they change as a result of the strategy. Section 3.2 of the chapter therefore discusses setting up a poverty monitoring system: how to define key indicators, track them over time, and determine what changes have taken place. Many countries already have poverty monitoring systems in place, so the task is to assess their adequacy and strengthen them as necessary. Experience shows that elements such as the tracking of public expenditures and outputs and quick monitoring of household well-being need special attention. Participatory data collection methods and qualitative information give a different perspective and should not be overlooked.

Second, rigorous evaluations should be done selectively to assess the impact on poverty of interventions that are key components of the strategy. Section 3.3 discusses the decision to conduct a rigorous impact evaluation and explains its design and implementation, including necessary data for different methodologies.

Other types of evaluation, such as assessing the process of formulating a poverty reduction strategy, can also be useful. Section 3.4 briefly discusses this topic, as thus far only limited experience exists. This section also briefly discusses another challenging topic: evaluating the impact of poverty reduction strategies in general as opposed to the impact of specific components of a strategy, such as programs or single policies. The key point is that a solid monitoring system will provide the basic data necessary to conduct such evaluations, should the need arise in the future.

Both monitoring and evaluation activities need to be carried out by institutions that are competent and that have strong links to key decisionmakers, if they are to be useful in the design and implementation of a poverty reduction strategy. Much monitoring and evaluation takes place without adequate development of in-country capacity and without strong links to key decisionmaking processes; thus precious opportunities to learn what works and what does not are lost, sometimes along with funds. Section 3.5 offers guidance on building capacity, particularly strengthening the processes that provide policymakers and others with feedback on the impact of policies and programs. A key message of this section is that dissemination of results is critical for use. Results that are not widely disseminated, through mechanisms tailored to different groups in civil society, will not be used, and the resources spent in getting such results will be wasted.

Nongovernmental actors—research institutions, civil society organizations, special-interest and advocacy groups, and others—have an important role to play in the design of the monitoring and evaluation system, in actually carrying out monitoring and evaluation activities, and in using the results. Section 3.6 discusses the role of these actors.

A Guide to Web Resources at the end of the chapter contains references to Web and other sources of information. Technical notes and case studies provide more detail on specific topics and country examples.

3.2 Setting Up a Poverty Monitoring System

To know if a poverty reduction strategy is effective in reducing poverty, it is necessary to set in place a system to monitor progress. This section discusses the features of such a system and issues encountered frequently during implementation.

3.2.1 Defining goals, indicators, and targets

Before a monitoring system can be set up to assess whether a poverty reduction strategy is effective in reducing poverty, it is necessary to agree on which poverty reduction goals the strategy wants to achieve, select key indicators, and set targets for such indicators.

There are probably many possible definitions of these terms, but the following are used in this book:

Goals are the objectives a country or a society wants to achieve; they are often expressed in nontechnical, qualitative terms, such as “eradicate hunger” or “reduce poverty.”

Indicators are the variables used to measure progress toward the goals. For example, progress toward eradicating hunger could be measured by looking at the number of families who say they are not able to have three meals a day all 12 months of the year.

Targets are the quantified levels of the indicators that a country or society wants to achieve at a given point in time—for example, a target of all families being able to eat three meals a day all 12 months of the year by 2015.

Example: The Millennium Development Goals

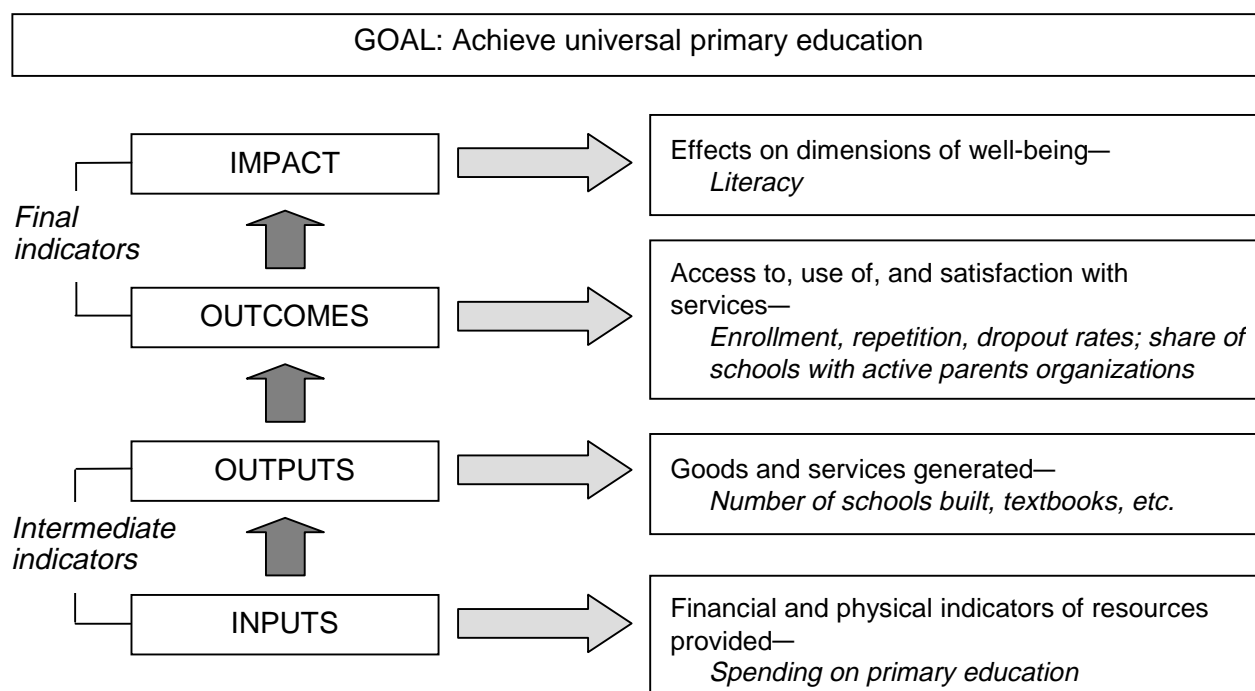
The Millennium Development Goals (MDGs) provide an example of the types of goals, indicators, and targets that can be used to monitor progress. Following various international conferences of the 1990s and the work on the International Development Goals, over 150 Heads of State gathered at the Millennium Summit in September 2000 in New York agreed on a set of goals to monitor progress in poverty reduction (box 3.1).

3.2.2 Selecting indicators

Once a set of goals has been agreed on through participatory processes, the next step is to identify indicators—also in a participatory way—to measure progress toward those goals.¹

As shown in figure 3.1, indicators can be broadly classified into two categories: intermediate and final. When an indicator measures the effect of an intervention on individuals’ well-being, we call it a “final” indicator. For example, literacy may be considered one of the dimensions of well-being, so an indicator measuring it—say, the proportion of people of a certain age who can read a simple text and write their name—would be a final indicator. Sometimes final indicators are divided into “outcome” and “impact” indicators. Impact indicators measure key dimensions of well-being such as freedom from

Figure 3.1. Types of Indicators



Box 3.1. Millennium Development Goals, Indicators, and Targets	
Goal 1: Eradicate extreme poverty and hunger	
Goals and Targets	Indicators*
Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	1. Proportion of population below \$1 per day 2. Poverty gap ratio (incidence x depth of poverty) 3. Share of poorest quintile in national consumption
Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	4. Prevalence of underweight children (under 5 years of age) 5. Proportion of population below minimum level of dietary energy consumption
Goal 2: Achieve universal primary education	
Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	6. Net enrollment ratio in primary education 7. Proportion of pupils starting grade 1 who reach grade 5 8. Literacy rate of 15- to 24-year-olds
Goal 3: Promote gender equality and empower women	
Target 4: Eliminate gender disparity in primary and secondary education preferably by 2005 and to all levels of education no later than 2015	9. Ratio of girls to boys in primary, secondary and tertiary education 10. Ratio of literate females to males of 15- to 24-year-olds 11. Share of women in wage employment in the nonagricultural sector 12. Proportion of seats held by women in national parliament
Goal 4: Reduce child mortality	
Target 5: Reduce by two-thirds, between 1990 and 2015, the under-5 mortality rate	13. Under-5 mortality rate 14. Infant mortality rate 15. Proportion of 1-year-old children immunized against measles
Goal 5: Improve maternal health	
Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	16. Maternal mortality ratio 17. Proportion of births attended by skilled health personnel
Goal 6: Combat HIV/AIDS, malaria, and other diseases	
Target 7: Have halted by 2015, and begun to reverse, the spread of HIV/AIDS	18. HIV prevalence among 15- to 24-year-old pregnant women 19. Contraceptive prevalence rate 20. Number of children orphaned by HIV/AIDS
Target 8: Have halted by 2015, and begun to reverse, the incidence of malaria and other major diseases	21. Prevalence and death rates associated with malaria 22. Proportion of population in malaria risk areas using effective malaria prevention and treatment measures 23. Prevalence and death rates associated with tuberculosis 24. Proportion of TB cases detected and cured under DOTS (Directly Observed Treatment Short Course)
Goal 7: Ensure environmental sustainability	
Target 9: Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources	25. Change in land area covered by forest 26. Land area protected to maintain biological diversity 27. GDP per unit of energy use (as proxy for energy efficiency) 28. Carbon dioxide emissions (per capita) [Plus two figures of global atmospheric pollution: ozone depletion and the accumulation of global warming gases]
Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water	29. Proportion of population with sustainable access to an improved water source
Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	30. Proportion of people with access to improved sanitation 31. Proportion of people with access to secure tenure [Urban/rural disaggregation of several of the above indicators may be relevant for monitoring improvement in the lives of slum dwellers]
* Some indicators, particularly for goal 7, remain under discussion. Additions or revisions to the list may be made in the future.	

hunger, literacy, good health, empowerment, and security. Outcome indicators capture access to, use of, and satisfaction with public services, such as use of health clinics and satisfaction with the services received; access to credit; representation in political institutions and so on. These are not dimensions of well-being in themselves, but are closely related.

When an indicator measures a factor that determines an outcome or contributes to the process of achieving an outcome, we call it an “input” or “output” indicator, depending on the stage of the process—in other words, an “intermediate” indicator. For example, many things may be needed to raise literacy levels: more schools and teachers, better textbooks, and so on. A measure of public expenditures on classrooms and teachers would be an input indicator, while measures of classrooms built and teachers trained would be output indicators. What is important is that inputs and outputs are not goals in themselves; rather, they help to achieve the chosen goals.

Outputs differ from outcomes because they are fully under the control of the agency that provides them; so, for example, the number of schools built is an output, because it is directly under the control of education or other public authorities, while the number of children going to the schools is an outcome, because it depends on the behavior of children and their families. Table 3.1 illustrates goals and some of their corresponding intermediate and final indicators.

Although the main objective of the monitoring system is to track progress in poverty outcomes and impacts, both final (outcome and impact) and intermediate indicators (input and output) should be tracked.² Monitoring final indicators helps to judge progress toward the goals set. But final indicators are the result of several factors, many of which are outside the control of policymakers and program administrators. Intermediate indicators, on the other hand, generally change as a result of actions by the government and other agents. Moreover, final indicators generally change slowly over time, while intermediate indicators change more rapidly, giving an indication, if not on what is happening

Table 3.1. Examples of Final and Intermediate Indicators

<i>Goal</i>	<i>Intermediate indicator (input and output)</i>	<i>Final indicator (outcome and impact)</i>
Reduce extreme poverty and expand economic opportunities for the poor.	<ul style="list-style-type: none"> ⌢ Expenditure on infrastructure ⌢ Expenditure on and number of beneficiaries of job training programs ⌢ Percentage of roads in good and fair condition 	<ul style="list-style-type: none"> ⌢ Incidence of extreme poverty: percentage of population whose consumption falls below the poverty line ⌢ Poverty gap ratio ⌢ Income/expenditure of the poorest 20 percent of the population as a share of the total income/expenditure of the whole population ⌢ Unemployment/under-employment rate ⌢ Percentage of the poor population with access to microcredit programs
Enhance the capabilities of poor men and women.	<ul style="list-style-type: none"> ⌢ Expenditure on primary education as a share of national income ⌢ Expenditure on primary health care as a share of national income ⌢ Percentage of schools in good physical condition ⌢ Pupil-teacher ratio ⌢ Number of doctors per 100,000 inhabitants 	<ul style="list-style-type: none"> ⌢ Literacy rates ⌢ Learning achievement ⌢ Dropout and repetition rates ⌢ Net enrollment in primary education ⌢ Percentage of population below the poverty line with access to health care facilities ⌢ Infant, child, and under-five mortality rate ⌢ Maternal mortality rate ⌢ Malnutrition rate
Reduce the vulnerability of the poor.	<ul style="list-style-type: none"> ⌢ Expenditure on safety net programs ⌢ Percentage of poor households/individuals receiving transfers from the government 	<ul style="list-style-type: none"> ⌢ Variability of household consumption ⌢ Percentage of AIDS orphans protected

with well-being, at least what is happening with some of its determinants. This can make it possible to take corrective action while a program is being implemented. Finally, information on intermediate indicators is often easier to collect (we will return to this point below when discussing sources of data).

The most useful intermediate indicators are those that refer to key determinants of impact or outcome and that vary across areas or groups or over time. For example, in a country where all schools have more or less the same teacher-to-student ratio, the teacher-to-student ratio would not be a very useful intermediate indicator to monitor differences in quality of education across regions (although it could still be useful to monitor changes over time).

Final and intermediate indicators should be complemented with other selected indicators to measure overall country performance and account for the context in which the poverty reduction strategy is being implemented. For example, indicators measuring exogenous factors that are likely to impinge on outcome indicators such as rainfall or external demand for a country's goods should be included in the monitoring system.

In general, good indicators share a number of features. Box 3.2 summarizes some of these common features.

The choice of indicators is clearly dependent on the types of data that are available in a country, as well as on what can be feasibly monitored given resource and capacity constraints; in fact, the process of selecting indicators should start from an analysis of what is available and what is feasible, and indicators that are not yet available should be included in the monitoring system only if it is realistic to set up a mechanism to collect and analyze data on such indicators.

For the intermediate and final indicators that have been selected in practice, see case studies C.1 and C.2, which provide examples of the indicators used to monitor the effectiveness of the poverty reduction strategy in Uganda and Tanzania.

3.2.3 Disaggregating indicators

The decision on the level of disaggregation of indicators is as important as the choice of indicators itself. These are in a sense “joint decisions” that are usually considered at the outset, based on existing data sources and on the goals that a strategy aims to achieve. Indicators can be disaggregated along various dimensions, including location, gender, income level, and social group (based on ethnicity, religion, tribe, caste). Aggregate, country-level indicators are useful, as they give an overall picture of where a country stands in comparison with others. However, aggregate indicators tend to mask significant differences across areas, gender, or social groups, and it is hard to design good policies and programs to reduce poverty without a disaggregated picture that captures these differences.

The appropriate type and level of disaggregation depend on country conditions and the indicator itself. Here are some examples.

A basic type of disaggregation is by *geographic areas* including urban/rural, administrative units and geoclimatic zones. Calculating disaggregated *urban* and *rural* indicators is common, and essential, but not always sufficient. Smaller cities often tend to be more similar to rural areas than to megacities, for example, in terms of the importance of agriculture as a source of livelihood. So it may be useful to

Box 3.2. Features of Good Indicators

A good indicator

- is a direct and unambiguous measure of progress—more (or less) is unmistakably better;
- is relevant—it measures factors that reflect the objectives;
- varies across areas, groups, over time, and is sensitive to changes in policies, programs, and institutions;
- is not easily diverted by unrelated developments and cannot be easily manipulated to show achievement where none exists; and
- can be tracked (better if already available), is available frequently, and is not too costly to track.

disaggregate further among urban areas by size of settlement or at least to distinguish megacities from the rest. Similarly, the capital city often tends to have different characteristics: higher average income, better availability of services, a larger share of employment in services, and so on. Thus it may be useful to construct separate indicators for the capital.

Most countries are divided into *administrative units*—states, regions, provinces, districts, municipalities, villages, and so on—and these can be used as a basis of disaggregation. Ideally, there would be indicators for each administrative level with decisionmaking power over resources, or to which resources are allocated. In practice, however, the availability of data and resource constraints will determine the lowest feasible level of disaggregation.

A third type of geographic disaggregation is by *geoclimatic zones*. Most countries have a number of geographic zones characterized by different soils, rainfall, topography, and, consequently, different agricultural practices, settlement patterns, ease of access, and so on.

Another basic type of disaggregation is by *gender*. Appropriate gender indicators measure factors that vary by gender and take into account the impact of biological differences. For example, life expectancy tends to be higher for women, so a lower life expectancy for women than for men is usually an indication that women may be suffering severe health risks at childbirth. See chapter 10, “Gender,” for more information.

Disaggregating by *income, consumption, or asset ownership* level is a common way to see how indicators vary across the population. It is usually preferable to a simple poor–nonpoor disaggregation, as it captures the fact that many household and individual characteristics vary along a continuum. There are often significant differences among those classified as poor, and those just below the poverty line generally have very similar characteristics to those just above it. So it is desirable to divide the population into groups of equal size rather than simply into poor and nonpoor. Some commonly used groupings based on income and consumption level are the following:

Name	Number of groups	Share of the population (percentage)
Deciles	10	10
Quintiles	5	20
Quartiles	4	25
n th percentile	n	100/n

Disaggregating indicators by, for example, quintiles is important to monitor whether improvements reach the worse-off as well as the better-off. Nationwide average targets, such as those of the MDGs, can often be reached with different degrees of improvement for different groups.³ If improving the well-being of the poorest is important, then tracking indicators disaggregated by quintile is essential.

In most countries there are significant differences across *socially defined groups*, whether along ethnic, tribal, religious, or other lines. The definition of the relevant groups will naturally vary across countries.

Finally, it is important to recognize that disaggregating indicators by areas, groups, and the like usually has political consequences and must be done carefully. Furthermore, monitoring indicators disaggregated by administrative area almost always requires complementary efforts to build capacity for monitoring and analysis in the decentralized administrative units, a point highlighted in case study C.1 on Uganda.

3.2.4 Setting targets

Once indicators are selected, it is useful to assess baseline values and set quantitative targets for at least some of them. Baseline values can be obtained from existing data, if they are of reasonable quality and not too old.⁴ Where data for an indicator do not yet exist, the first available estimate, if it comes within a reasonable amount of time, or a preliminary estimate subject to revisions, can be used as the baseline.

Setting targets is a complex task. We offer some general guidelines here; additional guidance on the technical aspects of setting targets for different indicators can be found in chapter 4, “Development Targets and Costs.”

First, targets should be selected on the basis of the current situation and what is attainable in a given country at a given time. Even if a country chooses goals consistent with the MDGs (see box 3. 1), the indicators and targets selected may not be the same. The target of achieving universal primary school enrollment obviously is not relevant for a country where this has already been achieved.

Second, targets may be set at different levels of disaggregation. In addition to national-level targets, specific targets can be set for certain regions or groups. For example, for most countries, educational targets are not very useful unless they are differentiated by gender, and for large countries such as Brazil and India, geographic targets make good sense.

Third, the inclusion of qualitative and subjective factors in goal setting is important. Many factors that affect quality of life cannot be easily quantified but are not for this reason less important. Where feasible, qualitative and subjective indicators could be added—for example, whether or not people perceive themselves as being poor.

Fourth, as a general rule, improvements become more difficult as levels improve. For example, it is generally more difficult to reduce income poverty from 10 percent to 0 than from 40 percent to 30 percent, because the target group generally becomes more difficult to reach.

Fifth, if a particular indicator has continuously worsened in the recent past, it may not be realistic to set a target indicating a substantial improvement in the short term. Most likely, it will take some time for that indicator to stabilize and start improving.

Finally, it is essential to consider the resource implications of the selected targets and their feasibility. Resources may have to be shifted from some sectors and programs toward activities that are in line with the selected targets. See chapter 4, “Development Targets and Costs” for a more detailed description of the costing of targets.

Figure 3.2 summarizes the steps involved in selecting indicators and setting targets and points to documents providing guidance on each step.

3.2.5 Determining data requirements

As mentioned, both intermediate and final indicators should be tracked. So a good poverty monitoring system would include data on both categories of indicators. These would be collected through a number of different instruments and by different agencies. This last point is important: the fact that a good poverty monitoring system requires data on different indicators does not mean that one agency needs to be in charge of all data collection, which would be neither desirable nor efficient.

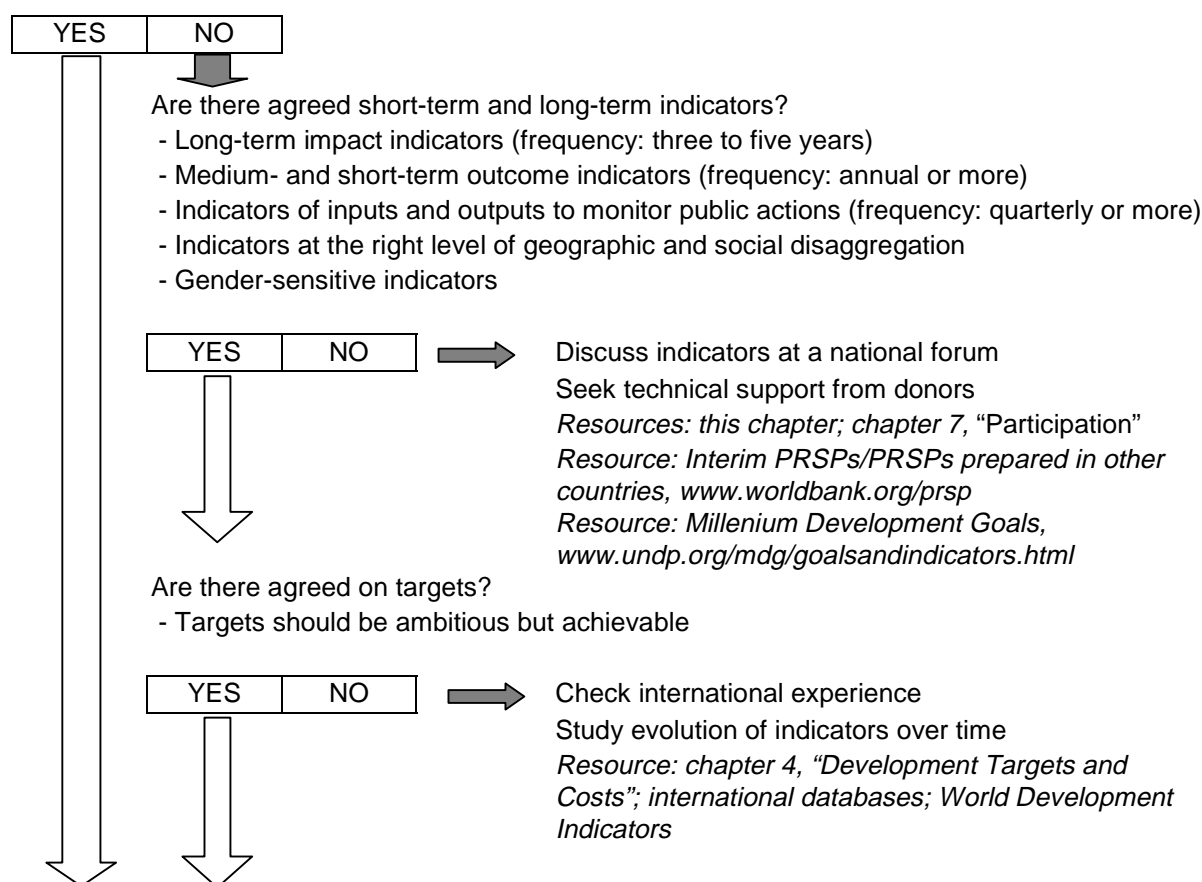
Data on intermediate indicators are usually collected by the treasury or finance ministry and sectoral ministries at the central and local level through financial and management information systems. These systems collect data on public expenditures in various sectors and on activities and outputs produced by such expenditures. For example, the treasury or finance ministry will collect data on expenditures in education, while the education ministry will have data on schools built, textbooks purchased, scholarships provided, training activities, and so on. Data from administrative records usually exist in countries, although there may be problems with their accuracy, timeliness, and comprehensiveness. Data on the number of staff in key sectors come from sectoral ministries or the ministry in charge of public administration.

Information on outcome and impact indicators normally needs to be collected from beneficiaries through household or individual surveys and participatory methods. Because of the need to collect information directly from households and individuals, outcome and impact data are costlier to collect and require more time. Particular attention is needed to obtain reliable information from women and possibly other groups, such as children, the elderly, or excluded minorities, who may not be easily reached or feel comfortable responding to interviewers.

Why is it necessary to collect data on access to and use of services from households in addition to using data from administrative records? Why, for example, are household surveys needed to determine how many children are attending school? Why are enrollment data from the management information

Figure 3.2. Selecting Indicators and Setting Targets

Are there agreed indicators and targets for the poverty reduction strategy?



NEXT STEP: Poverty Monitoring System

systems (MIS) from the education ministry not enough? First, data collected from households are more reliable: households have fewer incentives to report school attendance incorrectly than program administrators and local officials, whose budget allocations and incentives may depend on achieving enrollment targets. Second, household surveys and participatory studies generally collect other information from households, such as income or consumption, education status of the parents and employment status, or reasons not to attend school; this additional information makes it possible to analyze the causes of trends in enrollment rates. This is not to say that MIS data on use of services are not useful, only that they should be checked against and complemented by information collected directly from households.

A good monitoring system should also include data on external factors that may influence the effectiveness of the poverty reduction strategy, such as weather or external market factors. Table 3.2 summarizes collection instruments, agencies usually responsible, and the level of disaggregation for different indicators.

For a more detailed discussion of various data collection instruments, see chapter 1, "Poverty Measurement and Analysis," and chapter 5, "Strengthening Statistical Systems."

Note that data from these various sources are complementary, not substitutes for one another. Having very good household-level data on consumption and incomes will not be sufficient to understand trends in poverty outcomes; accurate and timely data on public expenditures and public services are needed as well. The increased attention that poverty reduction strategies place on final indicators should not reduce attention to intermediate indicators, or shift resources away from tracking them.

Table 3.2. Data for Monitoring and Sources

<i>Type</i>	<i>Indicator</i>	<i>Instrument</i>	<i>Agency</i>	<i>Level</i>
Input	Public finance data: revenues, expenditures by category Human resources	Budget documents; actual expenditure data Expenditure tracking surveys Payroll data	Ministries of finance and planning and public administration; sectoral ministries; public accounting and auditing agencies	National and various subnational administrative levels
Output	Outputs of public expenditures: infrastructure, services provided	Administrative and management information systems Community surveys	Sectoral ministries; project implementation units; local administrations and local service providers	National and various subnational administrative levels; facilities (schools, clinics, etc.)
Outcome	Access to, use of, and satisfaction with services	Priority and quick monitoring surveys; multi-topic household surveys; qualitative studies	Central statistical agency; local service providers; others	Households and individuals; facilities (schools, clinics, etc.); communities
Outcome/ Impact	Household consumption and income; living conditions; social indicators; household priorities; perceptions of well-being	Household budget/ expenditure/ income surveys; single-topic surveys (for example, labor force surveys); multi-topic household surveys (such as Living Standard Measurement Surveys and Demographic and Health Surveys); qualitative studies	Central statistical agency	Households and individuals; communities
Other	National accounts: gross domestic product, consumption, investment, exports, imports, etc. Consumer and producer prices	System of national accounts, trade statistics	Central statistical agency; central bank	National (largest subnational levels in some cases)
Other	Climatic data: temperature, rainfall, water flows, etc.	Direct measurement	National weather agency; others	As detailed as possible

3.2.6 Determining the frequency of monitoring

The decision on how frequently a given indicator needs to be monitored depends on a careful assessment of the tradeoff between the desirability of recent data and the cost of collection, much like the decisions on which indicators to track and at what level of disaggregation. Data on input indicators, such as public expenditures, are tracked at least annually and, in most cases, more often (monthly or quarterly) as part of budget tracking mechanisms. Data on outputs are most often available on an annual basis, but it is highly desirable to have information on key outputs midway through the budget year to inform midcourse corrections and decisions on budget allocations for the following year. Data on some outcome indicators should also be available annually. Data on impacts, on the other hand, are usually not available annually, both because it is costly to collect and analyze household survey and participatory data and impact indicators do not usually change rapidly.

Table 3.3 indicates the desirable frequency of collection for the various indicators listed in the previous table.⁵

3.2.7 Elements of poverty monitoring systems that often need attention

Most countries already have monitoring systems in place to track most, if not all, the indicators needed to monitor the effectiveness of poverty reduction strategies. So what more needs to be done? Recent experience in countries that are developing and implementing poverty reduction strategies points to the need to devote attention early on to some key elements of the system.

Table 3.3. Frequency of Data Collection

<i>Type</i>	<i>Indicator</i>	<i>Instrument</i>	<i>Frequency</i>
Input	Public finance data: revenues, expenditures by category Human resources	Budget documents; actual expenditure data Expenditure tracking surveys Payroll data	Monthly or quarterly where possible; at least yearly
Output	Outputs of public expenditures: infrastructure, services provided	Administrative and management information systems Community surveys	Possibly every six months; at least yearly
Outcome	Access to, use of, and satisfaction with services	Priority and quick-monitoring surveys; multi-topic household surveys; qualitative studies	Yearly where possible
Outcome/ Impact	Household consumption and income; living conditions; social indicators; household priorities; perceptions of well-being	Household budget/ expenditure/income surveys; multi-topic household surveys; qualitative studies	Every three to five years
Other	National accounts: Gross domestic product, consumption, investment, exports, imports, etc. Consumer and producer prices	System of national accounts, trade statistics	Monthly or quarterly where possible (trade statistics, for example); at least yearly Monthly or quarterly price collection; consumer price index basket updated at least every five years
Other	Climatic data: temperature, rainfall, water flows, etc.	Direct measurement	Daily where possible

Frequent problems in tracking intermediate indicators are the following:

- *Actual expenditure data are not timely.* In many countries actual expenditure data are available only with a significant time lag. This is less problematic for recurrent expenditures (especially salary, but also nonsalary), where actual expenditures are often fairly close to budgeted amounts, but can seriously limit a country's ability to track capital expenditures that are often quite different from budgeted amounts. Programs to improve expenditure tracking at the central and decentralized levels—for example, through the establishment of well-designed reporting formats and computerization—can improve the timeliness of expenditure data.⁶
- *Input data (expenditures and human resources) cannot be easily related to outputs, so it is hard to estimate the cost of providing services.* For example, a large share of expenditures in education is for “general administration,” and it is not clear how much of this supports primary versus secondary or tertiary education. So the cost of providing, for example, a year of schooling to a primary school child cannot be estimated accurately. Solving this problem requires moving towards activity-based costing, where all expenditures are related to specific activities and outputs. This is done extensively only in a small number of countries, but in most countries there is scope to move in this direction.⁷
- *Disaggregated spending data are unavailable or inaccurate.* Without data disaggregated at the level of the facilities or agencies that provide services, it is hard to assess whether public funds reach the facilities or not. Where local government accounts are not available or are of poor quality, expenditure tracking surveys can be conducted. In Uganda, spending data for 1991–95 collected from a random sample of public schools revealed that less than 30 percent of the funds intended for nonsalary public spending actually reached schools because district administrations kept and used the rest of the funds. This finding led to the decision to inform the public on allocations and to implement changes in spending procedures. The survey instruments and methodologies used are available and can be applied elsewhere.⁸

In tracking outcomes and impact, other issues have emerged:

- *It takes a long time to process data from household surveys and make them available for analysis.* Data entry, cleaning, and organization often take years. This need not be: there are ways to shorten the process considerably. For example, data entry can be carried out in the field or in de-

centralized field offices concurrently with data collection; there are even experiments to eliminate paper questionnaires completely and enter data directly on disk. Data cleaning can be speeded up considerably by using precoded questionnaires and data entry programs that identify entry errors and inconsistencies between variables (for example, a mother who is younger than one of her children). Moreover, when data entry takes place while in the field, errors can be corrected through recall or re-interviewing.⁹

- 3) *There is a need to introduce quick monitoring tools to gather information from households on an annual (or more frequent) basis.* Even when data from household surveys are processed and made available quickly, these surveys still take time to conduct (especially if data are collected over the course of a year to capture seasonal patterns) and may be too costly to be conducted every year. How can changes in household and individual well-being be tracked more frequently? There are now quick-monitoring tools that have been tested in different countries and can be applied fairly easily—the Core Welfare Indicators Questionnaire (CWIQ) is a good example (see box 3.3). Other examples are the citizen scorecards piloted in Bangalore, India (see case study C.3) and the user surveys piloted in Uganda that complemented the expenditure tracking surveys cited above.¹⁰

3.3 Designing Impact Evaluations

Poverty monitoring provides crucial information to assess overall progress in achieving poverty reduction goals and to understand changes over time and space. However, complementary tools such as impact evaluations are required to inform policymakers and the public on which public actions have been effective and which ones have not worked so well in reducing poverty. An impact evaluation assesses the changes in well-being that can be attributed to a particular program or policy. Information generated by impact evaluations informs decisions on whether to expand, modify, or eliminate a particular policy or program and is used in prioritizing public actions. It is a decisionmaking tool for policymakers and increases public scrutiny of programs.

There are other types of evaluations such as process evaluation and theory-based evaluations that are also important for improving management performance and should be conducted depending on the evaluation question at hand (see technical note C.1). However, it is important to note that these evaluations do not estimate the magnitude of effects and assign causation. Such a causal analysis is essential for understanding the effectiveness of alternative program interventions in reducing poverty and thus for designing appropriate poverty reduction strategies.

Some of the questions addressed in impact evaluations are the following:

- 3) Do key policies/programs in the poverty reduction strategy achieve the intended goal?
- 3) Can the changes in poverty outcomes be explained by those programs, or are they the result of some other intervening factors occurring simultaneously?
- 3) Do key program impacts vary across different groups of intended beneficiaries (males, females, indigenous people), regions, and over time? If so, what are the cultural, economic, and political factors that limit the full participation of women or other vulnerable groups in the program benefits?
- 3) Are there any unintended effects, either positive or negative?
- 3) How effective are key programs in comparison with alternative interventions?
- 3) Are key programs worth the resources they cost?

The first step is to decide what policies and programs should be evaluated. Designing an impact evaluation then involves defining the expected outcomes and their timeframe, selecting an evaluation design and obtaining the data needed. As with the monitoring system, impact evaluations also require a well-established feedback mechanism into policymaking and a clearly defined institutional framework. These issues will be covered in section 3.5.

Box 3.3. The Core Welfare Indicators Questionnaire

A number of countries in Africa (for example, Ghana and Tanzania) have started using a new survey tool, the CWIQ, for monitoring outputs and outcomes in the context of poverty reduction strategies. The CWIQ is a household survey designed to provide very rapid feedback through the tracking of leading indicators and can show who is and who is not benefiting from programs and policies. It focuses on simple indicators of usage, access, and satisfaction.

The CWIQ is a ready-made survey package that national statistical offices can implement on an annual basis and can supplement, when necessary, with special modules. It is meant to complement other surveys. It is designed to be administered to large samples of households, so that results can be disaggregated to relatively low levels, and to be repeated annually, so that time-series can be quickly built up. The standard output tables and graphs present access, usage, and satisfaction indicators broken down by geographic and socioeconomic groupings.

The CWIQ does not collect information on consumption or income, which cannot be done accurately using a short questionnaire, but can collect information on indicators that are related to economic well-being, such as consumption of certain goods or ownership of assets. A recent multi-topic or budget survey is usually used to identify core indicators that are easy to monitor and correlated with consumption or income; if such a survey is not available, information from a participatory poverty assessment can be used, as was done for the first pilot in Ghana. The CWIQ can include up to 10 such indicators, and these can be used as proxy indicators to track changes in consumption/income and income poverty.

3.3.1 Deciding when to conduct an impact evaluation

Impact evaluations should be conducted only for a selected set of interventions (section 3.4 includes a brief discussion on the evaluation of overall poverty reduction strategies). Impact evaluations can be demanding activities in terms of analytical capacity and resources. Therefore, it is very important that they are conducted only when the characteristics of the intervention warrant an impact evaluation. There are other less rigorous and capacity-intensive evaluation methodologies that should be considered when measuring the magnitude of program effects, and assign causation is not a first priority. The selection of programs and policies for an impact evaluation should be done so as to maximize the learning from current poverty reduction efforts and inform program and policy choices. Since donors are often interested in supporting impact evaluations, countries should carefully explore the possibility of getting and coordinating technical and financial support. Three questions can help guide the decision of when to conduct an impact evaluation.

First, is the policy or program considered to be of strategic relevance for poverty reduction? Policies and programs expected to have the highest poverty impacts may be evaluated to ensure that the poverty reduction strategy is on the right track and allow for any necessary corrections. For example, in a poor agrarian economy, expansion of agricultural technology and improvement of grain production may be critical for household and food security as well as for poverty reduction. An evaluation of policies or programs to expand food production and productivity would then become a high-priority task. Likewise, an evaluation of active labor market programs and public works may be critical for a country that has high unemployment and is emerging from a serious financial crisis.

Second, will the evaluation of a particular policy or program contribute to filling in knowledge gaps of what works and what does not in poverty reduction? If knowledge gaps exist about what works best to reduce poverty, an impact evaluation is well justified. For example, despite a widespread belief in the importance of rural roads in alleviating poverty, little hard evidence exists on the nature and magnitude of their impact. This knowledge gap has prompted an evaluation of a World Bank-financed rural transport project in Vietnam.

Third, is the policy or program testing an innovative approach to poverty reduction? Impact evaluations can help to test pioneering approaches and decide whether they should be expanded and pursued on a larger scale. Hence, the innovative character of policies or programs also provides a strong reason to evaluate. For example, Morocco is evaluating the impact of an innovative nonformal school program to see whether nonformal schools are suitable alternatives to other basic educational services. One important caveat, however, is that fruitful evaluations require sufficiently mature programs. Although programs may be testing innovative approaches, they need clearly defined objectives and well-delineated activities, as well as a stable institutional framework for implementation.

3.3.2 Measuring the impacts of policies and programs

To evaluate a program or policy, it is first necessary to understand the nature of the welfare benefits that it is expected to generate. This, of course, depends on the type of intervention and its objectives. Some interventions may have set multiple objectives. In this case, it is best to focus the evaluation on a few key objectives. Equally important is the need to be clear about the time within which welfare changes are to be expected. Some policies or programs may only realize their full effects in the longer term. In such instances, indicators of shorter term outcomes may be needed to form a judgment on the direction and speed of realization of the intervention's objective. For example, it may take several years to observe changes in the cognitive development of young children resulting from early childhood development programs. Hence, in the shorter term, the evaluation may focus on measuring the effect of the program on child-rearing practices of caregivers rather than on cognitive development. Additional examples of interventions follow:

Intervention	Impacts	Timeframe	Shorter term outcomes
Public works program	Consumption gains	Immediate	–
Nutrition intervention	Improved nutritional status of children (weight-for-age)	Medium term	Improved caloric intake
Early childhood development	Improved health, nutrition, and cognitive development of young children	Medium and long term	Improved child-rearing practices

Choosing an appropriate evaluation design

Evaluating the impact of a policy or program hinges on asking the fundamental question: What would the situation have been if the intervention had not taken place? Although one obviously cannot observe such a situation, it is possible to approximate it by constructing an appropriate counterfactual, which is a hypothetical situation that tries to depict the welfare levels of individuals in the absence of a policy or program. How a counterfactual is constructed or visualized depends on a number of factors, including program coverage.

For partial-coverage programs, counterfactuals are simulated by comparing program participants (the treatment group) with a control or comparison group. The control or comparison group is made up of individuals (or other unit of analysis, such as households, schools, organizations) that have the same characteristics as program beneficiaries, especially with respect to those characteristics that are relevant to program participation and program outcomes, but do not participate in the program being evaluated.

The key issue when evaluating the impact of partial-coverage programs is how to select or identify nonparticipants. The group can either be selected randomly through a process similar to a lottery or be constructed using special statistical techniques. The nonparticipant group is called a control group when its members are randomly selected; otherwise, it is called a comparison group. The choice of method to identify the group of nonparticipants determines the evaluation design, which can be broadly classified into three categories: experimental, quasi-experimental, and nonexperimental. These evaluation designs vary in feasibility, cost, and the degree of clarity and validity of results. Technical note C.2 describes them in greater detail and discusses their advantages and limitations.

In some situations it is not possible to have a group of individuals from which the intervention is withheld. For example, there is no scope for control or comparison groups in a nationwide school lunch program. For this type of intervention (full-coverage interventions), the same evaluation question applies—what would the situation be without the policy or program?—but the methodology to answer it is different.

Evaluations of full-coverage interventions rely mostly on comparing the situation of the relevant population group before and after the program. This is a quasi-experimental methodology called reflexive comparison (see technical note C.2). Additional methods to evaluate full-coverage interventions include simulations using computable general equilibrium (CGE) models, comparisons of countries with and without the program, and statistical controls. These methods are further discussed in technical note C.3.

3.3.3 Determining data requirements

Household data are probably the most widely used in impact evaluation. In some instances, data at other levels of disaggregation are desirable. To assess the impact of an intervention on particular members of the household (for example, women and children), it is necessary to collect data at the individual level.

Ideally, data for impact evaluation would be collected from the same set of households at least two times, before and after the intervention.¹¹ Nonetheless, it is important to distinguish between desirability and feasibility. The existing information base and time and resource constraints are key factors to be considered when deciding which data sources to use. If only postintervention data are available, it is still possible to conduct a sound evaluation by choosing an appropriate evaluation design. Technical note C.4 describes different types of data sources for impact evaluation, their advantages, and their shortcomings.

Quantitative and qualitative methods for data collection

The validity of evaluation results depends in large part on the adequacy and reliability of the data. Hence, it is important to use different sources of data collected through quantitative as well as qualitative methods. In general, qualitative methods are aimed at studying selected issues, cases, or events in depth by gathering information on people's attitudes, preferences, and perceptions; data collection is not constrained by predetermined standardized formats or categories of analysis. By contrast, quantitative methods typically rely on random sampling and structured data collection instruments that fit diverse experiences into predetermined response categories (for example, Living Standards Measurement Surveys (LSMS)-type surveys). Although the two approaches differ substantially in their objectives and characteristics (see table 3.4), they are highly complementary. Quantitative methods produce results that are easy to summarize, compare, and generalize, while the qualitative approach provides in-depth and detailed data that can be useful in understanding the processes behind observed results and assessing changes in people's perceptions of their well-being. Examples of evaluations using a combined quantitative and qualitative approach can be found in case study C.6.

Gender analysis is one of the areas where a combination of quantitative and qualitative methods will frequently be required. In many cultures, it is more difficult to obtain reliable information from or about women using conventional quantitative survey methods, and it will often be necessary to use qualitative data collection methods such as focus groups, participant observation, use of drawings, or pictures to describe how women spend their time, and so on. For a detailed discussion of qualitative methods and how they can be used in gender analysis, see chapter 10, "Gender."

Table 3.4. Comparison of Quantitative and Qualitative Approaches for Evaluation

<i>Aspect</i>	<i>Quantitative approach</i>	<i>Qualitative approach</i>
Objectives	<ul style="list-style-type: none"> ➤ To assess causality and reach conclusions that can be generalized 	<ul style="list-style-type: none"> ➤ To understand processes, behaviors, and conditions as perceived by the groups or individuals being studied
Data collection instrument	<ul style="list-style-type: none"> ➤ Structured, formal, predesigned questionnaires 	<ul style="list-style-type: none"> ➤ In-depth, open-ended interviews ➤ Direct observation ➤ Written documents (for example, open-ended written items on questionnaires, personal diaries, program records)
Sampling	<ul style="list-style-type: none"> ➤ Probability sampling 	<ul style="list-style-type: none"> ➤ Purposive sampling
Methodology for analysis	<ul style="list-style-type: none"> ➤ Predominantly statistical analysis 	<ul style="list-style-type: none"> ➤ Triangulation (simultaneous use of several different sources and means of gathering information) ➤ Systematic content analysis ➤ Gradual aggregation of data based on selected themes

Source: Adapted from Carvalho and White (1997) and Baker (2000).

Table 3.5. Evaluation Methods and Data Requirements

Evaluation design	Data requirement		Use of qualitative approach
	Minimal	Ideal	
Experimental	Single cross-section data of treatment and control group	Panel data on both treatment and control group	<ul style="list-style-type: none"> ➤ Inform design of survey instrument, sampling
Quasi-experimental			<ul style="list-style-type: none"> ➤ Identify indicators
Matching comparison	National cross-section (census, national budget or LSMS-type survey) and oversampling of program participants	National survey and smaller project-based household survey, both with two points in time	<ul style="list-style-type: none"> ➤ Data collection and recording using textual data, informal or semi-structured interviews, focus groups or community meetings, direct observation, participatory methods, photographs
Reflexive comparison	Baseline and follow-up data on program participants	Time series or panel studies that collect data for several years before and after the program	
Nonexperimental	Cross-section data representative of the whole population with corresponding instrumental variables	Cross-section and time series representative of both the beneficiary and nonbeneficiary population with corresponding instruments	<ul style="list-style-type: none"> ➤ Triangulation ➤ Data analysis

Source: Adapted from Baker 2000.

Linking data requirements to evaluation methods

Data needs depend on the kinds of outcomes to be measured and the type of evaluation design that will be implemented. Since programs selected for evaluation will look at a range of indicators and will require different evaluation designs, data requirements will also differ.

On the one hand, data needs depend on evaluation design (see table 3.5). On the other hand, the choice of evaluation methodology is determined by the type of intervention to be evaluated (full or partial coverage); the desired level of reliability of results; time and resource constraints; and data availability.

Conducting an impact evaluation may seem a daunting task given the informational and analytical requirements. However, it is important to emphasize that the choice of evaluation design can accommodate time and resource constraints, and that the evaluation strategy should be tailored to in-country capacity. If in-country capacity is limited, the number and frequency of evaluations can be gradually scaled up as capacity constraints are eased.

3.3.4 Obtaining data

Data collection can be both expensive and time consuming. Thus the main challenge is how to take advantage of existing data sources and how to plan additional data collection to maximize its use for both impact evaluation and outcome monitoring.

Impact evaluations can draw on a variety of data sources, including surveys, administrative records, and management information systems (see box 3.4 and chapter 1, “Poverty Measurement and Analysis,” and chapter 5, “Strengthening Statistical Systems”). Hence, one of the early steps in designing an evaluation strategy is to take stock of different types and quality of data already available. Some of the data used for poverty monitoring and analysis are likely to be useful for impact evaluation.

If the existing data are insufficient, the next step is to find out whether there are any planned or ongoing data collection efforts. Surveys or other data collection instruments that are at a planning or early implementation stage can be adapted to provide information for evaluation by oversampling in the program areas or by introducing additional modules on issues related to the evaluation. Oversampling involves increasing the sample of the population surveyed to include enough individuals (or other unit of analysis) with a particular characteristic, such as being a program participant. For example, the evaluation of the Trabajar program in Argentina piggybacked on a national survey that was already in progress by oversampling program participants (see case study C.4). The use of this alternative, however,

Box 3.4. Examples of Sources of Data for Evaluation

- Household income and expenditure surveys
- Living Standards Measurement Surveys
- Demographic and Health Surveys (DHS)
- National census
- Labor market surveys
- Records of cooperatives, credit unions, and other financial institutions
- Administrative records (for example, school records on attendance, repetition, examination performance; or public health records on incidence of infectious diseases, number of women seeking advice on contraception)
- Specialized surveys conducted by universities, nongovernmental organizations (NGOs), consulting groups
- Monitoring data from program administrators
- Project case studies

Source: Adapted from Baker 2000.

may be limited by the timing of the existing data collection and the degree of flexibility in the design of the data collection instrument.

Some evaluations will require the collection of new data. If this is the case, it is important to be aware of the additional institutional capacity and other resources demanded by the data collection task. Where data needs are paramount and institutional capacity is weak, it is important to coordinate efforts across institutions, both public and nonpublic, to design instruments that collect information that is useful for as many purposes as possible. One example of this is the Panel Data Initiative in Africa (see box 3.5). Section 3.5 further discusses the issue of institutional capacity for evaluation.

In conclusion, figure 3.3 summarizes the steps to be taken in designing an evaluation system.

3.4 Challenges Ahead for Monitoring and Evaluation

3.4.1 Assessing the process of formulation and implementation of poverty reduction strategies

The main objective of a poverty reduction strategy is to reduce poverty, and this chapter has focused on monitoring progress in achieving poverty reduction goals and evaluating the poverty impact of interventions that are part of the strategy. But the *process* of formulating and implementing a poverty reduction strategy also seeks to achieve several objectives: increase country ownership; foster through deeper participation the partnership between the government and civil society, on one hand, and between the government and donors on the other hand; take a long-term, comprehensive approach to poverty reduction. It would be important to monitor these objectives and assess whether they are met.

The steps described in section 3.2 to set up a poverty monitoring system apply equally to setting up a system to monitor progress towards process objectives. Agreement is needed on the objectives to achieve, and on the indicators to be used. Objectives and indicators should be selected in a participatory manner. Indicators could refer to inputs and outputs of the process as well as to outcomes; for example, the following indicators have been suggested to monitor participation in the preparation of a Poverty Reduction Strategy Paper (PRSP):¹²

- *Input.* Public resources used to increase quality and scope of participation.

Box 3.5. Impact Evaluation in the Africa Region: A Cross-Sectoral Initiative

The Panel Data Initiative aims at improving data collection and analysis in several African countries by creating sustained partnerships with African research centers and building capacity as well as consensus on the importance of program evaluation. Given the desirability of panel data for impact evaluation, this initiative will use existing quality household surveys as baselines and develop panel data sets that will be available to researchers.

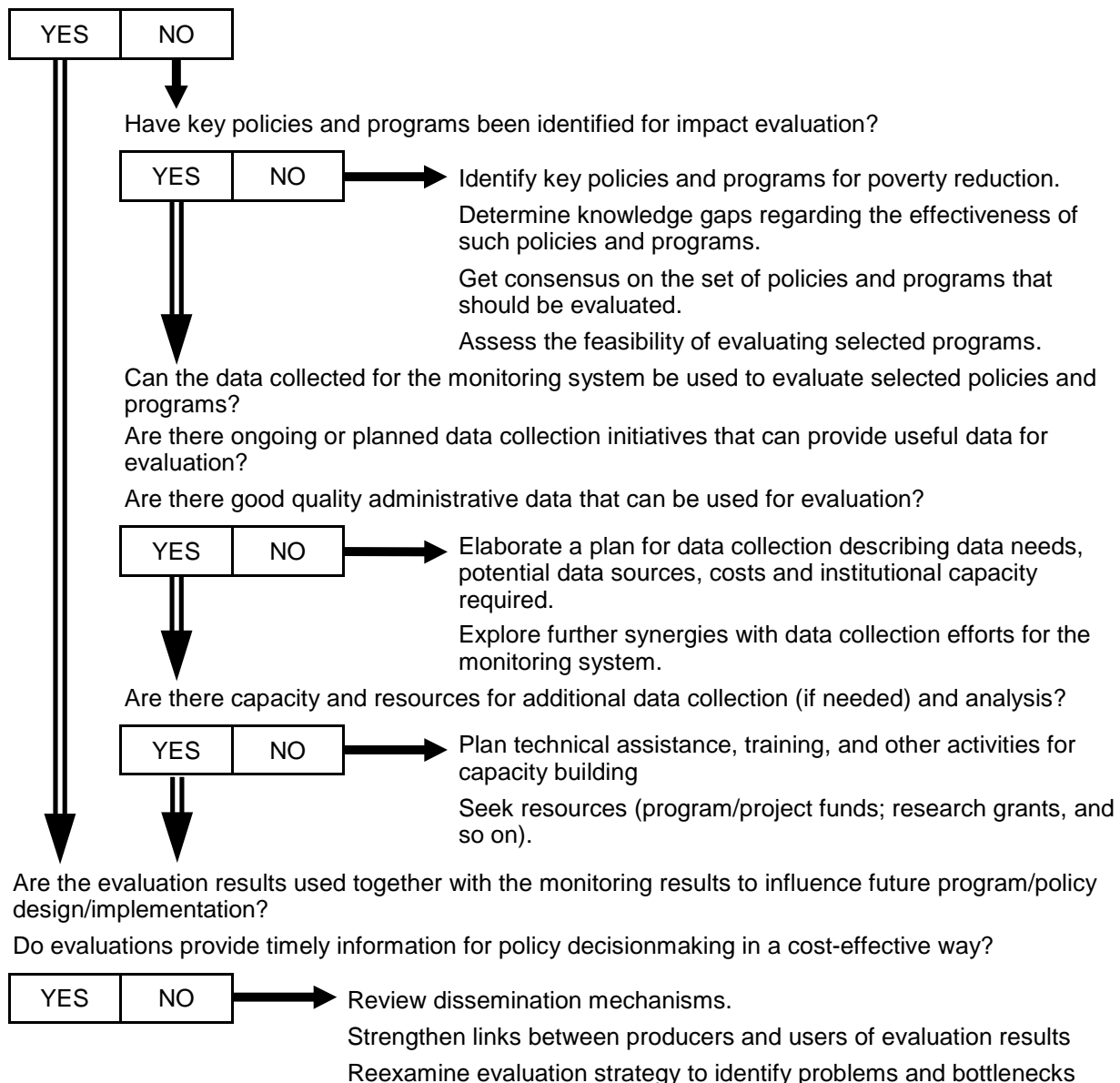
Data obtained through this initiative will be used to evaluate the impact of policy changes (structural adjustment and sectoral policies), investment programs (national, regional, and community based), as well as exogenous shocks (drought, AIDS, civil strife, and commodity price cycles) on household welfare. In particular, this initiative will provide information on variables such as nutritional status, income levels, and productivity. Quantitative survey data will be complemented with qualitative data for a subset of samples.

- 3 **Output.** Measures of the extent to which meaningful participatory arenas (that include all stakeholders who want to participate) have been opened across the country to discuss the design, implementation, and monitoring and evaluation of a PRSP.
- 3 **Outcome.** Measures of the extent to which the PRSP takes into account the needs and priorities of key stakeholders, including poor people; civil society and government have a higher capacity to decide on the country's poverty reduction strategy and more opportunities to negotiate with donors and creditors over it.

Where appropriate, indicators should be disaggregated by gender, geographic area, social group, and so forth (for example, the number of participatory meetings held could be disaggregated by area; participation of women could be tracked separately) and, whenever possible, should be specified precisely.

Figure 3.3. Strengthening Impact Evaluation

Has an evaluation strategy been implemented (what programs and policies to evaluate: when, how, by whom, and so on)?



Source: Authors.

Where data exist on those indicators that can be quantified, it may be useful to identify initial (baseline) values and define targets. For example, baseline values for participation indicators could reflect the situation before the PRSP process is initiated. Where data do not exist, as will often be the case with process indicators, a system to collect and analyze the needed data would have to be set in place. As for indicators in general, what is desirable may not be feasible or affordable, so the final decision on what to monitor, with what instruments and what frequency, will be influenced by available resources. Moreover, in many cases process indicators may be qualitative in nature and not quantifiable.

The process of selecting indicators and monitoring the process of formulating a poverty reduction strategy offers a real opportunity to foster partnership between the government, civil society organizations, and donors. It also is a learning opportunity, as most of the experience so far in assessing process objectives has been gained at the microeconomic level (projects and programs) rather than at the macroeconomic level (strategy).

3.4.2 Evaluating the overall poverty impact of poverty reduction strategies

After a few years of implementation of a poverty reduction strategy, the question of whether the strategy as a whole (rather than specific interventions within it) has been effective in reducing poverty may arise. Evaluating the poverty impact of the entire strategy poses a tremendous challenge, since it requires an evaluation framework that considers a large number of economic and institutional changes occurring simultaneously and can sort out the causal relationships between actions. One possible approach is to use methodologies similar to those for evaluating the poverty impact of countrywide, or full-coverage interventions: comparing the situation before and after implementation of the strategy using time series (see reflexive comparison in technical note C.2); simulating the situation without the strategy using CGE models; and comparing countries with different strategies through regression analysis and other methods (see technical note C.3). For indicators of poverty that capture empowerment and security dimensions, participatory methods may be more appropriate. Experience is limited and much remains to be learned.

Because of the complexity of such overall evaluation exercises and the capacity and resources they require, countries are not expected to carry them out. Moreover, given that the poverty impacts of a strategy may only be observed several years after the start of implementation—as noted, it takes time for policies and programs to affect well-being—it is not advisable to evaluate the overall poverty impact of a poverty reduction strategy within the three-year time frame of a PRSP. Within this timeframe, it is possible to assess the *process* of formulating and implementing the strategy (as discussed in the previous section), monitor outcomes, and carry out other types of evaluation, including qualitative and participatory assessments that examine the links between the inputs and processes of the strategy and any outcomes observable within the three-year time frame (see technical note C.1). What is most important in the short and medium term is to set up a solid monitoring system: without the basic information collected through the monitoring system, no evaluation exercise can be carried out.

3.5 Strengthening Monitoring and Evaluation Capacity and Feedback Mechanisms

3.5.1 Strengthening capacity

Poverty monitoring and impact evaluation activities involve the participation of several agencies both inside and outside the government, each with their own role. Within the government, central ministries such as finance and planning usually have a large role in designing the overall monitoring and evaluation strategy, monitoring its implementation, and using the results, as well as providing key data on expenditures; sectoral ministries usually provide data on outputs; the central statistical agency is usually responsible for the collection of data from households and individuals. Agencies and institutions outside the government, such as research centers, universities, and NGOs, often also collect and analyze information. Donors can provide technical assistance to strengthen capacity. Box 3.6 summarizes these roles.

Strong country demand at all levels is generally the main precondition for the development of a national M&E system. Sustainable capacity is usually built up if governments and civil society are truly committed to measuring the outcomes and impact of public action and to using this information to achieve better results. Thus the participatory processes followed in designing poverty reduction strategies can be critical in creating a strong demand for monitoring and evaluation.

Donors can contribute to create demand for M&E activities through the requirements of their assistance. For example, the International Monetary Fund (IMF) and the World Bank, under the PRSP approach, require as one of the conditions associated with the provision of concessional assistance and debt relief that governments prepare an annual progress report on the implementation of the poverty reduction strategy. This annual report would discuss actions taken and changes in those indicators that are tracked annually; if annual targets were set, the report would discuss whether they were attained and indicate the reasons for any differences between actual values and targets.¹³ While such donor requirements do create demand for monitoring and evaluation, sustainable capacity will be built only if there is strong in-country demand.

Once there is a strong country demand for monitoring and evaluation, feasible options to build capacity vary across countries depending on local circumstances and opportunities, the actors involved, the institutional framework, and the distribution of existing capacity across agencies.¹⁴ An important consideration is that it may be appropriate to gradually scale up monitoring and evaluation activities. Experience suggests that it may be better to put in place a few mechanisms that can be implemented immediately rather than start with the design and development of a comprehensive or very sophisticated setup. A first step can be to take stock of existing M&E capabilities and activities among central and line ministries, local governments, national statistical agencies, and other organizations such as universities and NGOs. On the basis of this assessment, various alternatives can be implemented to ease capacity constraints and develop local skills, including the following:

- 3 Establish partnerships to collect and analyze data and provide training on skills relevant to monitoring and evaluation. Potential partners are universities, research institutions, NGOs, consulting firms, and development agencies. Collaboration with these institutions can take several forms, including carrying out joint evaluations, providing grants for the professional development of monitoring and evaluation specialists, and contracting out survey implementation.
- 3 Disseminate national and international lessons about experience in monitoring and evaluation. Identify good-practice examples within the country and in similar countries and create a database. Selected cases from this database can be presented at workshops for key central and local government officials.
- 3 Build a network to facilitate exchange among practitioners, academics, and civil servants in charge of M&E activities. Network activities can include knowledge dissemination and training. At the international level, the International Development Evaluation Association provides a forum to exchange information on good practices and methodologies.

As decentralization of administrative functions and service provision takes place in a country, it is important to build up M&E capacity at the subnational level. Regional and provincial administrations, and citizens, will need to assess the effectiveness of the strategy pursued at the local level. Central

Box 3.6. Roles of Various Agencies in Monitoring and Evaluation

Central ministries such as planning and finance are usually in a good position to coordinate the design, monitoring, and support for M&E activities. The finance ministry also provides key data on public expenditures.

Line ministries are usually in charge of sectoral program coordination and supervision. Thus they play an important role in supervising the implementation of M&E activities at the sectoral level, and they are the key source of administrative records and data from management information systems.

Project implementation agencies are in charge of project and program management. They are responsible for the timely and appropriate implementation of program monitoring and evaluation.

Central statistical offices are key providers of data as well as expertise in data collection and analysis.

Universities, research centers, and consulting firms are potential suppliers of analysis and evaluation skills and also can offer training in a range of skills.

Development assistance agencies can help develop M&E capacity by providing technical assistance.

statistical agencies are reluctant at times to build decentralized capacity, but this reluctance can be overcome if central and local M&E systems are seen as complementary. National agencies can continue to have responsibility for the conduct of data collection and analysis exercises at the national level; local agencies can develop the capacity to analyze subsets of the national data as well as collect and analyze data to assess the impact of local policies and programs.

Chapter 5, “Strengthening Statistical Systems,” discusses in more detail assessing capacity and developing short- and long-term plans to strengthen capacity for quantitative data collection, while section 3.6 discusses the role of nongovernmental actors.¹⁵

3.5.2 Strengthening feedback mechanisms

Monitoring and impact evaluation should not be stand-alone, technical activities. They should be closely linked to decisionmaking processes at all levels and provide feedback to project managers, policymakers, and civil society on, among other things, the performance of existing policies and programs. Thus a crucial element of the M&E system is the existence of a *feedback process*.

A feedback process is a mechanism by which monitoring and evaluation results are disseminated and used to decide on future courses of action. Results should be disseminated broadly. M&E systems that provide results to only a select group of users (central ministries, for example) risk being underused and losing financial and political support. Wide dissemination of results reinforces the system by strengthening an outcome-based culture.

The dissemination strategy should accommodate the diverse information needs of different groups, including policymakers, program managers, program beneficiaries, the general public, the media, and academics. For example, reports that include main findings and emphasize implications for policy and program design can be distributed among government officials in central and line ministries as well as local administrations. Detailed reports can be produced for program administrators and researchers. Press releases can be used to reach the media. Workshops and seminars can be used to disseminate results among the general public and civil organizations. Posting of information on the Web, if possible, makes it available to interested audiences within and outside the country.

It is important that findings and recommendations be accessible to community councils, local women’s organizations, and ethnic, religious, environmental, and other groups representing communities to whom programs are targeted. Most of these groups may not have access to information technology and conventional dissemination mechanisms. In these cases, alternative dissemination methods, such as meetings, pamphlets, posters, and so on, may be required. Dissemination materials prepared in more than one language and separate meetings with different groups (for example, men and women) may also be required. Active participation of NGOs and other local organizations may be crucial to ensure that all sectors of the community are reached.

In addition to results, the actual data and careful documentation of methods of analysis should also be made available to the public. Reluctance in releasing unit record data can give rise to suspicion, while open access and discussion over data, methods, and results foster transparency and broad acceptance of the findings. Open access to unit record data also enables NGOs to carry out independent analysis and increases demand for data, which helps ensure the sustainability of the M&E system. In some countries there are legal impediments to the dissemination of raw data related to the protection of privacy; these can be overcome with technical solutions that make it very hard to identify respondents and changes in the legal framework; many countries now grant open data access, and lessons have been learned from their experience.

Beyond broad dissemination, a well-established process to feed M&E results back to policymakers is crucial if results are to be used in formulating policy. Since key policy decisions are made at the time of budget formulation, key results should be available then. This particularly means that data for the first six months of the fiscal year should be available not just on expenditures but also on outputs. Any data on other intermediate and final indicators tracked annually should also be made available at the time of budget formulation.

In some countries, poverty monitoring units have been established with the explicit purpose of providing policymakers with information on which to base decisions. These units have been most successful when they have been located close to decisionmaking centers (such as the Prime Minister's Office) and when they have acquired adequate capacity to provide competent and timely information. In other cases, independent agencies have been set up (such as the *observatoires* in some West African countries).

3.6 Promoting Participation in Monitoring and Evaluation

Nongovernmental actors, from researchers and community organizers to representatives of the poor, have an important role to play in monitoring and evaluation: they can contribute their knowledge and expertise to the design of the M&E system, carry out M&E activities directly, and use the results to keep governments honest.

Broad consultations during the design of the M&E system are important to build consensus on what to monitor and what to evaluate—the selection of indicators and targets—and generate a sense of ownership among different groups in society, thus increasing the acceptance and use of findings. Consultations help to identify adequate indicators of people's perception of well-being and bring into the process the expertise of NGOs.

In addition to providing their views, expertise, and knowledge during the design of the system, civil society organizations can contribute directly to implementing M&E activities, either independently or under contracts from the public sector. Research organizations and universities often have the capacity and expertise to carry out surveys and participatory work and analyze the results, while interest groups and community-based groups can take advantage of easy access to their members to get their views and opinions. Also, civil society organizations are sometimes more experienced than government agencies in the use of participatory methods of data collection and analysis.

Finally, civil society organizations have a crucial role to play as users of M&E results. Wide dissemination of results encourages participation. By accessing M&E findings, civil society organizations can generate a participatory review process of poverty reduction efforts that increases accountability and transparency of public resource allocation and public actions. Chapter 7, "Participation," expands on these issues and discusses alternative strategies to promote participation depending on country circumstances. For information on promoting women's participation, see chapter 10, "Gender."

Notes

1. This chapter takes the goals as given. See chapter 7, "Participation," for a discussion of participatory goal setting.
2. In this respect a poverty monitoring system combines implementation monitoring and performance- or results-based monitoring (sometimes the term "poverty monitoring system" is also used to refer to outcome/impact monitoring only).
3. For a discussion of how health targets can be reached with different degrees of improvement for the poorest and richest, see Gwatkin 2000a, 2000b.
4. For example, existing household survey data may be too old, or the sampling methodology may not ensure representativeness.
5. Guidance on the frequency of collection of gender-based indicators can be found in chapter 10, "Gender."
6. For more discussion of systems to improve the tracking of public expenditures, see chapter 6, "Public Spending." See also the assessment of expenditure tracking systems done by the World Bank for the Highly Indebted Poor Countries initiative: <http://www.worldbank.org/hipc/tracking.pdf>.
7. For more information on costing programs, see chapter 4, "Development Targets and Costs"

8. For more detail on the methodology and findings, see Abdo and Reinikka (1998) and Republic of Uganda (1998). Survey instruments can be found at <http://www.worldbank.org/research/projects/publicspending/tools/tools.htm>.
9. For more information on ways to improve the timeliness of household survey data, see Grosh and Munoz 1996.
10. For more information on the Core Welfare Indicators Questionnaire, see www4.worldbank.org/afr/stats/cwiq.cfm; copies of the brochure, questionnaire, handbook, and various other documents about the CWIQ can be downloaded from the site. For more information on user surveys in Uganda, see <http://www.worldbank.org/research/projects/publicspending/tools/tools.htm>.
11. Where migration is an important issue, a new group of immigrant households can be incorporated into the sample at different points in time.
12. Adapted from a presentation by Rosemary McGee and John Gaventa of the Institute for Development Studies.
13. The annual progress report would also discuss any modifications in the strategy or its implementation that may be necessary given the findings of monitoring and evaluation activities. See IMF and World Bank, [December] 1999, "PRSPs—Operational Issues," IMF and World Bank, Washington, D.C.
14. See, for example, Blank and Grosh (1999) on how to use household surveys to build analytical capacity.
15. See also http://www.worldbank.org/html/oed/evaluation/html/monitoring_and_evaluation_capa.html for additional information on assessment tools and lessons learned in building institutional capacity for monitoring and evaluation.

Guide to Web Resources

Baker, Judy. 2000. "Evaluating the Poverty Impact of Projects: A Handbook for Practitioners." Directions in Development. World Bank, Washington, D.C. This handbook seeks to provide project managers and policy analysts with the tools needed for evaluating the impact of interventions. It includes a discussion of evaluation methodologies and implementation issues and presents several case studies, some of them also included in this chapter.

Available at <http://www.worldbank.org/poverty/library/impact.htm>.

MacKay, Keith. 1999. "Evaluation Capacity Development: A Diagnostic Guide and Action Framework." ECD Working Paper Series 6. World Bank, Operations Evaluation Department, Washington, D.C. This guide provides a detailed checklist of issues to be considered in developing a country's evaluation capacity.

Available at http://www.worldbank.org/html/oed/evaluation/html/ecd_doc.html.

World Bank. 1999. "CWIQ (Core Welfare Indicators Questionnaire) Handbook and CD-ROM." Africa Operational Quality and Knowledge Services. World Bank, Washington, D.C. This handbook provides guidance on the use and implementation of the CWIQ.

Available at <http://www4.worldbank.org/afr/stats/cwiq.cfm>.

Web Sites

Monitoring and Evaluation Capacity Development (<http://www.worldbank.org/evaluation/me/>). Contains assessment tools and lessons learned in building institutional capacity for monitoring and evaluation.

PovertyNet (<http://www.worldbank.org/poverty/>). Provides a number of resources for poverty monitoring, including links to the poverty monitoring database, LSMS site, Poverty in Africa site, Africa Household Survey databank, and impact evaluation site.

Poverty Reduction Strategy Papers (<http://www.worldbank.org/poverty/strategies/index.htm>). Includes interim and final PRSPs prepared by countries.

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Chapter 4

Development Targets and Costs

Luc Christiaensen, Christopher Scott, and Quentin Wodon

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4.1 Introduction

Realistic, quantified development targets are key components of PRSPs, and their establishment is a significant challenge for policymakers. Development targets are intended to help governments focus their resources and hold them accountable for subsequent actions. To serve these purposes, targets must be SMART; that is, they must be Specific, Measurable, Achievable, Relevant, and Time-bound. Experience has shown that most targets developed in the current PRSPs and I-PRSPs fail in several of these dimensions. Most often they are overambitious; they are technically and fiscally unattainable, which defeats their role as effective incentives to action. One example is Tanzania, where some recent informal assessments suggest that the PRSP targets for lowering infant, child, and maternal mortality in this country are unachievable, while other targets—such as those for reducing income poverty, improving access to safe drinking water, and rehabilitating rural roads—will be attained only under the most optimistic assumptions. While this example is particularly striking, it is by no means unique. Similar examples have been reported in other countries. Targets are often also fiscally unattainable. For example, in many countries, the cost of reaching the targets set forward in the Poverty Reduction Strategies largely exceeds the amount of debt relief granted under the Heavily Indebted Poor Countries (HIPC) agreement.

This chapter presents some analytical techniques to help policymakers gauge the technical and fiscal feasibility of their targets. While each of the techniques discussed below has deficiencies, taken together they have proven very useful in providing a sense of realism to target setting. The chapter begins with a review of issues involved in target setting. It then presents three methods for assessing the technical viability of development targets, gradually moving from low data- and skill-intensive to more demanding tools. Next, the chapter discusses two broad sets of techniques for estimating the cost and fiscal feasibility of reaching specific targets, as well as a number of issues to be considered when gauging a country's capacity to implement the related program. The chapter ends with some concluding remarks.

4.2 The Political Economy of Target Setting

Targets form a powerful tool to help policymakers focus their efforts and improve their policies' efficiency. Yet this does not follow automatically. Broad political consensus, careful design, and continual monitoring are necessary for targets to be effective. This section elaborates on the different roles targets play (section 4.2.1) and provides some guidance regarding the key choices involved in setting effective targets (section 4.2.2). Monitoring issues are briefly discussed in section 4.2.3.

4.2.1 The incentive effects of targets

A target is a pre-determined value of a specific indicator that a country wants to achieve by a particular date. For example, a country may want to reduce the incidence of poverty to one-half its current level by 2015. When countries, agencies, or individuals expect to be evaluated on the basis of whether they have met specific targets, these targets may affect their behavior in at least three ways.

Resource mobilization

The setting of targets helps mobilize resources (human and financial) in order to achieve certain goals. Targets represent challenges. They indicate priorities, and they may serve as catalysts to focus the efforts of the various parties involved in reaching the targets. Mobilizing resources is without doubt a primary function of targets set by the international donor community such as the International Development Goals. In domestic settings, as well, targets are frequently used to galvanize support for key initiatives. It is important to set ambitious yet realistic targets, which implies they must be both technically and fiscally feasible. Indeed, if targets are perceived as either too easy or too difficult to attain, mobilization will be weakened. When they are too easy, targets will not be viewed as sufficiently challenging and they will fail to stimulate a response. When they are too difficult, targets will be seen as infeasible and thus unworthy of additional effort.

Resource allocation and consensus building

The process of setting targets helps to prioritize the allocation of resources. Other things being equal, governments and other involved parties will focus their activities on areas where targets have been set rather than on “targetless” areas. The process for setting targets should thus be participatory, in order to galvanize such broad societal support for these targets that governments can and will be held accountable for reaching them. Ideally, progress reports should be fed back into the political debate about choosing proper targets, so that the process becomes iterative, with contributions from specialists, policymakers, and political representatives. Targets indicate priorities for the allocation of public expenditures. It follows that the larger the number of targets, the weaker their role in setting priorities for resource allocation. Having too many targets erodes the significance of any single target. Finally, setting priorities and targets presupposes some knowledge of the relationship between the targets and the inputs (and the associated costs) necessary to reach them. While it is clearly impossible in practice to obtain perfect knowledge of this relationship, such precision is not required to foster a culture of accountability and performance orientation in the budgetary system, the third key objective of setting targets.

Performance evaluation

Targets introduce accountability. They provide benchmarks against which the performance of the responsible actors can be judged. Performance is judged as good if targets are met, and bad if they are not. The effectiveness of targets as performance benchmarks depends on the consequences for the different actors (the government, the private sector, and/or civil society) of meeting or not meeting targets. For example, if bad performance may ultimately result in replacement, or if failure to meet targets may affect the release of (additional) funds by a lender or donor, there will be powerful incentives to reach the targets. In this situation, setting targets becomes an integral part of the conditionality framework. Yet, in order for targets to act as credible benchmarks for performance evaluation, they must be realistic, they must carry broad societal support, and it must be possible to disentangle the effects of poor performance by the implementing actors from the effects of external shocks. Also, there is typically more than one benchmark, and failure according to one criterion may be balanced by success according to another. It is thus essential to take a balanced and comprehensive view in evaluating a government's performance in reaching targets. For example, when evaluating the implementation of its PRSP, a country may find that it reduced income poverty over a three-year period, thereby demonstrating “success” when compared to a poverty baseline. But it still may have missed its poverty reduction targets due to unforeseen external shocks, such as a drought or a sudden change in its terms of trade, thereby exhibiting “failure.” Furthermore, as was the case in Uganda (see box 4.2 below), success in reaching certain outcome targets, such as gross school enrollment rates, may occur at the expense of deteriorating quality, as revealed by lower teacher-pupil and textbook-pupil ratios.

While it is clear that setting targets has, in principle, positive incentive effects for public mobilization, resource allocation, and performance benchmarking, it is also clear that this does not follow automatically. Great care must be taken in the design, implementation, and evaluation of targets. As in the case of the United Kingdom, illustrated in box 4.1, there is always a risk that targets may not convey appropriate priorities, could be too complex or numerous, or might stifle innovation in the field due to bureaucratic pressure from the center to meet the targets. When these things happen, targets may lead to suboptimal behavior and unintended consequences. It is therefore important to make the right choices in setting targets and look for targets that are SMART, i.e., targets that are Specific, Measurable, Achievable, Relevant, and Time-bound. In the next section we will review some key issues in setting SMART targets.

4.2.2 Selected choices involved in target setting

Many choices are involved in setting targets, and those choices critically determine the effectiveness of targets or incentive mechanisms. In this section, we review such key issues as whether to set targets for inputs, outputs, outcomes, or impact; whether to set point targets or target ranges; whether to set targets only at an aggregate level or also at a disaggregate level; and whether to set targets for the short run or for the long run.

Box 4.1. Missing the Point? Target Setting in the United Kingdom

If targets are to be useful, they should have the characteristics highlighted below. In the United Kingdom, many targets seem to lack these qualities, calling into question the effectiveness of target setting in that country.

Simplicity. Targets need to be simple to be useful as a management tool. Yet public services are often trying to fulfill many objectives. In the United Kingdom, government departments are currently striving to meet around 600 targets. How successful are the public services in meeting these targets? There is no simple answer to that question. The information is not only scattered across reports issued by individual departments, but it is also difficult to interpret. "The target regime is virtually impossible to follow," says Tony Travers of the London School of Economics. "The government has engineered an incredibly complex world where targets and indicators change and it is very difficult even for experts to keep a grip on what they are and to understand whether they are being achieved." The government has accepted that its first set of targets (in 1999) was problematic. Supposedly SMART—Specific, Measurable, Achievable, Relevant, and Time-bound—they turned out to be anything but. A new set of targets has sought to address the earlier weaknesses, through closer focus on outcomes and a drastic cut in the number of "high-level" performance targets, from around 300 to 160. But are the new targets any better? A report from the National Audit Office (NAO) revealed nervousness on this point within the government. The NAO surveyed 17 departments and found the biggest worry is a lack of incentives for workers to meet targets. Another concern is the difficulty in identifying "high-level quantifiable measures of the intended outcomes"—even though departments had spent a year laboriously negotiating just those. Departments were also worried about their ability to influence final outcomes.

Incentive effects. If public servants are asked to focus on one measure, they will ignore the others. So when the government set a target for reducing class sizes within primary schools, these duly fell—and secondary school class sizes rose. And when the government set a target for raising literacy and numeracy, children became more literate and numerate—but at the cost of squeezing out other beneficial activities such as sport. At worst, targets create "perverse incentives," when workers find ingenious, and not necessarily desirable, ways to meet their targets. That is why, for example, the government's commitment to reduce the hospital waiting list is now widely discredited. The target, cutting the number of people waiting for treatment by 100,000, has been met. But the number of people waiting to see a specialist—waiting to be put on the waiting list, in other words—increased. The target has distorted clinical priorities; minor disorders can be dealt with more swiftly than serious illnesses, so managers have been putting pressure on surgeons to give smaller problems priority over larger ones. To give another example, when the government set local authorities a target for collecting recyclable waste, it seemed a good idea. Even better, the local authorities persuaded residents to take the trouble to separate the stuff that was worth recycling from all the rest—and met their target. There was only one snag. The target was for collecting recyclable waste, not for recycling it. As a result, some local authorities put the rubbish that had been so carefully separated back in with the rest of their garbage and incinerated the lot.

Innovation. Britain's new targets linked to spending plans for 2001–04 break new ground in their focus on the outcomes of public spending. Whereas an output target might be the number of police officers, an outcome target is a reduction in crime. Some of these stretch a long way into the future. For example, there are precise numerical commitments to reductions in mortality rates from heart disease and cancer by 2010. Yet targets risk promoting the illusion that the center can drive change, while improvements in public services generally come from individuals and teams finding better ways to work. Targets also risk encouraging bureaucracy, thereby stifling initiative on the ground. One risk arises because, in general, it is easier to measure outcomes than to determine who is responsible for them, so the target regime could degenerate into something that is farcical and useless. There are worries that the focus on outcomes that can be quantified comes at the expense of others that cannot so easily be measured. Even if the targets are achieved, it may be at the cost of worse performance in another area. For instance, literacy and numeracy may easily be targeted, but improvements in schools in those areas may be at the expense of less measurable virtues, such as creativity.

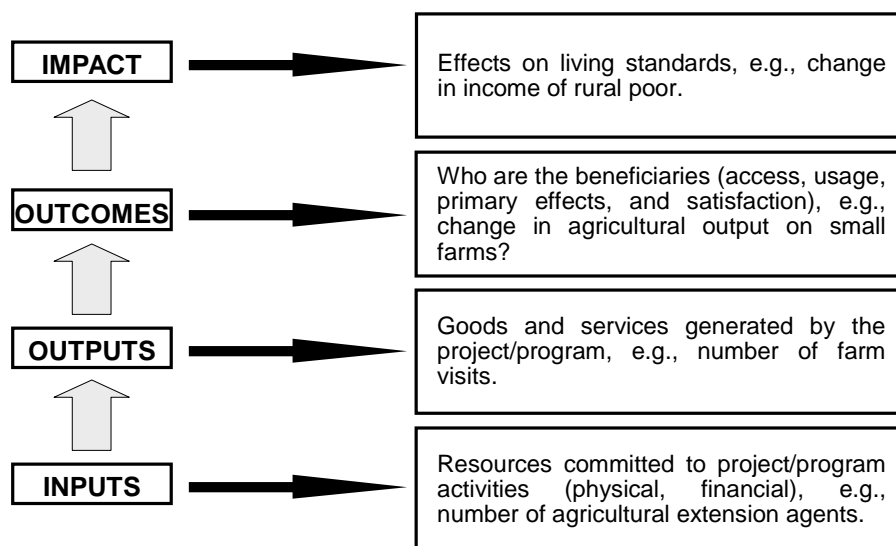
Source: Adapted from *The Economist*, April 28–May 4, 2001, pp. 22 and 53–54

Targets for inputs and outputs, or for outcomes and impact?

In principle, targets may be set at each of the four stages of the program or policy cycle: inputs, outputs, outcomes, and impact (see figure 4.1 and chapter 3, "Monitoring and Evaluation," for a definition of these terms). The first two stages in the cycle—inputs and outputs—cover implementation of the program or policy, while the last two stages—outcomes and impact—seek to capture the program's results. Since the PRSP process will be judged primarily on its results, the most important targets will refer to outcomes and impact. Nevertheless, there are good reasons for including input and output targets as well. First, at least over short periods of time, input indicators are likely to play as important a role in poverty monitoring as outcome indicators, because the effects of poverty-reducing policies materialize only after a time lag. Second, given that policymakers do not control all the factors that convert inputs into outcomes, input indicators such as the actual disbursement of public expenditures for poverty reduction purposes can be a valuable guide to a government's ex ante seriousness of purpose in reaching certain outcomes such as poverty reduction.

However, if targets for inputs and outputs are included together with targets for outcomes and impact, then the targets for results should be checked for consistency with the targets for implementation, i.e., they should be vertically consistent. For example, a target for increasing agricultural production (a result target) may entail a target for the number of farm visits by agricultural extension staff during the

Figure 4.1. The Stages of the Program Cycle



next year (an output target). This in turn implies a set of targets for the number of extension agents and vehicles (input targets), for a given level of public sector technical efficiency. The importance of consistency among result and implementation targets is clearly illustrated by the recent experience in Uganda (see box 4.2). Consistency among targets can be checked either by examining how indicators of outcomes have varied with indicators of inputs and outputs in the country's past, or through comparing the input-output-outcome relationship implicitly assumed in a country's PRSP with international evidence (see section 4.3.1). Since outcomes in different areas of well-being are often interdependent (for example, both the incidence of income poverty and infant mortality may be affected by female educational attainment), the consistency of outcome targets for different dimensions of well-being should also be checked. That is, in addition to being vertically consistent, targets should be horizontally consistent. Finally, when targets are set for each stage of the program cycle for each of the different dimensions of well-being, they quickly become too numerous, which in turn undermines their individual strength (see box 4.1). The marginal benefits of yet another target in terms of increased incentives and accountability will have to be traded off against increasing marginal costs of implementing and monitoring this additional target.

Point targets or target ranges?

In many cases, countries lack reliable information on the input-output relationship at the sector level. There is also some level of uncertainty over the elasticity or responsiveness of poverty and human development indicators with respect to growth and other macroeconomic variables, as well as a high degree of vulnerability of many PRSP countries to shocks such as low rainfall, adverse movements in commodity prices, or natural disasters. All this suggests that target *ranges*, rather than point targets, may be more appropriate for outcomes and impact. In the case of income poverty, for example, a target range's lower bound might be that the aggregate poverty incidence, as measured by the headcount ratio, should not increase between 2000 (the assumed start date of the PRSP) and 2003. Its upper bound could be a given reduction in the headcount ratio using realistic growth and urbanization projections, and the related poverty elasticities (see section 4.3.2 below). On the other hand, point targets may be more appropriate for input and output delivery, as governments typically exert more control over these measurable elements.

Aggregate or disaggregate targets?

Different targets for different regions or for different population groups (identified, say, by gender or ethnicity) provide a powerful instrument to ensure equal treatment of marginalized groups. Setting

Box 4.2. Delivery of Basic Services in Uganda: The First Annual PRSP Progress Report

Evaluation of the delivery of basic services in Uganda, one year after PRSP implementation, indicates that even though the performance of the basic public services—education, health, water, and sanitation—has improved, progress has not been as fast and comprehensive as envisioned in the PRSP. This can largely be ascribed to a discrepancy between the results and implementation targets.

For example, access to education by all income groups and gross enrollment rates have drastically improved. Yet, the quality of education has suffered substantially in the process, with about one in four pupils failing to pass final examinations in primary school. While gross primary enrollment rates were higher than anticipated, targets for average pupil-textbook ratios and average pupil-classroom ratios were not met, partly due to continued delays in teacher recruitment and placement, resulting in a substantial decline in the quality of education. Teacher recruitment has been constrained by a number of factors, including a shortage of qualified teachers in the country. Low pay and payroll delays have also discouraged the entry of new teachers.

In health, the DPT3 immunization target set forward in the PRSP was not achieved. A decrease in vaccinators, and problems with Uganda's aging and inadequate refrigeration systems, hindered the country's efforts. An acute shortage of qualified staff in the health sector was a general constraint to reaching the health targets. In both education and health, discrepancies between result and implementation targets prevented policymakers from reaching their targets. The discrepancies may also have engendered undesirable side effects, such as a decline in the quality of the services provided.

Source: Uganda Ministry of Finance, Planning, and Economic Development 2001.

separate targets to protect marginalized population groups or regions may thus be fully justified on equity considerations, even if it comes at the expense of efficiency. For example, it might be much cheaper to reach national targets for access to health and sanitation services by increasing coverage among the urban population rather than by expanding access to services for those citizens who live dispersed in remote rural areas. Yet, access to services among the rural poor might have been much lower to start with and it would thus be unfair to focus all additional efforts on the urban areas, even though it is more efficient. Budgetary and efficiency considerations are bound to lead governments to ignore the interests of marginalized groups in the absence of disaggregate targets. Considerations of equity and efficiency will have to be traded off against each other. Second, following the process of public sector decentralization combined with the establishment of participatory mechanisms for civil society under the PRSP, there will be an increasing demand for local and regional targets, in addition to national targets.

While considerations of equity and decentralization provide powerful ethical and political arguments to set disaggregated targets, care must be taken, as they may induce behavior making it more likely that sector targets will be attained at the expense of overall national targets. For example, if separate poverty targets are set for the rural and urban populations, the Ministry of Agriculture might lobby to introduce a support price for the main food crop sold by small farmers in order to reduce rural poverty. In the absence of a food subsidy to net consumers of the food crop, this price intervention is likely to raise urban poverty and possibly overall poverty. Hence, while it is useful to *monitor* indicators at disaggregate levels to be able to trace where potential problems lie, this does not necessarily imply disaggregate targets are always needed. Also, if all targets are set at disaggregated levels, the number of targets in a country rapidly grows, reducing their effectiveness in fostering accountability. In conclusion, equity considerations provide a powerful argument to set separate targets to protect disenfranchised population groups and regions, but a proliferation of targets must be avoided and the possibility of perverse incentives must be minimized.

Short-run or long-run targets?

Targets can be set for different dates in the future. While annual PRSP progress reports on implementation are important to ensure accountability, this does not imply that annual *targets* should be set, but rather that progress toward these targets should be monitored annually. In theory, the relevant decision rule for the timing of, say, poverty reduction, is that the (discounted) marginal cost of poverty reduction should be equated across time periods. One could ask whether a country's short- and long-run targets are consistent with this rule. In practice, this theoretical principle is not easy to implement. Furthermore, many countries have already committed themselves to long-run poverty reduction and other targets, such as the International Development Goals (IDGs), or to country-specific targets, such as those embodied in the Kyrgyz National Vision for 2010. Still, any targets set within, say, the first three- to five-year time horizon of the PRSP should be consistent with longer-term objectives. Consistency means that

some thought has to be given to the appropriate time path for achieving the target. For example, two countries may share the same long-run target for reducing poverty, such as achieving a decline in the headcount ratio of 25 percentage points by 2010. However, country A, which enjoys good governance and a high growth rate, may opt for a more rapid decline in poverty in the early years than in the later years of the time horizon. This scenario could reflect rising marginal costs of absolute poverty reduction. By contrast, country B, which adopts its first PRSP just after the end of a civil war, or in the immediate aftermath of some other major exogenous shock, may choose a slower decline in poverty in the early years than in the later years of the time horizon because the marginal cost of absolute poverty reduction may fall in the future.

4.2.3 Monitoring progress

For targets to serve as an incentive for government and civil society to mobilize and allocate scarce resources, in order to attain priority social goals, progress toward attaining these targets must be closely monitored. This is a challenge of institutional design. Those working within the information systems used to support the PRSP process need incentives to collect and record information accurately, and in a timely fashion. In addition, once these data are stored, incentives are needed to reveal this information truthfully, whether to an administrative superior, to policymakers, or to other users in civil society. The most fundamental incentive for monitoring progress toward the attainment of PRSP targets is a democratic political process by means of which citizens demand transparency and accountability in policymaking. Further discussion of this issue may be found in chapter 5, “Strengthening Statistical Systems,” while examples of the institutional frameworks used to monitor the PRSP in Uganda and Tanzania may be found in the technical notes to chapter 3, “Monitoring and Evaluation.”

4.3 Setting Realistic Targets

This section presents three analytical techniques that can help policymakers gauge the technical feasibility of reaching their targets: historical benchmarking, macrosimulations, and microsimulations. Under the historical benchmarking approach (section 4.3.1), we assess the evolution of development outcomes such as poverty, literacy, or longevity based on the historical evolution of these indicators within a given country and/or in similar countries. Under the macro- and microsimulation approaches (sections 4.3.2 and 4.3.3), we evaluate the feasibility of targets by the likelihood that another set of targets for key variables affecting the indicators for which the original targets were set, will be achieved. That is, by establishing an empirical relation between the PRSP targets and their correlates, the feasibility of the PRSP targets is evaluated according to the feasibility of the required growth path of their correlates. The empirical relation between the original targets and their correlates can be established using macro- or microeconomic data and models. Within a macroeconomic context, the simplest way to analyze the determinants of poverty and other indicators consists of looking at the effect on poverty of changes in mean income (i.e., economic growth) on the one hand, and changes in inequality on the other hand, possibly also taking migration and urbanization into account. Within a microeconomic context, the simplest way to analyze the determinants of poverty and other indicators is to analyze the effects of various household and community characteristics, while holding all other household and community characteristics constant.

4.3.1 Historical benchmarking

Historical benchmarking provides a simple and useful first step toward introducing some realism into target setting. It is neither time- nor skill-intensive, and the data needed to make historical comparisons can be readily obtained from the World Development Indicators (available on CD-ROM) or from country-specific sources. Furthermore, historical benchmarking can be readily applied to most targets. Thus, at a minimum, each country should gauge its PRSP targets by historical experience. Under this approach, the change in the indicator implied by the target (say, GDP growth or access to safe water), will be compared with the historical evolution of that indicator within the country. This information can be complemented with the examination of the historical evolution of the same indicator in similar countries. These data,

together with an overview of the economic and sectoral policies in place in the past, should help establish the broad feasibility of PRSP targets.

Even though simple, historical benchmarking is nonetheless quite informative, as will be shown with an illustration from Guinea. In its interim PRSP the government of Guinea set itself as objectives—amongst others—to increase the annual agricultural growth rate from 5.3 percent during 1997–99 to 10 percent in 2010, and to enhance the gross primary school enrollment rate from 53.5 percent in 1998–99 to 100 percent in 2007. To determine if these targets are realistic, we can inspect the recent evolution of the indicators in Guinea and selected neighboring countries.

Growth in agricultural GDP

Table 4.1 gives three-year average growth rates for agricultural GDP (we use average rates to control for temporary fluctuations resulting from weather vagaries). For 1989–2000, the moving average for Guinea is 4.2 percent. Guinea's performance is better and less volatile than that of its neighbors, suggesting that the country may already be approaching its production possibilities frontier. Agricultural growth never reached 10 percent in Guinea over the past dozen years. Over the past three decades, agricultural growth reached 10 percent only three times in Mali and two times in Senegal, typically due to rebounds after droughts. If agricultural growth were to accelerate according to its projected linear trend, it would reach 7.3 percent by 2010 in Guinea, the largest projected growth rate among all neighbors but one. Historical benchmarking suggests that a target for agricultural growth of 10 percent per year is unrealistic. A sustainable agricultural growth rate between 6 percent and 7 percent may be attainable, though it would still be ambitious given the efforts already undertaken in Guinea over the past decade to boost agricultural growth and the fact that over extended periods of time most countries experience one or more years with negative agricultural growth, due to bad weather.

Gross primary school enrollment

Guinea also committed to reaching 100 percent gross primary enrollment by 2007. This implies an increase of 46.5 percentage points over a period of only seven years, i.e., an increase of about 7 percentage points per year. Comparative and historical analysis again suggests that this objective is too ambitious. From table 4.2 we see that it took Guinea 36 years to increase gross primary enrollment by 22.6 percentage points, from 30 percent in 1960 to 52.6 percent in 1996. While this rate of increase is relatively low compared to the neighboring countries, gross primary enrollment rose by less than 40 percentage points in the majority of the developing countries over the period 1960–95 (not reported here). Furthermore, the experience in Côte d'Ivoire and Ghana suggests that growth in gross (versus net) enrollment decelerates as enrollment rises. While Guinea's target for 2007 is too ambitious, an increase by 20 or 25 percentage points may be feasible.

Table 4.1. Agricultural Growth in Guinea and Selected Neighboring Countries, 1970–2000

<i>3-year moving average</i>	<i>Guinea</i>	<i>Côte d'Ivoire</i>	<i>Ghana</i>	<i>Mali</i>	<i>Senegal</i>
1987–2000					
mean	4.2	3.2	3.0	4.0	1.3
standard deviation	1.1	1.7	1.4	2.4	2.5
Frequency 1970–2000^a					
Moving average >10 %	0	0	0	3	2
Moving average < 0 %	0	6	6	6	8
Projected growth in 2010 from linear trend over					
1987–2000	7.3	2.8	7.8	0.4	4.8
1970–2000	–	2.6	3.3	4.8	1.4

a. Period for Guinea is 1987–2000.

Source: World Development Indicators, World Bank (various years).

Table 4.2. Gross Primary Enrollment in Guinea and Selected Neighboring Countries, 1960–96

	% gross primary enrollment			Change (% points)	
	1960	1980	1996 ^a	1960-1996 ^a	1980-1996 ^a
Côte d'Ivoire	46	75.0	71.3	25.3	-3.7
Ghana ^a	38	79.4	78.7	40.7	-0.7
Mali	10	26.3	45.1	35.1	18.8
Senegal	27	46.3	68.2	41.2	21.9
Guinea	30	36.4	52.6	22.6	16.2

a. Reference year for Ghana is 1994

Source: World Development Indicators, World Bank (various years).

These examples show that historical benchmarking provides a useful first step in the evaluation of the technical feasibility of development targets. In the next section, we review methods to set targets based on simple macroeconomic models. In the case of Latin America, these models have been integrated into SimSIP, a user-friendly simulator whose name stands for “Simulations for Social Indicators and Poverty.” Historical benchmarking is also used in SimSIP. Country-specific historical trends are provided for social indicators in education, health, and basic infrastructure. For each indicator, a country-specific historical trend and several projections into the future based on econometric models are provided. The country-specific historical trend carried into the future is generated using one of the following four models: linear trend, logarithmic trend, exponential trend, and power trend (see technical note D.1). It is worth noting that for many indicators, the historical trends that best fit the data are based on logarithmic specifications, which suggests that simply using linear projections may not yield appropriate results. Also, projected trends are sensitive to the choice of the base years from which they are projected.

4.3.2 Macrosimulations

One of the most important factors in reduction of poverty and improvement of social indicators is economic growth. Other variables are also important, including level of urbanization, because it is typically easier and cheaper to provide access to education, health, and infrastructure services in urban areas than in rural areas. The feasibility of poverty and social development targets can in first approximation be evaluated by the feasibility of their implicit economic growth, urbanization, and other requirements. Specifically, estimates of the relation between growth, urbanization, and social indicators can be obtained by applying multivariate regression techniques to aggregate cross-country data available in the World Development Indicators. While it may not be practical for government staff in PRSP countries to undertake such analysis themselves, several studies have recently examined the empirical relationship between poverty, social indicators, and their correlates.

In this section we describe the underlying principles and present some empirical results. This provides a first and readily applicable set of tools to help policymakers gauge the feasibility of their development targets. Over time, however, more comprehensive and more accurate data will become available and more sophisticated estimation techniques will be developed. The reader is encouraged to periodically search the literature for updates of the empirical results presented below.

Targets for poverty

As discussed in chapter 1, “Poverty Measurement and Analysis,” poverty measures are fully determined by the mean level of, in this example, per capita income or consumption in a country, and the inequality in per capita income or consumption. Using estimates of both growth and inequality’s effect on poverty, it is thus feasible to simulate future poverty measures as functions of the expected level of GDP growth (which can be used as a proxy for the increase in mean income or consumption) and the expected change in inequality over the planning horizon.

Two main methods are used in practice to simulate future poverty levels. The first method is very simple. Assume that in a given country, real per capita GDP growth is expected to increase at a rate of 4

percent per year for 10 years. If per capita GDP growth is taken as a proxy for the growth in per capita disposable income or consumption, this will translate into an increase in mean income of 48 percent after 10 years. If inequality is assumed to remain unchanged, all households will benefit from the increase in mean income in the same proportional terms. Hence, in the latest household survey available for the country under review, one can multiply the per capita income or consumption of all households by 1.48, and use the same poverty line in real terms in order to estimate the new level of poverty. The difference between the simulation and the original poverty measures provides the target. Using the same method, it is feasible to estimate the required level of distribution-neutral growth over a given period necessary to achieve a certain level of poverty reduction. Adjustments can be made to this method, for example, to take into account the fact that per capita disposable income or per capita consumption may not be perfectly correlated to per capita GDP growth. The simulations can also be made in terms of GDP growth rather than per capita GDP growth, in which case assumptions must be made regarding population growth over the planning horizon.

Ravallion and Chen (1999) use this method to calculate the per capita growth rates required to reduce the incidence of poverty in selected African countries by half over a 25-year period, from 1990 to 2015. The results are provided in table 4.3. The majority of countries need per capita consumption growth of around 2 percent per year to halve the incidence of poverty in their country (at \$1/day in purchasing power parity [PPP]). But there are some (Guinea-Bissau, Lesotho, and Zambia) where significantly higher growth rates are called for. This reflects the sheer magnitude of poverty in these countries. And there are others (Côte d'Ivoire and South Africa, for example) where the task is less challenging. In most countries, however, recent growth experience is not encouraging. Only Botswana, Mauritania, and Uganda have experienced the sort of private consumption growth that would halve their poverty incidence (again at PPP \$1/day). These examples show that the goal can be achieved. But for most of Africa, the most likely and challenging reality could be increasing absolute numbers of those individuals living in poverty.

The second method is slightly more complex, but simulation tools are available to facilitate its use. The idea is to rely on a simple set of elasticities of poverty reduction and inequality to growth. The

Table 4.3. Required Annual Growth to Halve Poverty over 25 Years in African Countries

<i>Country</i>	<i>Required growth rate to halve poverty over 25 years (per capita per year)</i>		<i>Historical growth rates: 1990-98 (per capita per year)</i>	
	<i>At \$1/day (85 ppp \$)</i>	<i>At \$2/day (85 ppp \$)</i>	<i>Private consumption</i>	<i>GDP</i>
Botswana	1.97	3.09	3.45	2.07
Côte d'Ivoire	1.05	1.89	-1.79	2.01
Ethiopia	1.24	2.81	0.52	1.05
Guinea	2.65	3.17	1.21	2.50
Guinea-Bissau	5.37	7.83	0.25	-0.32
Kenya	2.42	3.85	-1.17	-2.28
Lesotho	2.90	4.13	-0.08	1.52
Madagascar	2.63	6.81	-1.09	0.53
Mauritania	2.11	2.56	2.82	-1.06
Niger	1.78	5.59	-0.18	-0.90
Nigeria	2.18	2.95	-0.73	-1.01
Rwanda	1.14	2.88	0.05	-1.11
Senegal	2.79	4.23	0.14	-1.17
South Africa	1.36	2.65	0.24	-0.46
Uganda	2.34	4.44	3.04	3.75
Zambia	4.94	7.13	-3.23	1.52
Zimbabwe	1.87	3.46	-0.31	-1.47

ppp = purchasing power parity

Source: Ravallion and Chen (1999), based on Africa Live Data Base, World Bank

elasticities are typically estimated using a panel of poverty, mean income, and inequality measures for countries within a given region, or for provinces or states within a given country. Three elasticities must be estimated empirically, in order to obtain the net impact of growth on poverty; the fourth is obtained as a function of these three (see Wodon and others 2000). The elasticities are:

- **Gross elasticity of poverty reduction to growth.** This is the percentage reduction in poverty obtained with a 1 percent growth rate in per capita income, holding inequality constant.
- **Elasticity of inequality to growth.** This is the percentage change in inequality obtained with a 1 percent growth rate in per capita income. The sign of this elasticity is not clear a priori. If there is no systematic correlation between growth and inequality, this elasticity is zero.
- **Elasticity of poverty to inequality.** This is the percentage increase in poverty associated with an increase in inequality, holding mean income constant. This elasticity is positive.
- **Net elasticity of poverty to growth.** This elasticity is obtained as a function of the three other elasticities. Denoting by γ and λ the gross and net elasticities of poverty to growth respectively, by β the elasticity of inequality to growth, and by δ the elasticity of poverty to inequality controlling for growth, $\lambda = \gamma + \beta\delta$. For example, if growth is associated with an increase in inequality (if β is positive and statistically significant), part of the effect of growth on poverty will be “lost” due to the increase in inequality and the impact that this has on poverty.

Table 4.4 gives the above elasticities for the headcount index, poverty gap, and squared poverty gap in Latin America, as obtained from a data set of 12 Latin American countries with five years of data on poverty, inequality, and income growth measures per country. Both poverty (not being able to meet one’s basic needs) and extreme poverty (not being able to meet one’s basic food needs) are considered. Note that these estimated elasticities are not country-specific. Consider the example of the headcount index of poverty. Without changes in inequality (as measured by the Gini index), a 1 percent increase in per capita income results at the regional level in a -0.93 percent decline in the headcount index of poverty (second row in the table). With a regional headcount for poverty at 36.74 percent in 1996 in Latin America, this represents a one-third of a percentage point decline in the share of the population in poverty ($36.74 * (-)0.0093 = -0.34$). This is the “gross” impact of growth on the headcount index of poverty. The net impact of growth on poverty once inequality is allowed to change with growth is similar, because the elasticity of inequality to growth is almost zero (and not statistically significant).

Note also that the elasticities of poverty to inequality are larger for the poverty gap and squared poverty gap than for the headcount index, because these poverty measures are more sensitive to the inequality among the poor (this applies especially to the squared poverty gap).

The use of elasticities has both advantages and disadvantages. One advantage is that the elasticities take into account the potential correlation between growth and inequality. For example, if growth is associated with rising inequality, part of the poverty-reducing effect from growth will be offset by the negative effect of rising inequality. Under such circumstances, neglect of the growth-inequality relationship would lead to overestimates of the poverty-to-growth elasticity. At the same time, the use of elasticities provides an estimation only of future poverty, while the method based on the survey data

Table 4.4. Elasticities of Poverty with Respect to Growth and Inequality in Latin America

	Poverty			Extreme poverty		
	Headcount	Poverty gap	Squared poverty gap	Headcount	Poverty gap	Squared poverty gap
Net elasticity of poverty to growth (1)	-0.94	-1.11	-1.19	-1.30	-1.32	-1.33
Gross elasticity of poverty to growth (2)	-0.93	-1.09	-1.16	-1.27	-1.28	-1.29
Elasticity of poverty to inequality (3)	0.74	1.22	1.61	1.46	2.11	2.41
Elasticity of inequality to growth (4)	NS	NS	NS	NS	NS	NS

Note: The net elasticity (1) = (2) + (3)*(4). NS denotes an elasticity not statistically significantly different from zero at the 5 percent level (the estimate of the elasticity of inequality to growth is -0.02).

Source: Wodon and others (2000).

itself is more “exact.” For example, if one wants to simulate the impact of distribution-neutral growth using the latest survey data, multiplying all incomes in the data by a constant will yield the “exact” new poverty measures corresponding to the scenario, while using the elasticities approach would only yield a forecast based in part on experience. Both methods can be implemented with user-friendly Excel-based software programs (SimSIP_Goals and SimSIP_Poverty), which have been created to facilitate the analysis of the sensitivity of poverty forecasts to assumptions for GDP growth, urbanization growth, and population growth (see technical note D.1). These programs are available free of charge on the World Bank’s website.

A few additional features of the SimSIP simulation software are worth mentioning:

- 3 The models underlying the simulators’ poverty forecasts account for the effect of urbanization on poverty. That is, poverty forecasts are done at the urban and rural levels separately. The rate of urbanization is then used in order to compute the final national poverty measure. This has the advantage of providing information on the contribution of migration, or more generally urbanization, to the decrease in poverty over time.
- 3 Instead of predicting the growth in GDP per capita, real GDP growth and population growth can be entered separately in the simulators, which enables the user to estimate the contribution of the reduction in the rate of population growth to the reduction of poverty.
- 3 The simulators have a number of additional features that can be useful. One such feature is the ability to compute the change in the Gini index needed to reach the poverty goal set by the user, once the other variables (time horizon, percentage poverty reduction, real GDP growth rate, population growth, and urbanization growth) have been specified. Another feature is the ability to compute the share of GDP or mean income that would be needed to eradicate poverty under perfectly targeted income transfers. The user can also compute the increase in the taxation rate on the nonpoor that would be needed to eradicate poverty, or the increase in social public spending, or in public spending targeted to the poor.

It should be emphasized, however, that the methods presented above are simple accounting frameworks, useful for estimating the feasibility of targets, but without any explanatory power regarding the size of the elasticities or the reasons behind the growth-inequality linkages. The methods also rely on several assumptions. First, if per capita GDP growth is used as a proxy for growth in disposable income or private consumption, it is implicitly assumed that GDP growth translates directly into household income or consumption. Similarly, when sectoral decompositions are used to analyze the poverty reduction effect of growth in various parts of the economy, the simulations typically assume that sectoral growth rates translate directly into household consumption and income growth rates in the same sectors. Finally, the secondary effects of policies are typically assumed absent. Despite these limitations, the tools are proving useful in setting targets. They indicate the economic growth needed to achieve specific targets, and the feasibility of such growth rates can be readily assessed based on historical experience.

Targets for social indicators

Higher economic growth and lower population growth are not only significant for poverty reduction; they are also crucial for improving nonmonetary indicators of well-being. Urbanization also matters, because it is often easier and cheaper to provide access to public and private services for education, health, and basic infrastructure in urban areas than in rural areas. Technological progress, often proxied by a time variable, is important as well—simply recall the effect of vaccine development on infant mortality. The level and allocation of public social spending per capita may also have a substantial effect, but comparable information about these variables over time is difficult to obtain for many countries.

In order to integrate forecasts for nonmonetary indicators of well-being into SimSIP_Goals, Wodon and others (2001) have estimated the elasticities of education, health, and basic infrastructure indicators to real per capita GDP growth, urbanization, and time using worldwide panel data sets, including both industrial and developing countries. The regressions were performed on gross primary, secondary, and tertiary enrollment rates; net primary and secondary enrollment rates; the rate of illiteracy among the

adult population; infant mortality rate, under-five mortality rate, life expectancy, and under-five malnutrition rate; access to safe water and sanitation; and the number of telephone main lines per 100 inhabitants (details are available in technical note D.1). Two different econometric models were estimated. As expected, economic growth was found to have positive effects on a wide range of social indicators including infant mortality, enrollment in secondary education, illiteracy, access to safe water, and life expectancy. For example, for the countries with the lowest level of real per capita GDP (less than \$1,000 in 1985 prices), a 1 percentage point in growth is expected to result in a 0.314 percentage point increase in net primary enrollment in the first of the two models. The impact of growth on net primary enrollment decreases as the level of GDP increases, up to the level of a per capita GDP above \$10,000 (in 1985 prices), at which no more gains in net primary enrollment are obtained. While the magnitudes of the elasticities in each of the two models depend on the social indicator and level of development, there is no doubt that economic growth is associated with strong nonmonetary benefits in terms of education and health performance, as well as access to safe water and sanitation, among others.

In the simulations, the predicted values for the social indicators using both models are calculated by applying to the latest actual data point the estimated elasticity and the projected rate of change of the relevant indicators (GDP per capita growth rate, rate of urbanization, and time trend). As for the simulations on poverty, the per capita GDP growth rate is itself a function of the assumptions for real GDP growth and population growth. Where feasible, the projections for up to 1999 are based on actual GDP growth, urbanization, and population growth rates available in the World Development Indicators database. The growth rates selected by the user are thus applied from 1999 onward. Only statistically significant estimates for elasticities are used in the calculations. That is, if the elasticities are not statistically different from zero at the 10 percent level of significance, a coefficient of zero is assumed. The predictions are also bound by the following restrictions: mortality and illiteracy rates must be greater than or equal to zero, gross school enrollment rates must be less than or equal to 130 percent, and access to safe water and sanitation must be less than or equal to 100 percent. The predictions obtained with the two econometric models, and the projection into the future based on the historical trend with the best fit, provide the user three different estimates for future targets, and thus a range for what might be reasonably expected.

Sensitivity of targets to the choice of elasticities

The simulations for poverty and social indicators based on the elasticities used in SimSIP_Goals provide a good first step toward gauging the realism of development targets. Yet the simulations are sensitive to the underlying regression specification. Re-estimation of the econometric models used in SimSIP_Goals is not a viable option for most development practitioners or government officials. However, SimSIP_Goals has an option that enables the user to override the elasticities used as default, so that the user may specify his own elasticities. In other words, the user may rely on the existing literature for assessing the effect of income growth and other variables on poverty and social indicators. Such an exercise can be useful for triangulation, i.e., for checking the robustness of the results obtained in SimSIP_Goals to alternative assumptions. We provide two illustrations below for health indicators.

Under-five mortality

Demery and Walton (1999) review the empirical literature on the elasticity of under-five child mortality to GDP growth per capita and conclude that it lies between -0.2 (Pritchett and Summers 1996) and -0.6 (Filmer and Pritchett 1997, Pritchett 1997). They decide to use an elasticity of -0.4. In SimSIP_Goals, the elasticities in the first econometric model estimated by Wodon and others (2001) vary from zero to -0.47, depending on the level of economic development of the country. A user wishing to rely on Demery and Walton's suggestion could override the elasticities in SimSIP_Goals and use instead a value of -0.4, which in most cases would yield forecasts for child mortality that are slightly more optimistic.

Child malnutrition

Alderman and others (2000) examine the effect of (log) GDP per capita and female secondary school enrollment on the prevalence of malnutrition (i.e., the proportion of children under five whose weight-

for-age ratio falls more than 2 standard deviations below the median for their sex and age group in the reference population), while controlling for time effects. They use a country-fixed-effect model with data on 63 developing countries spanning the period 1970–95. The marginal effect of the logarithm of per capita GDP on malnutrition is statistically significant and estimated at -8.02. This estimate can be used to compute the income growth needed to reach a given malnutrition target by a certain date. For example, if the prevalence of preschool child malnutrition in 1990 is estimated at 30 percent in a given country, GDP per capita would have to grow by 7.8 percent per year—holding everything else constant—in order to reduce the child malnutrition rate by half by 2015¹. This would correspond to an elasticity of child malnutrition to growth of -0.09. Compared to the SimSIP elasticities of child malnutrition to economic growth, which vary from zero to -1.1 depending on the country's level of economic development and the econometric model, with a mean of -0.23, this elasticity is relatively low. This is related to the fact that the model underpinning the SimSIP elasticities does not include other important determinants of child malnutrition, such as educational achievement and access to sanitation. To the extent that growth is correlated with those and other omitted variables that affect child malnutrition independently, their effect will be captured by the growth elasticities. A user wishing to rely on Alderman's estimates could always override SimSIP_Goals's elasticities, which will yield less optimistic forecasts for child malnutrition.

Before closing this section, it must be emphasized that factors other than those taken into account in SimSIP_Goals and other similar models may help achieve international development goals. For example, as emphasized by Alderman and others (2000), more ambitious goals for reduction of malnutrition could be achieved if direct nutrition interventions were put in place. Income growth is often needed, but direct nutrition interventions ranging from community-based programs focused at changing behavior (e.g., child growth monitoring programs) to national campaigns for immunization and micronutrient supplementation are equally necessary. The results of growth-based simulations are only indicative. They should be interpreted within the broader context of other intervening factors, whose effects are often not explicitly estimated by macroeconometric models (see section 4.3.3 on microsimulations).

Forecasting economic growth

In SimSIP, the targets for social indicators are based on (1) the latest point of data available for any given countries, and (2) the estimated elasticity of the indicator under review to economic growth and urbanization. To set targets, assumptions for future per capita GDP growth and urbanization must be made. Estimating future per capita GDP growth itself requires estimates of future population growth and GDP growth. Estimates for future population growth and urbanization rates are available from the United Nations. But in order to estimate real future GDP growth, one may want to rely on economic models as well. Indeed, while the likely accuracy of projected GDP growth rates can be judged by their historical basis, past growth rates are not necessarily a reliable guide to the future. For some countries, high past growth rates may have resulted from favorable temporary external shocks (improvement in terms of trade or external transfers) or unsustainable fiscal or monetary policies. For others, recent growth rates may be unusually low because of unfavorable shocks, or the effects of policy reform changes.

There are a number of papers in the literature that can be used to forecast economic growth. We review only one of them here. To examine the growth potential of countries, Demery and Walton (1999) use growth predictions derived from an empirical growth model estimated by Sachs and Warner (1995). This model relates per capita growth to initial conditions such as GDP, educational attainment, the price of investment, and the country's economic and political stance, as well as concurrent factors such as government consumption spending, political and social unrest, and investment. The initial economic policy stance in each country is simply classified as good or poor, and represented in the regression analysis by a good/bad dummy. Although this approach is rudimentary, Demery and Walton argue that it might still be informative for target-setting purposes. By substituting current levels of these variables in Sachs and Warner's estimated regression equation, Demery and Walton predict each country's GDP per capita growth into the future. They subsequently switch the good/bad economic policy dummy from 0 to 1 to distinguish between low- and high-income growth scenarios.

Demery and Walton find, for example, that per capita GDP growth in Kenya is predicted at 1.7 percent under the bad policy/lower income growth scenario and 3.5 percent under the good policy/higher

income growth scenario. Even the latter is well below the level likely needed to reach various objectives, such as Kenya's child mortality reduction target for 2015. While additional direct child mortality interventions could help reach the child mortality reduction target, it is unlikely that their effect would be sufficient to close the gap between the estimated growth requirements and predicted growth.

Growth predictions are only as precise as their underlying assumptions. Their accuracy depends on a host of factors, such as the model used being a correct reflection of the underlying determinants of growth; stability of the estimated coefficients over time; and an unchanging investment-to-GDP ratio. Given the complexity of the economic growth phenomenon, no single model will be able to correctly predict future growth rates. Thus, economic growth rate projections based on a single model should be used in conjunction with insights and predictions from other growth models, as well as with the country's growth performance in the past. Together, these various pieces of the puzzle should provide a benchmark for reasonable growth expectations.

4.3.3 Microsimulations

The results and models in the previous section are based on aggregate national data. This approach assumes that each observation is representative of the behavior of people in the country. This may be defensible when the results are used to gauge the feasibility of development targets. The macro approach also has the advantage that it can be expanded to examine the effect of country-level characteristics such as sector-specific public expenditures. Yet in aggregating across households and regions within a given country, a lot of information gets lost. Furthermore, cross-country regressions typically do not account for the country-specific nature of the relationship between development outcomes and their determinants. Such considerations can be accommodated within a micro-level approach. It is recommended that the macro approach to gauging targets be complemented with micro-level analysis.

Using micro data is becoming increasingly feasible. Over the past decade, many countries have collected nationally representative household survey data. These comprehensive data sets are often well suited to estimating the relative importance of the different determinants of development outcomes, for example the relative determining roles of income, education, community sanitation, health infrastructure, and other factors in child malnutrition rates. This is done through the application of multivariate regression techniques. The resulting coefficients on the different determinants can be used to predict the effect of changes in policy variables. These simulations can inform policymakers about the interventions needed to reach a development target. The feasibility of the target can then be gauged by the technical and fiscal feasibility of these interventions. Box 4.3 describes applications of this technique to maternal mortality in Pakistan and child malnutrition in Ethiopia. For a software application that examines poverty reduction targets based on micro-level analysis (included in SimSIP), please see technical note A.6 for chapter 1, "Poverty Measurement and Analysis."

Though microsimulation is data-intensive, data availability is no longer the major obstacle to the microsimulation approach. However, the micro-level approach is relatively technical. Moreover, a major shortcoming lies in its inevitable reliance on observed variables. Unobservable or unmeasured variables—such as maternal nutritional knowledge and quality of health care in the case of child malnutrition, or technological knowledge and participation in agricultural extension in the case of agricultural production—may also be key driving factors. Their omission may result in a bias of the estimated coefficients and the related policy simulations. This critique is not limited to microsimulations. It applies equally well to the macrosimulations discussed above. Since it is not always feasible to remedy these problems, it is important to keep the shortcomings in mind. One possible strategy is to use a wide set of targets and cost assessment techniques when developing the development targets. Together, these techniques should provide a reasonable picture of what can be considered achievable.

4.4 The Cost and Fiscal Sustainability of Target-Reaching Efforts

Target setting is intrinsically linked to the government's budgetary process and its fiscal constraints, which opens another avenue for gauging the viability of development targets. It must not only be

Box 4.3. Microsimulations for Child Malnutrition and Maternal Mortality

Child malnutrition in Ethiopia. In its interim PRSP, Ethiopia committed itself to reducing child malnutrition to half its 1990 level by 2015. Christiaensen and Alderman (2001) use household surveys from 1996–98 to analyze the determinants of child malnutrition and simulate the effect of various interventions. They look in particular at stunting. Household resources, parental education, food prices, and maternal nutritional knowledge are all found to have a large effect on stunting. Community sanitation and health infrastructure also reduce stunting, but this result is less robust to the regression specification. Using the regression estimates, the authors simulate the effect of (1) increasing per adult equivalent incomes by 2.5 percent per year over 15 years; (2) bringing at least one female adult per household up to the primary school education level; and (3) enhancing awareness of malnutrition by increasing by 25 percentage points the proportion of mothers who rightly diagnose their stunted and nonstunted children, respectively, as stunted and nonstunted (which has an effect similar to bringing one female adult per household to the primary education level). When combined, the three interventions reduce stunting by up to 42 percent. Given their optimistic income growth assumptions, this might represent an upper bound of what could realistically be achieved. The microsimulations thus indicate that the government's goal is ambitious, especially since maternal nutrition education programs have not been a high policy priority for the Ethiopian authorities so far.

Maternal mortality in Pakistan. Midhet and others (1998) analyze the relationship between maternal mortality and access to health services in two remote rural provinces. Controlling for a wide range of individual- and household-level variables (e.g., socioeconomic status, women's education, and maternal risk factors), they find that district-level health system variables, such as access to and use of peripheral health services, reduce maternal mortality while access to (expensive) emergency obstetric services does not. The authors suggest that peripheral health services may have positive effects because exposure to these services produces such benefits as improved knowledge about family planning and education, improved care during pregnancy, and timely referrals of high-risk deliveries. Next, the authors analyze the relationship between changes in access to peripheral health services and changes in the health system and other non-health-related variables, controlling for individual and community characteristics. In line with expectations, the results suggest that public spending on peripheral health facilities improves access to care. Then, the authors use microsimulations to show that increasing access to peripheral health services by 30 percent among target groups would reduce maternal mortality by up to 20 percent over three years. Finally, they use this finding to compute the associated cost, and compare this cost to the cost of other interventions not directly related to the health care system that also have positive effects on mortality.

technically feasible to attain targets, as discussed in the previous section, efforts to attain them must also be fiscally sustainable. The effect of public (and private) expenditures on development outcomes is a function of both the amount spent on specific interventions and their effectiveness, i.e., their effect per dollar spent. The fiscal feasibility of development targets can thus be gauged by the government's capacity for increasing public spending, discussed below in section 4.4.1, and by its scope for enhancing the efficiency of that spending, discussed in section 4.4.2. It is important to consider both dimensions—funding capacity and capacity to improve overall efficiency—in evaluating the fiscal viability of targets. A third set of issues concerns the government's capacity to implement the programs necessary to attain specific targets. These are addressed in section 4.4.3.

4.4.1 Assessing costs

Estimating the cost of target-reaching efforts involves several methodological issues. It also requires detailed sectoral and program information and analysis.

General considerations

Assessing the cost of target-reaching efforts is even more difficult than setting targets. Detailed country information and knowledge are needed, and a good dose of common sense and experience is required to suggest realistic cost estimates. In theory, the costs of attaining PRSP output and outcome targets depend on three sets of parameters: (1) the shape of sectoral and program production functions (holding technical efficiency constant); (2) the level of technical efficiency in the various sectors and programs (holding inputs constant); and (3) the factor prices for the various inputs. Part of the difficulty in estimating costs for reaching a set of targets is that all three sets of parameters are likely to be changing simultaneously, at least over the medium term. Indeed, some determinants of costs, such as the level of technical efficiency, are themselves objectives of policy, so they should not be treated as fixed parameters over the whole planning horizon.

In several priority areas of a PRSP, such as education and health, wage costs make up a very large proportion of recurrent costs. Consequently, when costing targets, it is important to be explicit about the assumptions made regarding public sector wages. This may be a delicate issue, especially if public

sector workers are unionized. In some PRSP countries, the cost, over 15 years, of recent wage increases in the public sector, has been estimated to be fairly close to the HIPC relief expected by the countries. This reduces the scope for new interventions designed to improve basic social indicators. More generally, it is desirable to undertake a sensitivity analysis of the cost of reaching various targets to variations in the level of public sector pay. As was the case for target setting, simulation tools have been created to facilitate this task. Specifically, the SimSIP_Costs software can be used to assess the cost of various targets related to education, health, basic infrastructure, and program interventions, with an eye on public sector wages, especially in the case of teachers. Ideally, the results of the sensitivity analysis should be fed back into the consultative process of the PRSP in order to promote awareness and discussion.

Cost estimates may also be affected by the process of administrative and political decentralization, which is under way in many low-income countries. If responsibility for public service delivery, and the hiring of teachers, medical staff, and agricultural extension personnel, passes from central to local government, it is likely that all three determinants of a target's costs—sectoral and program production functions, technical efficiency, and wage levels—will be affected. Indeed, a major aim of decentralization is precisely to influence these factors so as to improve efficiency.

Finally, it could be argued that cost estimations should use the "social" or shadow prices of inputs when these diverge from observed market prices. Yet in practice, information and other resource constraints on the PRSP process severely limit opportunities for using shadow prices. Furthermore, from the viewpoint of fiscal sustainability, what matters in the end is what the government has to pay in order to attain a set of targets, not what it "ought" to pay.

Sectoral analysis

While the parameters and results of detailed sectoral analyses depend on specific country circumstances, simulation tools have been created to facilitate the work of government staff in charge of PRSPs. Here we review some features of SimSIP_Costs, a simulator for estimating the cost of reaching education, health, and infrastructure targets (see technical note D.2). For each sector, the user must provide information on demographics, delivery systems, and cost parameters, as indicated in table 4.5. This information is then used to compute outcomes and to assess the overall (public) cost of reaching these outcomes. The cost calculations in SimSIP allow the user, in many cases, to change unit costs over time. As mentioned above, this is important, as unit costs often change over time. For example, unit costs often increase once higher levels of education, health, or infrastructure are attained, because coverage of the more remote areas is often left until the end. Using the same fixed costs over the whole planning horizon could lead to an underestimation of the total cost.

In the education sector, SimSIP_Costs computes the cost of reaching targets for preschool, primary, and secondary education. Cohort analysis is used to quantify various variables of interest in predicting educational outcomes over time. In traditional cohort analyses, a given class is followed through the grades from the time of entry until graduation, taking into consideration the repetition and dropouts that occur along the way. In SimSIP_Costs, this model is extended to follow cohorts over time, from one grade to the next, and from one cycle to the next. The simulator allows for many variables to be estimated for each cycle, including:

- **Net enrollment rate.** This is the number of students of the "correct" age registered in the schooling cycle as a fraction of the population in the age bracket. The correct age group for each cycle may differ across countries depending on the theoretical age at entry and the length of the cycle. For example, the primary education cycle may last from five to nine years.
- **Gross enrollment rate.** This is the number of students, regardless of age, who are registered in the cycle, as a proportion of the population in the correct age bracket.
- **Completion rate.** This is the share of students who complete a schooling cycle as a fraction of the population that should have completed that cycle, had all children gone to school and succeeded in completing their studies.

Table 4.5. Structure of SimSIP_Costs for the Education, Health, and Infrastructure Sectors

Assumptions for	Education (pre-, primary, and secondary school)	Mobile basic health care units in rural areas	Infrastructure (water, sanitation, electricity)
Demographics	Entering cohorts (number of children of various age groups potentially joining the education system) by five-year intervals until 2015.	Initial and final population levels by 2015; average number of households by village; average household size in areas served.	Urban, rural, and national population and average household size by five-year intervals until 2015.
Delivery system	Length of schooling cycles; distribution of age at entry for the primary cycle; repetition, promotion, and drop-out rates by cycle or by grade.	Items in basic health care package, composition of mobile teams, number of villages covered by each team, number of visits per year to the same village.	Initial and final coverage; technology chosen for the delivery of each service.
Cost parameters	Supply-side costs (teacher wage, teacher-student ratio, administrative costs, etc.), demand-side costs (stipend value, coverage, etc.) and investment costs (cost per classroom, teacher training, etc.)	Structure for fixed and variable costs at various levels (from mobile health team to ministry of health).	Unit cost for each technology; structure for sharing costs between service provider and user (allows for access and consumption subsidies).
Setting targets	Changes in distribution of age at entry, repetition, promotion, and drop-out rates determine outcomes.	Outcomes are target coverage rates, with cost-effectiveness measured in terms of DALEs (disability adjusted life expectancy).	Outcomes are target coverage rates.

- **Timely completion rate.** This is the share of students who complete a schooling cycle in time as a fraction of the population in the age bracket. To complete a cycle in time, a child must enter the cycle at the right age and avoid repetition through the cycle.
- **Average number of years to graduate.** This is the average number of years taken to complete the cycle of schooling by those students who have successfully finished.

Whether the targets are specified in terms of net or gross enrollment, or any other measure of school performance, the simulator estimates the cost of reaching the targets. More specifically, based on country-level information, the simulator assesses supply-side costs (teacher wage, teacher-student ratio, administrative costs, etc.), demand-side costs (stipend value, coverage, etc.) and investment costs (cost per classroom, teacher training, etc.), the sum of which represents the sectoral cost.

For simulations in the health sector, SimSIP_Costs allows the user to estimate the cost of providing a basic health care package to households lacking access to health facilities. Following Dicowsky and Cardenas (2000), three basic health packages are considered. They differ from each other by the number of services included. The services included in each basic health care package address some of the main issues facing health policymakers in Latin American countries. They comprise general mortality reduction programs, with special emphasis on acute diarrhea and respiratory diseases within the population less than five year old; children's health programs, such as immunization and nutrient deficiency programs; pregnancy care, including prenatal and postnatal assistance; community and environment programs; adult and senior health issues; education on use of medical drugs; and occupational health programs. Additional services to deal with epidemics, such as that of HIV-AIDS, could be added to the simulator. Implementation of the basic packages is carried out by public servants from the ministry of health, several mobile health teams going from one village to another, and community teams composed of volunteers based in the villages themselves. The mobile teams are composed of a medical doctor, a nurse, a nurse assistant, a technician, and a driver. Community teams are formed of local residents who are not directly compensated but incur variable costs. Officials of the ministry of health include regional and local directors, contributing to fixed costs.

For simulations in the basic infrastructure sector, SimSIP_Costs allows the user to estimate costs of providing access to water and sanitation. The costs of reaching target coverage levels depend on the

choice of technology. In the case of water, for example, the technology chosen and its cost depend on three criteria: the type of water supply systems (piped or nonpiped), the water distribution mechanism (gravity fed, pump fed, or spring protection systems), and the population density of the area to be served by the respective systems (high-density, semidispersed population, or dispersed population). For sanitation, the alternative technologies under consideration include conventional sewage systems, pour-flush latrines, and dry latrines. The total costs are then functions of parameters that guide who is paying what, i.e., the split into public and private costs. While private costs are paid by households and therefore do not appear in the budget of the state or municipality, it is important to make sure that the services provided are affordable, and SimSIP_Costs enables the user to specify subsidies to be paid by the state either for access or consumption.

Program analysis

SimSIP_Costs also enables the user to assess the cost of various programs that could help reach targets. This is done through a review of best-practice social programs that have been implemented in various areas or countries and for which detailed evaluations are available. Since these programs can be replicated in other countries, it is useful for PRSP government staff to have an idea of their expected effect and cost. To give just one example here, we consider Progresa, a successful social program recently implemented in Mexico that provides means-tested conditional transfers to stimulate investment in their human capital by the poor themselves (see box 4.4 for a detailed description).

How effective is the program in contributing to development targets? Apart from its immediate impact on poverty through the cash transfers given to households, Progresa has been found to reduce child mortality by 12 percent. It has also been found to increase the number of years of children's schooling. Because enrollment in primary school is already high in Mexico, the increase for years of primary school was relatively low, at 76 years of schooling for a cohort of 1,000 girls, and 57 years for a cohort of 1,000 boys. The increase in years of secondary school was much larger, at 479 hours for girls and 249 hours for boys. The cost of generating an extra year of schooling was found to be around US\$5,550 for primary education and US\$1,000 for secondary education. Such cost estimates are valuable in assessing the budgetary implications of replicating a program such as Progresa in another country.

4.4.2 Efficiency of public spending

Given their limited tax base and challenges involved in improving tax collection, it is often difficult for many developing countries to increase spending on social development outcomes. But social development targets may still be attainable through a more efficient use of current resources. Murray and others (1994) find, for example, that a typical country in Sub-Saharan Africa could improve health outcomes by 40 percent simply by reallocating resources to the most cost-effective intervention mix. It is thus crucial to consider both funding capacity and efficiency of public spending when evaluating the feasibility of targets.

There is a long economic tradition of measuring efficiency, especially in the fields of agricultural and industrial economics. Techniques from these disciplines are increasingly being applied to other areas, such as health (Grosskopf and Valdmanis 1987; Evans and others 2000); education (Kirjavainen and Loikkanen 1998); and public administration (Grossman and others 1999). The key underpinning principle, which traces its origins to Farrell (1957), is best illustrated with a one-input one-output example as depicted in figure 4.2.

The objective or outcome is depicted along the vertical axis, while inputs are depicted on the horizontal axis. The curved line represents the maximum possible level of outcome that can be obtained for a given level of inputs. More particularly, it represents the best performance frontier determined by a representative peer group. Efficiency (E) is defined as the ratio of attained or observed outcome to best-practice outcome for that level of inputs. Assume, for example, that a country produces "a" units of outcome for 40 units of inputs. Based on the experience of its peers, it could have produced "a+b" units of outcome for that same level of inputs. The country's efficiency E is thus $a/(a+b)$. A country is considered

Box 4.4. Progresa: A Successful Means-tested Social Transfer Program in Mexico

Progresa provides means-tested conditional transfers to encourage investment by the poor in their own human capital. The program was introduced in early 1997, in response to rising poverty following the 1995 Mexican macro-economic crisis. It has become the largest poverty alleviation program of the Mexican government, today reaching 2.6 million rural households (40 percent of all rural households and 11 percent of all Mexican households). The program is geared toward improving high-school enrollment and attendance, especially among girls. It also aims to decrease malnutrition among preschool children and pregnant and/or lactating mothers, and to provide incentives for family preventive health care. The program seeks to integrate these objectives so that children's learning is not affected by poor health, malnutrition, or necessity to work; and so that parental inability to pay for increased nutrition and education is not a constraint on children's development. The main components of the program are:

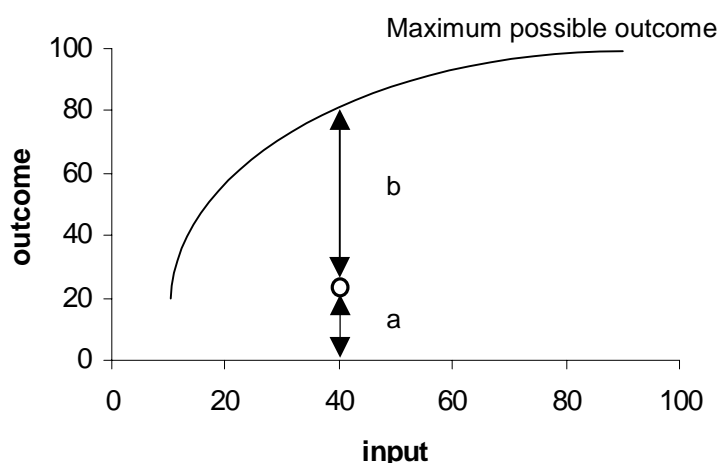
- Educational grants to foster enrollment and regular school attendance; continued receipt of these grants is conditional on individual child attendance reports by school teachers;
- Basic healthcare for all household members, with a strengthening of preventive medicine through health sessions. Session attendance is required to receive full payment of monetary transfers; and
- Monetary transfers and food supplements to improve the family's food intake, particularly for children and women, but also for older individuals (who benefit from a substantial share of financial transfers, a fact often overlooked when discussing the program). Food supplements are given for malnourished children and pregnant and lactating mothers.

The program follows a two-step targeting procedure. The first step is a geographical identification of marginal communities. In a second step, households are selected within eligible communities. To this end, a survey questionnaire is administered to all households in order to determine socioeconomic status. A principal component analysis is used to classify households as "poor" (eligible) or "nonpoor." A list of eligible households is then presented to the community, which has an opportunity to adjust it for exclusion or inclusion of households. Eligible households can then decide to enter the program. Eligibility cards are supplied to mothers (when the household is eligible to receive all three benefits) or to the household head (when the household includes no woman or is only eligible for food transfers). Registration takes place during a community assembly. In 1999, at the time of the program evaluation, Progresa's budget was US\$777 million (0.2 percent of Mexico's GDP). Administrative costs were 8.9 percent of total costs (including 2.67 percent for targeting costs at the household level and 2.31 percent for conditioning costs).

technically efficient if it produces on the best-practice frontier ($E=1$). Note that efficiency defined in this way is a relative and not an absolute concept.

Calculating efficiency empirically involves determination of the outcome and input variables, empirical determination of the production frontier, and calculation of the individual deviations from that frontier. Care must be taken in the choice of input and outcome indicators. Omission of important inputs may bias the estimation of the frontier, causing biased efficiency measures (Ravallion 2000). Furthermore, in choosing inputs, only directly related and controllable inputs in the production process should be included (Evans and others 2000). Noncontrollable exogenous determinants, such as the initial level of development or measures of performance of the judiciary system, could then be used in a second step to examine the differences in efficiency across the different observations. There are several methods to estimate the production frontier, which are briefly described in technical note D.3. Empirical applications

Figure 4.2. Measuring Efficiency of Input Use



of these techniques, to examine the effectiveness of health and education expenditures (box 4.5), indicate that there is a lot of scope for efficiency improvements in public service delivery in developing countries. This suggests that many development targets might well be attainable even when additional resources are limited, i.e., through a more effective use of existing resources.

4.4.3 Fiscal sustainability

Estimating the cost of reaching targets is only one step, albeit the most important, in an overall assessment of a PRSP's fiscal sustainability. Another important consideration is the government's capacity to implement the program. Bevan (2001) distinguishes two aspects of sustainability: "financial" sustainability and "absorptive" sustainability.

Financial sustainability

Financial sustainability signifies whether a planned expenditure path can be funded without unacceptable financing consequences for either the public or the private sector. Public expenditure can be funded from taxation, domestic and foreign borrowing, external grants (including debt cancellation), and seigniorage from printing money. The macroeconomic literature on financial sustainability is huge, but two issues are worth mentioning here. First, a common problem in the recent fiscal history of low-income countries has been the use of foreign aid to finance the capital costs of projects that exhibit low productivity *ex post*, owing to the recipient government's failure to pay the required level of recurrent costs (particularly maintenance expenditures) over the project period. As the donor community moves from project to program lending, and channels external assistance through the national budget, this problem will hopefully become less acute.

Box 4.5. Efficiency of Expenditures on Health and Education

Efficiency of national health systems. In its latest annual World Health Report, the World Health Organization (WHO) ranks the health systems of 191 countries based on their relative efficiency in producing health. The efficiency measures are derived from stochastic frontier analysis. Evans and others (2000), who developed the efficiency measures, take disability-adjusted life expectancy (dale) as the measure of a population's health. Real total (public and private) per capita health expenditures and average years of schooling are chosen as inputs. The former is a summary measure for all physical inputs in the health system, while the latter acts as proxy for nonhealth system inputs into health. (The researchers opted against taking income per capita as proxy for nonhealth system inputs, because it is not a direct determinant of health and is also highly correlated with health expenditures.) The stochastic frontier model is estimated through fixed-effects regression analysis, which is in essence a variable intercept model (see technical note D.3). The country with the maximum intercept is taken as the reference country (the frontier), and the relative distance from this maximum, corrected for the minimum expected health levels in the absence of a health system, yields the measure of efficiency.

The scores for each country's health system efficiency or performance index are on the statistical pages of the World Health Organization's website². By way of illustration, note that countries with an efficiency score of 0.5 ($E=0.5$) produce only half the number of disability-adjusted life expectancy years with the same total health expenditures per capita, and the same years of schooling, as their most efficient counterparts. Classifying countries with E larger than 0.7 as good performers, those with an efficiency index between 0.5 and 0.7 as mediocre performers, and those with an efficiency index below 0.5 as poor performers, Costa Rica ($E=0.882$), Sri Lanka ($E=0.783$), and Bangladesh ($E=0.709$) emerge as good performers; The Gambia ($E=0.687$), Vietnam ($E=0.611$), and Mongolia ($E=0.581$) as mediocre; and most African countries as poor performers. Guinea and Kenya, for example, display an efficiency index, respectively, of only 0.469 and 0.320. Health outcomes in these and many other African countries might be substantially improved, even without expanding current real expenditures on health.

Efficiency of government expenditures in producing education and health. Using Free Disposal Hull analysis, Gupta and others (1997) assess the efficiency of government expenditures on education and health in 38 countries in Africa over the periods 1984–87, 1988–91, and 1992–95. Their efficiency is assessed in relation to each other and in comparison with countries in Asia and the Western Hemisphere. The authors take primary and secondary school enrollment, as well as literacy, as outcome indicators for education. Outcome indicators for health are life expectancy, infant survival rate, and immunization rate. Inputs in education and health are measured in terms of per capita government expenditures on education and health, respectively, each expressed in purchasing power parity terms. From a combination of the different education efficiency scores, and relative to the other African countries in the sample, Gupta and others (1997) find that public expenditures on education are efficiently used in The Gambia and Botswana, though not in Burkina Faso and Côte d'Ivoire. Regarding health, Botswana and The Gambia emerge once again as efficient administrations. Inefficient use of public expenditures is noted in Mali, Malawi, and Niger, among other countries. Education and health spending in Africa became more efficient over time. Yet, when compared to Asian and Western countries, it is clear that there is substantial room for efficiency improvement.

Second, a public expenditure path planned to achieve a set of targets makes assumptions (often implicit) regarding the corresponding path of private expenditures (e.g., private consumption and investment) needed to achieve the same targets. For example, public spending on food supplements to malnourished children may be based on the assumption, which may be erroneous, that children's private food consumption within the household is not reduced as a result, or at least not reduced at a rate of one private food dollar for one public food dollar. Even in the absence of user fees, public spending on primary education requires complementary private expenditures on uniforms, transport, and other items if the children are to attend school. The assumptions about the complementarity of public and private resources should be made explicit in any discussion of the financial sustainability of PRSP targets.

Similarly, it is important to document the mix of public resources, both external and domestic, on which the country may rely over time. In the case of Tanzania, for example, a detailed set of public-sector activities required to attain PRSP goals has yet to be fully specified or their costs determined. However, current calculations suggest that public spending as a proportion of GDP may have to rise by over 3 percentage points (from 13.4 percent to 16.7 percent) over time. This is likely to generate a financing gap of around 3 percent of GDP. Since the net present value of the external debt is falling in Tanzania, there is scope for additional concessionary borrowing from abroad. If the current rules regarding cash budgeting are relaxed, the government could also cover part of the financing gap from seigniorage revenue and selling debt, since the domestic debt income ratio is low (Bevan 2001, pp. 20–21). This is the type of scenario that must be considered when assessing fiscal sustainability.

Apart from its sectoral and program-costing modules, SimSIP_Costs includes an overall fiscal sustainability interface. Assumptions are made regarding GDP growth, the revenues generated through taxation, and the extent of the sustainable public deficit in order to provide an overall envelope of public funding, including financing from donors. Spending for the social sectors is computed as a percentage of total public spending, and compared over time to the estimated cost of reaching the various targets. This helps the user determine if the costs in the various social sectors are affordable from a macroeconomic point of view with or without reallocation of funds toward the social sectors (beyond the reallocation of funds made feasible through HIPC debt relief). The user can also estimate the fiscal tradeoffs between various targets. Since the costs of reaching various targets are computed independently, one may, for example, ask how much access to water could be increased, from a fiscal perspective, if the target for net primary enrollment were reduced by one percentage point.

Absorptive sustainability

Absorptive sustainability signifies whether a planned expenditure path can be implemented, presuming it can be financed. For the public sector as a whole, absorptive capacity includes the ability to design, disburse, coordinate, control, and monitor public spending. This coordination is both vertical (between central and local government) and horizontal (between line ministries at any given level). Within the public sector, absorptive sustainability is about fiscal flexibility and has two main aspects. First, for the highest priority sectors where spending is due to rise under the PRSP, can the additional expenditure on, for example, rural roads, health, and education be undertaken by the relevant line ministries and other agencies without loss of control, increased leakage, and/or poorer service delivery? Absorptive capacity is difficult to measure. However, it should be feasible to calculate the planned real absolute changes in public expenditure of a given sector or ministry over a three-year period, to meet the PRSP targets, and to compare these changes with a recent time trend for the sector or ministry. If the required increase in real spending to meet PRSP targets exceeds this trend by a significant margin, doubts may be raised about the absorptive sustainability of the planned expenditure path.

Second, for the lowest priority sectors, a comparable exercise can be carried out to establish whether the planned rate of real public spending growth (which may be negative) is consistent with recent historical experience. Fiscal inertia caused by medium- and long-term contracts signed by line ministries, together with other frictional constraints, may limit the speed with which resources can be reallocated among different branches of the public sector. Such contracts are typical and include the following:

1. ***Labor contracts.*** Where a high proportion of public expenditure in a sector is taken up by the wage bill, the rate at which expenditure can be cut depends on the nature of labor contracts in the

sector. This, in turn, depends on the extent of labor unionization, the extent/nature of wage indexation (in high-inflation contracts) and other institutional features that affect the ease with which workers can be dismissed and/or real wages reduced.

2. *Defense contracts.* The purchase of military hardware, e.g., combat aircraft, sometimes ties in the buyer to purchase after-sales services for some minimum period, e.g., maintenance work, etc.

4.5 Conclusion

Targets are introduced in the PRSP with two key objectives: to initiate a process of prioritization and to foster a culture of accountability among the different actors involved in the policymaking process. Targets also help mobilize resources for the overall goal of reducing poverty. In order to achieve these objectives, it is essential that the chosen targets be realistic. They might lose their power as incentives if they were unattainable from the start. Unfortunately, experience suggests that in many current PRSPs and I-PRSPs, this may be the case; their targets tend to be too optimistic, and the cost of reaching them tends to be underestimated.

This chapter has provided a set of readily applicable tools for assessing the technical and fiscal feasibility of development targets. Each tool has intrinsic limitations, so it is important to apply as many tools as possible in order to set development goals that are, from a technical and fiscal perspective, realistically achievable. Fortunately, application of these different tools has been made easier through the development of user-friendly, free-of-charge software. While the SimSIP software applications simplify the task at hand, caution is warranted, especially in interpreting the results from the target-setting software. These results are only as reliable as their underlying estimated models. The good news is, these applications are sufficiently flexible to be adapted to country-specific circumstances, which is especially required when estimating costs. Nevertheless, practitioners are encouraged to continuously search the literature for updated and modified applications and new econometric techniques for estimating the relationship between development outcomes and economic performance.

While some applications for microsimulations have been developed within SimSIP, these are by nature country-specific, and they may not be readily applicable to other countries. Here, practitioners can draw on a vast literature on the microanalysis of determinants of development outcomes (Strauss and Thomas 1995). However, user-friendly analytical tools for assessing efficiency of expenditures on social development outcomes are still missing. Since there appears to be a lot of scope for improvement in the efficiency of public service delivery in many countries, this is an important area where additional empirical research would be valuable.

Notes

1. This can be calculated by applying the following formula: $dU = -8.02 \ln((1+r)^t)$ where dU is the percentage point change in malnutrition, r the GDP per capita growth rate and t the time period. Rearrangement of this formula yields: $r = \{[\exp(-dU/8.02)]^{(1/t)} - 1\}$ and substitution of the actual values for dU and t yields $\{[\exp(15/8.02)]^{(1/25)} - 1\} = 0.078$
2. http://www.nt.who.int/whosis/statistics/whr_statistics/select.cfm?path=statistics,whr_statistics,whr_select&language=english

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Chapter 5

Strengthening Statistical Systems

*Bahjat Achikbache, Misha Belkindas, Mustafa Dinc,
Graham Eele, and Eric Swanson*

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5.1 Introduction

Chapter 1, “Poverty Measurement and Analysis,” and chapter 3, “Monitoring and Evaluation,” of this book have emphasized the central role of measurement and the data needed for poverty reduction strategies. This chapter describes the role of the national statistical system in meeting the information needs of the Poverty Reduction Strategy Paper (PRSP) and, where the system is unable to meet those needs, provides guidance on the strengthening of capacity.

The preparation of the PRSP is a data-intensive process that focuses attention on the capacity of the statistical system to deliver the data. It provides an important opportunity not only to identify the demand for poverty-related data, but also to highlight areas where investment and improvements are needed. The PRSP process also emphasizes data quality and requires an assessment of the different data collection systems and processes. The PRSP demands a comprehensive approach, requiring information and analysis at the level of the macroeconomy for individual sectors, including both productive and social sectors, and at the household or individual level. Examining data sources and undertaking such a comprehensive analysis can help to identify gaps in coverage and inconsistencies in data series, highlighting instances of duplication and waste of resources devoted to data collection.

In order to take advantage of this opportunity, however, it is important to ensure that senior managers of statistical agencies are involved in the PRSP preparation process from an early stage. Statisticians’ direct involvement in the team is necessary to help analysts access and use the existing data, explain and interpret data from different sources, select appropriate indicators, and help design the monitoring system. Experience from a number of countries indicates that where statisticians are involved as full members of the PRSP team from an early stage, not only is the level of analysis enhanced, but opportunities for improving statistical systems are also more easily identified (see case study E.1).

Because of the wide range of information needed to develop a full understanding of the nature and incidence of poverty and the need to monitor progress at both the microeconomic and macroeconomic levels, very few, if any, countries will have all the data they need immediately available. In general, therefore, the PRSP process should identify the most important data deficiencies, specify the impacts these have had on the analysis of poverty, and describe how these factors have affected the selection of indicators and the design of the monitoring system. The preparation of an interim PRSP provides the opportunity to carry out an initial analysis of the statistical system and identify the main strengths and weaknesses. The full PRSP will need a more detailed assessment and a description of the steps that countries propose to take to improve the availability of information and the quality of the main indicators.

This chapter focuses on the assessment of a statistical system as a whole, taking a broad view of the range of organizations involved and the types of data needed for a PRSP. The emphasis is on national data, but in almost all cases the challenge is not only to monitor what is happening at the level of the whole country, but also to provide data at a sufficiently low level of aggregation to monitor poverty and identify appropriate interventions suited to specific environments and localities.

In making an assessment of the national statistical system and in developing a poverty-focused information strategy, the chapter makes use of the Data Quality Assessment Framework (DQAF) developed by the International Monetary Fund (IMF). This provides a formal framework for assessing the operations of a statistical system and emphasizes the importance of providing users of the data with the information they need to assess data quality and make the best use of the outputs provided. This chapter also refers to the IMF’s General Data Dissemination System (GDDS); more information on both DQAF and GDDS is provided in section 5.4 and technical note E.1.

5.2 Overview of the Statistical Process

The starting point of the analysis is to identify the data that are needed for the PRSP. In general, as identified in the other data chapters, data are needed for a number of purposes, including the following:

- general advocacy, supporting the social debate about strategies, targets, and policies and promoting participation generally;

- detailed analysis for resource allocation and program and project design;
- program monitoring and budget management;
- impact assessment of selected policies and programs; and
- promotion of greater transparency and accountability by government.

The information and data needed for all these purposes are generated by the statistical system, and figure 5.1 shows the processes that are involved. Data are obtained about a number of different social and economic agents that include households and individual people, private for-profit enterprises (both financial and nonfinancial), public sector agencies and other organizations involved in service delivery (for example, agencies providing health and education services), and other not-for-profit organizations and entities such as community groups, religious bodies, and so forth.

As indicated in the middle column of figure 5.1, the data are collected by different statistical agencies. Most countries have a national statistical agency that has primary responsibility for the collection and dissemination of statistical data, but a number of other organizations are also likely to carry out some data collection. For example, in many countries the central bank has responsibility for collecting monetary statistics and may well cover other areas such as banking and balance of payments. The Ministry of Finance is usually concerned with collecting and analyzing data on the financial operations of government, and other ministries may well collect data in their specific areas of concern, such as health, agriculture, or education.

Statistical data are disseminated and made available to users in different forms. Figure 5.1 lists examples of different kinds of statistical products and outputs. For example, economic data on the real economy is usually published in the form of national accounts, together with more detailed statistics on production and prices. Social statistics include data on health, education, population, and poverty outcomes. Other types of statistics will be important in different countries and may include data on the environment, governance, and the justice system.

In summary, therefore, the function of the national statistical system is to collect data on a number of different topics from a wide range of economic and social agents, to process and analyze these data, and to disseminate summary information in a form amenable to use by a wide range of different users. In the remainder of this chapter, we look at how the strengths and weaknesses of the system can be assessed from the point of view of the PRSP and how priorities for improvement can be identified. We look at system performance from two points of view: the adequacy of the outputs and the organization and management of the system as a whole.

5.3 Data Sources

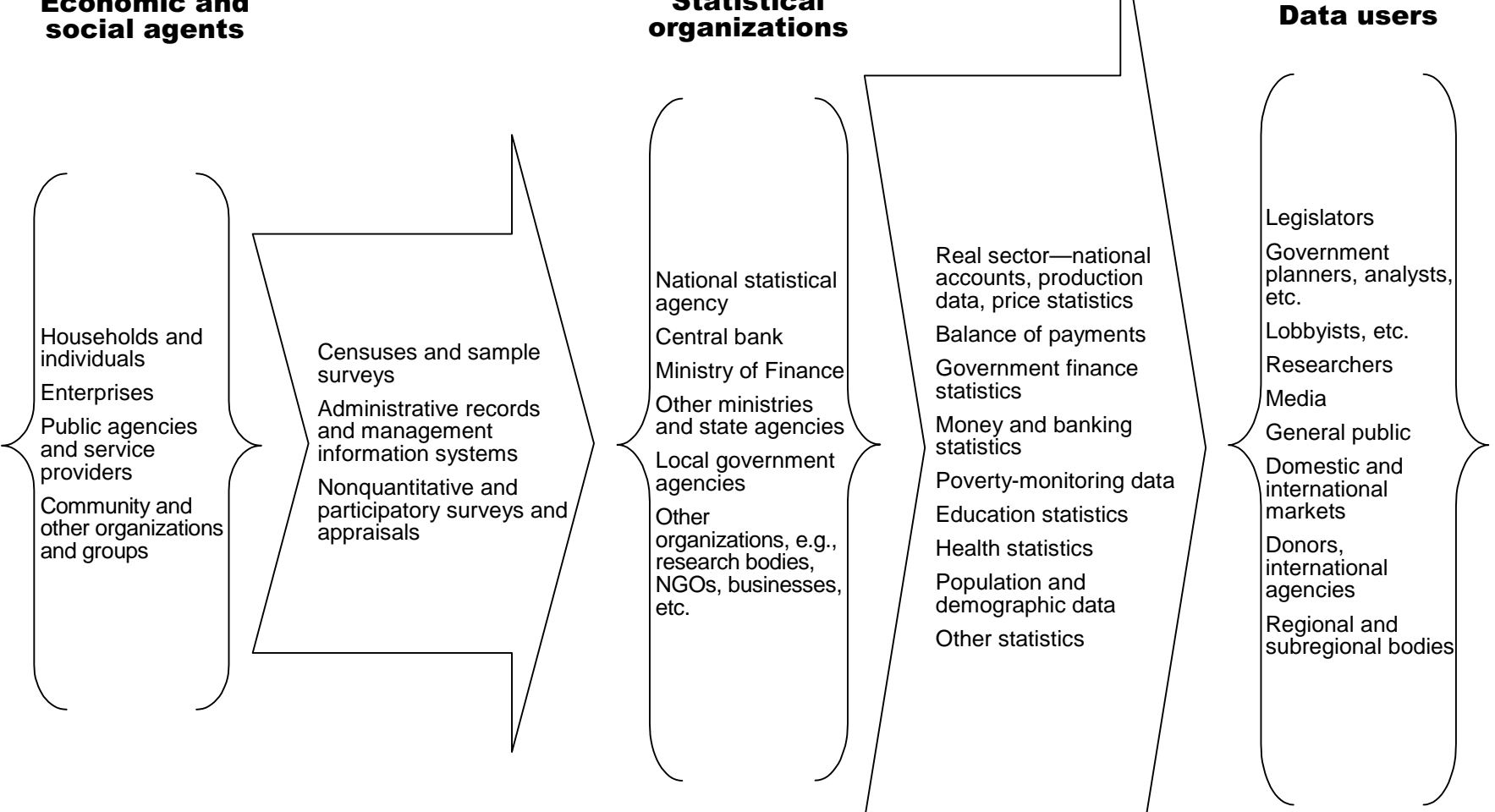
5.3.1 Censuses and surveys

In most countries, the national statistical agency will be responsible for large-scale and regular data collection processes. These will include censuses of population, agriculture, and businesses; sample surveys (especially those that use households as the unit of enumeration); and other kinds of data collection, such as price collections. Even in fairly centralized systems, however, many other central government ministries and departments will also collect data. In some cases these agencies may carry out specialized data collections, such as a school census or a survey of small businesses.

A wide ranges of literature exists on good practice and international recommendations for the design and implementation of different kinds of censuses and surveys. Technical note E.2 provides a number of references for the most important data collection exercises relevant to PRSPs.

Censuses

Censuses are usually complete enumerations of all the units in some population, such as all the people in a country (population census), all agricultural enterprises (agricultural census), or all business establishments in specified industries (economic census or a census of business activity). They are usually very large, expensive, and complex data collection exercises carried out at fairly infrequent intervals; for example,



most countries carry out population censuses only once every 10 years. The main purposes of a census are to (a) provide information about the structure of the population under study; (b) provide data at low levels of aggregation (the complete enumeration allows for the publication of information at very low levels of aggregation, subject only to the need to preserve the anonymity of individual respondents); and (c) provide a frame from which future samples can be selected.

From the point of view of the PRSP, the population census is probably the single most important source of data. While it is unlikely that it will be possible to change the timetable for carrying out censuses in countries, there is clearly an advantage in preparing the PRSP when recent census data are available. Population data are important, both in their own right and in providing the denominators for a number of important poverty indicators. Data derived from projections made from a baseline that is 10 or more years old are likely to be subject to substantial errors.

Sample surveys

Household surveys are a crucial source of information for poverty analysis. Usually, they collect information using a standard questionnaire from a sample of households selected at random from the population that is of interest for the analysis. National sample surveys use random processes to select households that are representative of the population as a whole, but other surveys may focus on specific interest groups, such as rural households, slum dwellers, members of a specific indigenous group, and so on. The use of random selection of the sample is important for two important reasons. First, it guards against bias in selection and provides an automatic mechanism for ensuring that the sample really is representative of the population as a whole. Second, random selection provides access to powerful statistical tools that not only provide unbiased and consistent population estimates, but also allow for estimation of the level of sampling error.

Sampling error is, in effect, the price that is paid for relying on data from only a sample to estimate characteristics for a population. Population estimates generated from different samples will vary. Using random sampling, statistical theory allows the distribution of the sample estimates to be derived, and this in turn provides an estimate of the likely range within which the true, but unknown, population parameter lies.

The design of household surveys usually involves a tradeoff among cost, speed, sample size, and the complexity of the information to be collected. In general, two kinds of approach are possible:

- *Large-scale, fairly rapid monitoring surveys* that attempt to monitor indicators of welfare in a population but that usually cover a limited set of data and may not provide the data needed to support causal analysis. Technical note E.3 provides details of the World Bank's Core Welfare Indicators Questionnaire (CWIQ), which provides a mechanism for carrying out rapid monitoring surveys.
- *More complex household surveys*, usually covering a much wider range of questions designed to understand household decisionmaking, but covering a smaller sample. The Living Standards Measurement Survey (LSMS), an example of such an approach, is described in more detail in technical note E.4.

5.3.2 Administrative data and management information systems

A substantial amount of information is also collected during the course of regular administrative processes. Figure 5.1 refers to these as management information systems (MIS). Typically, data are collected on a routine basis—for example, where people using a public service are required to make some payment, or perhaps apply for a license. The information is needed to manage the system, to account for revenue and expenditure, and to ensure that the legislative requirements are being met. At the same time, however, it can be used to generate statistical information. All countries make use of this kind of information. For the purposes of the PRSP, some important management information systems will include the following:

- school records, which will provide information on the educational system, including indicators such as enrollment, academic outcomes, and progress through the educational system;
- health records, providing information on access to and use of health facilities, morbidity and mortality data for important diseases, the use of preventive health services, and important outcomes such as the nutritional status of children;
- budget and expenditure records, providing information on the allocation and use of financial resources;
- social security records, providing information, for example, on changes in employment;
- fiscal and monetary data collected through the banking system to monitor macroeconomic conditions and stability; and
- taxation and customs receipts to monitor changes in government revenue and to provide information on external trade, business operations, and other economic data.

Of course, administrative data and management information systems are not only maintained by the central government. The records of local government also will be important sources of data, especially where there has been decentralization of service delivery and management. Records will be kept by nongovernmental agencies and civil society organizations as well, where, for instance, they are involved in the implementation of government or donor-funded programs and projects. Such systems, for example, could provide information on the extent and coverage of safety net programs or access to and use of financial services.

Data derived from MIS have important advantages and disadvantages for use in the PRSP. The overwhelming advantage is almost always one of cost, together with timeliness and frequency. Since the administrative systems are already in place, the costs are generally restricted to the compilation and analysis of the data. The main disadvantage is usually the coverage of the data. Information derived from the records maintained by a service delivery system, such as clinics or schools, will cover only those people and households that make use of the service. It cannot always be assumed, for example, that the population attending health clinics is the same as the population at large. Key groups may not have access because of problems such as distance or cost in addition to social and cultural reasons. It is important, therefore, occasionally to validate the information derived from MIS with data obtained from censuses and surveys.

Technical note E.5 provides information on the advantages and problems associated with the use of these types of data. It also provides examples of how the use of modern computer technology can improve the quality of the information and help to link together datasets from different sources.

5.3.3 Qualitative data and participatory assessments

The third type of data collection method shown in figure 5.1 covers a wide range of other information sources that have been grouped together under the general heading of qualitative data and participatory assessments. While these kinds of data are rarely considered to be part of a formal statistical system, the information they provide is nevertheless of the utmost importance for the development of a comprehensive poverty reduction strategy. Technical note E.6 describes some kinds of participatory assessment and offers advice on how quantitative data and qualitative information can be linked together in a poverty assessment.

5.4 Assessing Strengths and Weaknesses: Data Outputs

5.4.1 Data needs for the PRSP

Understanding indicators

The design and implementation of the PRSP generate many demands for different kinds of data. Data are needed to generate debate, allocate resources, design interventions, monitor progress, and report on outcomes. A key part of the process is to set goals with specific targets to be reached within an agreed-on timeframe. In order to measure progress, we need a number of different indicators, and because one

indicator can rarely reflect the extent to which a given goal has been realized, several indicators, both intermediate and final, are usually used for each goal.

Indicators can be broadly classified into two groups: *intermediate* and *outcomes/impact*. When an indicator measures an outcome or the effect of an intervention on individuals' well-being, we call it an "impact" or "outcome" indicator. For example, literacy may be considered a final goal, so an indicator measuring, say, the proportion of people of a certain age who can read a simple text and write their name would be an outcome indicator. Technical note E.7 lists the International Development Goals (IDGs) and the indicators selected for the goals; these may provide a starting point to consider outcome and impact indicators at the country level.

When an indicator measures a factor that determines an outcome or contributes to the process of achieving an outcome, we call it an "input" or "output" indicator, depending on the stage of the process—in short, an "intermediate" indicator. For example, many inputs may be needed to raise literacy levels: more schools, better-qualified teachers, training materials, and so on. A measure of public expenditures on classrooms and teachers' salaries would be an input indicator, while measures of classrooms built and teachers trained would be output indicators. What is important is that inputs and outputs are not goals in themselves; rather, they help to achieve the chosen goals. Table 5.1 gives examples of intermediate and final indicators for a set of possible goals (expanding economic opportunity, enhancing the capabilities of poor people, and reducing vulnerability).

Exogenous factors that are likely to affect final indicators but that do not themselves represent either final indicators or intermediate indicators as discussed above—such as rainfall and commodity prices—should also be measured. Both final indicators (outcome and impact) and intermediate indicators (input and output) are important. Monitoring final indicators helps to judge progress toward the targets set. However, these indicators generally change slowly over time and are the result of many factors, some outside the control of policymakers and program administrators. Monitoring intermediate indicators, on the other hand, gives a more timely picture of what is happening. These indicators generally change as a result of factors that governments and other agents control, and they are easier to collect information on. Monitoring inputs and outputs can help identify which of the several factors influencing an outcome are not on track and indicate what corrective action could be taken. Finally, it should be noted that many factors that affect quality of life cannot be easily quantified but are not for this reason less important. So, where feasible, qualitative and subjective indicators should be added—for example, whether or not people perceive themselves as being poor, the level of satisfaction with service delivery, or the quality of the services they use.

The characteristics of a "good" indicator

A good impact or outcome indicator (a "final" indicator) is one that

- provides a direct and unambiguous measure of progress—more (or less) is unmistakably better;
- is relevant—it measures goals or factors that have an impact on the goals;
- varies over time across areas and groups and is sensitive to changes in policies, programs, and institutions;
- is not easily blown off course by unrelated developments and cannot be easily manipulated to show achievement where none exists; and
- can be tracked (better if already available), is available frequently, and is not too costly to track.

For example, an indicator such as vehicle operating costs is influenced not only by factors reflecting policies and programs, such as the roughness of roads, but also by unrelated factors such as the international price of gasoline. Thus it is not a good indicator of progress achieved in the roads sector.

A good intermediate indicator is one that refers to key determinants of an impact or outcome and that varies across areas or groups or over time. For instance, if all schools had more or less the same teacher-student ratio, that ratio would not be a particularly useful intermediate indicator to monitor differences in quality of education across regions, although it could still be useful to monitor changes over time.

Table 5.1. Examples of Intermediate and Outcome Indicators

<i>Goal</i>	<i>Intermediate indicator (input and output)</i>	<i>Outcome/impact indicator</i>
Reduce extreme poverty and expand economic opportunities for the poor	<ul style="list-style-type: none"> • Expenditure on employment programs for the poor • Number of beneficiaries of employment programs for the poor 	<ul style="list-style-type: none"> • Incidence of extreme poverty: percentage of population whose consumption falls below the poverty line • Poverty gap ratio • Income/expenditure of the poorest 20% of the population as a share of the total income/expenditure of the whole population
Enhance the capabilities of poor men and women.	<ul style="list-style-type: none"> • Expenditure on primary education as a share of total expenditure in education • Expenditure on primary health care as a share of total expenditure on health • Number of new schools built • Number of primary school teachers trained • Percentage of population below the poverty line with access to health care facilities • Number of doctors per 100,000 inhabitants 	<ul style="list-style-type: none"> • Literacy rates • Learning achievement • Gross/net enrollment rates in primary/secondary education • Dropout and repetition rates • Infant, child, and under-five mortality rate • Maternal mortality rate • Malnutrition rate
Reduce the vulnerability of the poor	<ul style="list-style-type: none"> • Expenditure on safety net programs • Number of households/individuals receiving transfers from the government • Number of households receiving food aid as a percentage of drought-affected households 	<ul style="list-style-type: none"> • Number of households made food secure • Percentage of vulnerable group (for example, AIDS orphans) protected • Additional income provided through safety net programs

Source: From various resources developed by authors.

5.4.2 Assessing data quality

Assessing how well the statistical system generates the data needed for PRSP indicators requires an inventory of data outputs, setting out what indicators are produced. However, simply having information on whether or not a particular indicator is available is not sufficient. To complete the assessment we need to know how the indicator was collected, what it covers, how accurate or reliable it is, how often it is published, the time period to which it refers, and the level of aggregation. The whole range of factors that determine how well a particular indicator is suited to some use is referred to as data quality. There are many different possible definitions of data quality, but overall “the quality of the statistics refers to all aspects of how well these statistics meet users’ needs and expectations” (Kotz and others 1988).

In the past, quality in statistics might have been seen to be synonymous with accuracy, but today a consensus is emerging that quality is a much wider, multidimensional concept. However, no internationally agreed-on definition of data quality exists. To further a common understanding of data quality, the IMF has set up a data quality reference site on the Internet. It has also become clear that one practical need has been for more structure and a common language for assessing data quality. Such an assessment tool could serve to complement other frameworks (for example, the IMF’s Special Data Dissemination Standard and GDDS) to guide statistical agencies in assessing whether national data are adequate for different purposes, and to provide a basis for assessing and reporting on the observance of standards and codes. With these needs in mind, therefore, the IMF, in collaboration with other agencies, has been developing a DQAF.

The DQAF that is emerging reflects the growing literature on the subject, practical experience in dealing with the statistical systems of both industrial and developing countries, and feedback from several rounds of consultations. It comprises a generic assessment framework and specific assessment frameworks for the key sets of statistics, focusing initially on the main macroeconomic aggregates. The generic framework, which brings together the internationally accepted core principles/standards or

practices for official statistics, serves as the umbrella under which the dataset-specific quality assessment frameworks are developed. The framework follows a cascading structure that flows from five main dimensions that have been identified as critical constituents of data quality (see box 5.1). For each of these interrelated, and somewhat overlapping, dimensions, the framework identifies pointers, or observable features, that can be used in assessing quality. These pointers to quality are broken down into elements (principal identifiers of the quality dimension) and, further, into more detailed and concrete indicators. Below the indicator level, especially in the dimensions dealing with methodological soundness and with accuracy and reliability, the specific frameworks tailor these pointers to the individual datasets.

Because quality assessment depends on users' requirements, the weight given to any one of these dimensions will depend on the use to which the data will be put. It is not possible, therefore, to provide an absolute measure of quality for any indicator; rather, it is necessary to provide users with the information needed for them to make an assessment of quality, depending on their intended use. Table 5.2 provides some examples of the different aspects of data quality that may be required for PRSPs. The aspects of quality listed in the rows of the table are discussed in more detail below.

Data coverage

Data coverage, that is, what information is generated by the statistical system, refers to the published indicators as well as information on the scope of the data system and the reference time period. For a particular indicator it is important to know not only what information has been collected, but what group or population it covers and for what time period. For example, school enrollment may be defined as the percentage of children in a specified age group that are attending school. In order to use the indicator, it is also important to know which schools are covered (for example, are all schools included or just those operated by the government?), what grades are included, what point in time the data refer to, what ages are included, and whether the information has been collected from all the relevant schools or just from a sample.

Box 5.1. The Dimensions of Data Quality

The five dimensions identified in DQAF are as follows:

Integrity

This dimension is intended to capture the notion that statistical systems should be based on firm adherence to the principle of objectivity in the collection, compilation, and dissemination of statistics. The dimension encompasses the institutional foundations in place to ensure professionalism in statistical policies and practices, transparency, and ethical standards.

Methodological soundness

This dimension of quality covers the idea that the methodological basis for the production of statistics should be sound and that this can be attained by following international standards, guidelines, and agreed-on practices. In application, this dimension will necessarily be dataset-specific, reflecting differing methodologies for different datasets (for example, the 1993 System of National Accounts for national accounts and the fifth edition of the IMF's *Balance of Payments Manual* for balance of payments).

Accuracy and reliability

For most users, accuracy and reliability are among the most sought-after attributes of data. We are all concerned that the data we use portray reality sufficiently at all stages of dissemination—from “flash” to “final” estimates. This dimension therefore relates to the notion that source data and compilation techniques must be sound if data are to meet users' needs.

Serviceability

Another area of concern for users is whether the data that are produced and disseminated are actually useful. This dimension of quality relates to the need to ensure that data are produced and disseminated in a timely fashion, with an appropriate periodicity; provide relevant information on the subject field; are consistent internally and with other related data sets; and follow a predictable revisions policy.

Accessibility

Users want understandable, clearly presented data and need to know how data are put together, and users must be able to count on prompt and knowledgeable support from data producers for their questions. This quality dimension thus relates to the need to ensure that clear data and metadata are easily available, and that users of data receive adequate assistance.

Source: Carol S. Carson. 2000. “Toward a Framework for Assessing Data Quality.” IMF, Washington, D.C.

The IMF's GDDS provides a framework for assessing data coverage and identifying priority areas for improvements. This is discussed in more detail below. For the indicators that are needed for the PRSP, it is recommended that information about the source, coverage, reference period, and method of data collection be put together in a systematic way. This kind of information is referred to as metadata, that is, information about indicators that helps the user to interpret specific values and that also indicates possible limitations on use.

Methodological soundness

Methodological soundness ensures that the methodological basis for the data—related to the concepts and definitions used, the methods of data collection, and the ways in which the data are summarized and reported—is sound and reflects good practice. A particular requirement is consistency among different data collection processes so that real changes can be identified over time (time series analysis) and among different domains of study or strata at the same point in time (cross-sectional analysis).

In order to promote consistency, countries are encouraged to adopt and use international recommendations for the classification of variables and for frameworks for analysis. At the international level, several frameworks and classifications for specific types of data important for PRSPs have been developed and are in use in many countries. At the same time, countries also have access to internationally agreed-on recommendations on good practice for statistical activities and for the compilation of indicators. Technical note E.8 gives a list of those recommendations that are likely to be the most important for poverty analysis.

In the area of economic statistics, a number of frameworks exist to provide a basis for the collection and classification of data on different types of transactions.¹ There are no equivalent comprehensive frameworks for the social and demographic data, but guidelines do exist for compilation, standard classification systems, and examples of best practices that are frequently cited and widely used by statisticians to organize the collection and presentation of social and demographic statistics.

Accuracy and reliability

An indicator is a statistic that has been derived from a set of data in order to measure a specific phenomenon. As such, it is subject to errors that can arise from a number of different sources, including those described below.

Table 5.2. PRSPs, Data Uses, and Required Characteristics

<i>Uses of data quality</i>	<i>Advocacy, social debate, participation</i>	<i>Analysis, resource allocation, design</i>	<i>Program monitoring, budget management</i>	<i>Impact assessment</i>	<i>Transparency and accountability</i>
Integrity	Must be seen to be free from political manipulation	Need for detailed information on methods	Need for detailed information on methods	Need for detailed information on methods	Must be seen to be free from political manipulation
Methodological soundness	Broad concepts, simple constructs	Program-specific, complex constructs	Program-related, agreed-on performance measures	Program and policy related, compare changes over space and time	Broad concepts, simple constructs
Accuracy and reliability	Limited	High	High	High	Limited
Serviceability	Need to identify most significant trends, timeliness a lower priority	Trend data needed, timeliness very important	Need for data at regular intervals, timeliness very important	Data needed infrequently, timeliness a lower priority	Data to identify most significant trends, timeliness a lower priority
Accessibility	Outputs made accessible to poor and other groups	Need for access to detailed datasets	Need for access to detailed datasets	Need for access to detailed datasets	Widespread dissemination accessible to general public

Source: From various resources developed by authors.

- 3 Measurement error, in which the variable of interest cannot be measured with absolute accuracy. For example, we may measure household well-being by asking the members of the household to list all expenditures over a specified period of time. However, the responding data will almost certainly include some errors because people make mistakes in recording and forget or deliberately conceal some kinds of expenditures.
- 3 Estimation or calculation error, in which the statistical techniques or estimation procedures introduce some systematic error into the indicator.
- 3 Selection error, in which the way respondents are selected introduces some bias into the results. For example, a household survey that is carried out during normal working hours may not include respondents who are at work and, hence, the results may not be representative of the whole population.
- 3 Sampling error that results from indicators that are obtained from a sample of respondents rather than the whole population.

Systematic errors may introduce some bias into the reported indicators, or they may be random, thereby increasing the variation of the indicator around the reported mean. In most economic and social statistics, some kind of error is likely, and indicators need to be interpreted with this in mind. The main requirement is for the providers of the information to take as much care as possible to keep errors at a minimum and to provide users with the information needed to assess the likely size and impact errors. In general, increases in the accuracy or precision of indicators can be achieved, but at some cost, both in terms of time and resources. Assessing the tradeoffs among accuracy, timeliness, and cost for different indicators is an important component of the design of a poverty-monitoring system.

Serviceability

This aspect of data quality is concerned with the relevance of a specific indicator or dataset to the needs of the users as well as other aspects, such as the scope, timeliness, and frequency of indicators. Requirements will vary with both use and type of indicator. For example, variables that do not change rapidly over time, such as measures of population change and mortality rates, may need to be monitored only at fairly infrequent intervals—annually or perhaps only once every five years. Other variables that change rapidly, such as consumer and other prices, will need to be monitored much more regularly.

Data accessibility

Reliable, timely, comprehensive statistics are crucial to informed public decisionmaking and help to provide discipline in public debate. They may also have economic value to individuals and companies, who use them to make plans and evaluate market positions. In the PRSP process, statistics are needed to identify the causes and locations of poverty, to set goals, and to monitor progress toward those goals. For these purposes and others, it is important that the outputs of the statistical system be readily accessible to the public.

For the PRSP, the public should have ready access to official statistics, which should be timely. A regular publication program, in print or through electronic media, is the most common means of disseminating statistics. Whatever approach is chosen (and it is desirable to release data in as many formats as possible), data should become available to all interested parties simultaneously. It is useful for countries to describe how data are released and the steps taken to ensure equal access by all potential users.

One way dissemination can be improved is through the use of advance-release calendars. These inform the public of the planned date (and even time) of release for specific sets of data. The use of advance-release calendars increases transparency and helps to enforce a useful discipline on the statistical system.

Integrity

Integrity refers to the policies and practices that ensure the reliability of statistics and foster public confidence in the objectivity and professionalism of the statistical system. There are four main steps to increase the integrity of official statistics:

- Disseminate the terms and conditions under which official statistics are produced, including those relating to the confidentiality of individually identifiable information.
- Identify internal government access to data before release.
- Identify ministerial commentary when data are released.
- Provide information about revisions and advance notice of important changes in methodology.

While these steps cannot guarantee that statistics are free from tampering or that their presentation is not subject to political influence, they provide some safeguards and increase the amount of information available by which the public can judge the quality of the data.

5.4.3 The general data dissemination system

The review of data outlined above has been formalized by the IMF with support from the World Bank in the form of the GDDS. The system covers not only macroeconomic and financial data but also social and demographic data. The purposes of the GDDS are to

- encourage countries to improve data quality;
- provide a framework for evaluating needs and setting priorities for data improvement; and
- guide countries in the public dissemination of comprehensive, timely, accessible, and reliable economic, financial, and sociodemographic statistics.

Member countries of the IMF voluntarily elect to participate in the GDDS. Participation requires committing to using the GDDS as a framework for statistical development; designating a country coordinator; and preparing metadata² that describe (a) current practices in the production and dissemination of official statistics and (b) plans for short- and long-term improvements in these practices. Participants are requested to update their metadata as significant changes in their statistical practices or plans for improvement take place, but at least once a year.

Principal features of the GDDS

The GDDS framework is built around (a) data characteristics, (b) quality, (c) access, and (d) integrity. The framework is intended to provide guidance for the overall development of economic, financial, and sociodemographic data. The framework is designed to be flexible enough to meet the needs of different countries and the developmental requirements of their statistical systems.

The data dimension includes coverage, periodicity (the frequency of compilation), and timeliness (the speed of dissemination), and the system provides recommendations on good practice for compiling and disseminating data in five categories or sectors:

- ***real sector***—covering national account aggregates such as GDP, production, and price indexes and labor market indicators;
- ***fiscal sector***—government revenue and expenditure and government debt;
- ***financial sector***—broad money and credit aggregates, central bank aggregates, interest rates, and the operation of key financial institutions such as a stock market.;
- ***external sector***—balance of payments, international reserves, external trade, external debt, and exchange rates; and
- ***sociodemographic data***—population, health, education, and poverty.

The data dimension in the GDDS is closely linked to the quality dimension described in section 5.4.2. For the access and integrity dimensions, the focus is on the development of policies and practices in accordance with the dissemination of readily accessible and reliable data. Information on access and integrity of the data and, especially, the agencies that produce and disseminate the data, is essential in building the confidence of the user community in official statistics.

GDDS and the PRSP process

Box 5.2 sets out some of the ways in which the GDDS can be used as a powerful tool for the assessment of statistical capacity in the PRSP process. Case study E.2 provides an example of how the GDDS can be used to document the current capacity of the national statistical system within the framework of the PRSP. Case study E.2 also shows how the monitoring and evaluation needs of the PRSP can be included in the metadata for poverty statistics in the sociodemographic component.

The GDDS has developed quickly. By January 2001, 71 countries had appointed GDDS country coordinators, of which 22 had posted metadata on the IMF's Dissemination Standards Bulletin Board; metadata for several more countries were in the process of being finalized before posting.

At the same time, the GDDS is being increasingly used as a framework for statistical development generally. Although it emphasizes macroeconomic, financial, and monetary statistics, the inclusion of sociodemographic data provides the link to the PRSP process. From this perspective, the main advantages of using the GDDS as a framework are the following:

- No alternative system that brings together both social and economic statistics is available.
- The process of compiling the metadata provides a systematic way of assessing the performance and capacity of statistical systems and prioritizing plans for improvement.
- A large number of countries is interested in participating; there seems to be a great demand to use GDDS.

There are, of course, some disadvantages to using the GDDS as a framework. The main disadvantages are the following:

- The conceptual development of GDDS reflects an emphasis on economic and financial data.
- The format for compiling and presenting the metadata has been developed for economic and financial statistics; it is less well suited to social and demographic statistics (for example, no over-all framework exists for sociodemographic data).
- Not all areas of statistics are covered, and there are some important gaps, including environmental statistics.

5.5 Assessing Strengths and Weaknesses: Organization and Management

The effectiveness of a statistical system is determined by the outputs and products it produces, but it also depends on the system's functional and organizational structure. The purpose of this section is to identify the main components of a statistical system to provide a basis for assessing capacity and identifying where improvements and investments are needed, which is discussed in detail in section 5.6.

Before priorities for investing in the national statistical system can be identified and specific capacity strengthening activities undertaken, the current capacity of the system needs to be assessed. This will involve a process of identifying strengths and weaknesses and setting out opportunities and challenges.

It is recommended that such an assessment be divided into two parts: (1) the internal organization, covering aspects such as structure, human resources, infrastructure, coordination mechanisms, and management processes, and (2) the external environment, which includes elements such as the legislation

Box 5.2. The GDDS and the PRSP Process

The GDDS has two components that indicate its importance as a framework for assessing the statistical system as part of the PRSP process. First, it is comprehensive and designed to help countries prioritize plans for improving their statistical systems. Almost all the areas of importance to the PRSP are already included. Second, the formal process of preparing the metadata ensures that the data systems underlying the PRSP indicators are well documented.

The sociodemographic data component specifically includes poverty as a data category and thus provides the framework for documenting how the various indicators are to be generated. Important macroeconomic and government financial statistics are documented under the real and fiscal sectors.

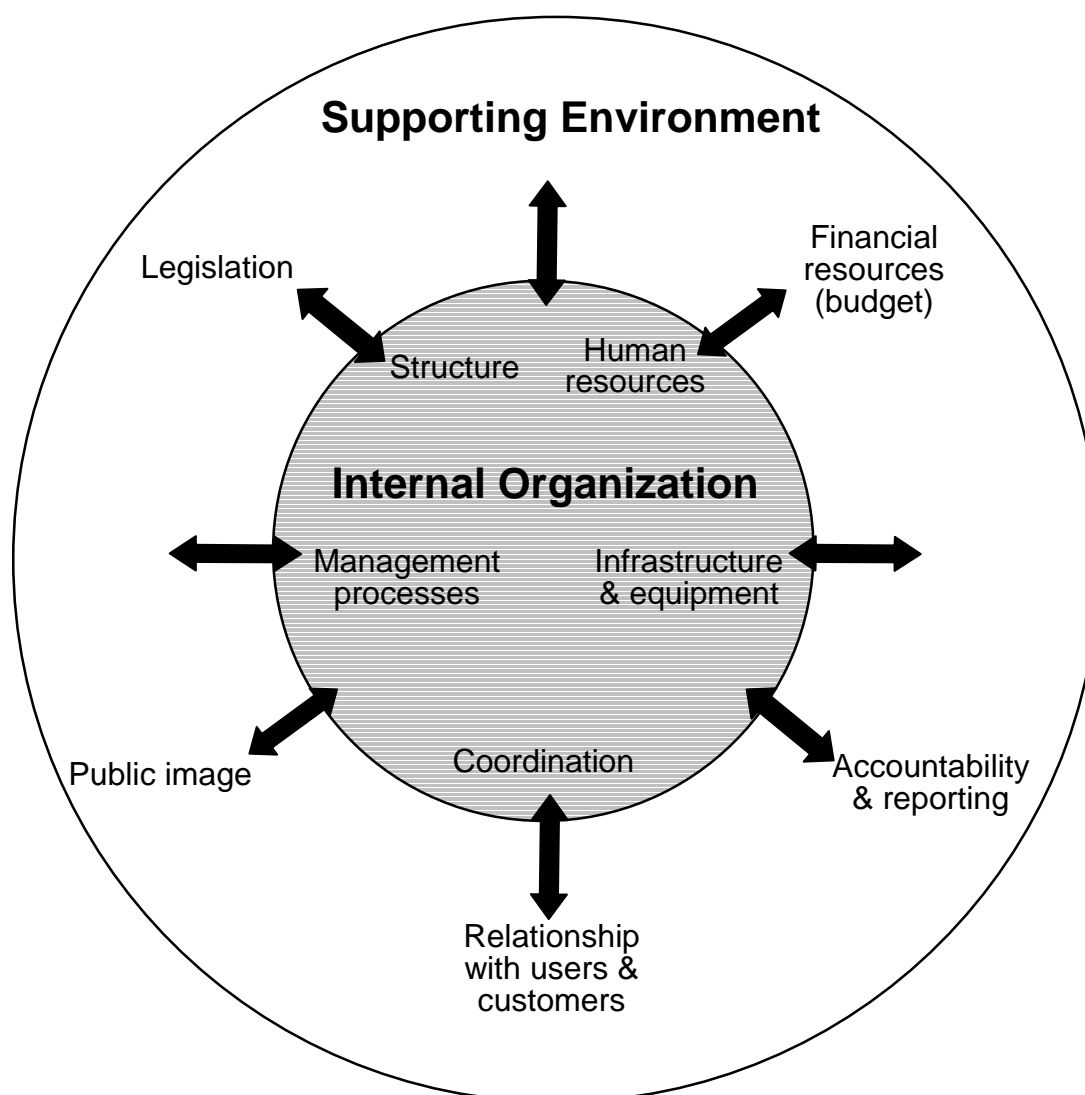
the system operates under, the availability of financial resources, mechanisms for reporting and ensuring accountability, relations with users and customers, and the general public image. Figure 5.2 illustrates the overall approach.

5.5.1 Internal organization

The structure of the national statistical system

While the information needs and priorities of a country and the capacity of its statistical system vary, many of the main elements can be found in most systems. The main functions of a statistical system are to collect data from a variety of sources, process and analyze this information, and disseminate it in different forms suited to the needs of different users. Other than scale, the key difference between a national statistical system and an individual researcher is that official statisticians largely collect data and produce statistical products for the use of others. This separation between data generation and use puts important demands on the statistical system. The analysis of structure, therefore, should be carried out in terms of the capacity of the system to fulfill the required functions and, ultimately, to provide the data that users want and need.

Figure 5.2. Components of a National Statistical System



Source: From various resources developed by authors.

The main components of a national statistical system are considered under the following headings:

- **Policy management and coordination.** Who is responsible for overall policy, for setting priorities, and for coordination and management of the system?
- **Quality management.** Who is responsible for ensuring the quality of the data produced?
- **Data collection, compilation, and dissemination.** Which agencies are responsible for the collection, compilation, and dissemination of data in the main areas of concern to the PRSP?
- **Database management.** Who has the responsibility for maintaining databases in the main areas?
- **Communications.** What mechanisms and processes exist for communicating between data providers and users?

Case study E.3 provides some examples of different structures of national statistical systems. In particular, the case study contrasts systems that are centralized with those that operate on a more decentralized basis. The case study also discusses some of the advantages of the national statistical agency operating as an independent agency rather than as part of the ministerial structure.

Coordination and management

A key requirement for any statistical system, especially a more decentralized one, is to have effective procedures in place for coordination and management. Effective management is required to set strategy and agree on targets, ensure that the system is responsive to the needs of customers, mobilize financial and other resources, maintain a supportive external environment, manage human resources, and ensure consistency in systems and operations. An important component of the analysis of statistical systems will be a review of organization and management, using these headings. Case study E.4 provides an example of an organization and management review for a statistical agency in Africa.

Human resources

The statistical system's human resources—the people who work for the component organizations and the skills and expertise they possess—represent the most valuable and often the scarcest resource. To be effective, a modern statistical system needs a wide range of skills and expertise, including the following:

- general management,
- financial management,
- human resource management,
- technical statistical analysis,
- survey design and management,
- cartography,
- communications, publications, and design, and
- computer systems analysis and programming.

The analysis of the human resource development needs of a statistical agency will start with a summary of requirements, determined by current and planned activities and targets, schemes of service that set the qualifications required for staff at different levels, and the analysis of strengths and weaknesses. A human resource development strategy and training needs analysis will then match the current situation against requirements, with an identification of priority areas for investment. Case study E.5 gives an example of a review of training and human resource development needs in an African statistical system.

Infrastructure and equipment

The main functions of a statistical agency are data collection, data processing and analysis, and dissemination of statistical products in different formats. Infrastructure and equipment need to be adequate to meet the needs of these tasks, with particular emphasis on data handling and processing. Because poverty-related data are derived from household and other types of sample surveys, based on

direct enumeration, to meet the needs of the PRSP the statistical system also needs to have access to adequate infrastructure and equipment to support these kinds of surveys.

Modern computer technology has the potential to substantially increase the efficiency of a statistical agency and to reduce costs. In particular, it provides opportunities for reducing delays in data processing, for dramatically reducing the cost of data dissemination through the use of technologies such as the Internet and CD-ROMs, and for expanding the scope for linking together different datasets.

Management systems

The manner in which a statistical agency is managed, including the mechanisms for setting goals, measuring progress, assessing staff performance, and communicating at all levels, greatly influences performance and outputs. Box 5.3 indicates some of the areas that need to be addressed.

5.5.2 The external environment for statistics

As illustrated in figure 5.2, the effectiveness of a national statistical system and the extent to which it can meet the needs of the PRSP process are factors of both the external environment in which it operates and its internal organization. In this section we look at the key components of the external environment.

Statistical legislation

The rules under which a statistical system operates are usually spelled out in legal statutes and administrative rules. Although each country will have its own set of rules and principles, over the last century a number of general principles have been established from experience. They also have been discussed and validated internationally and are applicable for a wide range of different environments.³

The governing principles and practices for operating an effective statistical agency are summarized below.

- Maintain a relationship of mutual respect and trust with those who use a statistical agency's data and information. In particular, the agency must maintain credibility for itself and its products. It must be objective and be seen to be free of political interference and manipulation. While the national statistical agency must be accountable for its operations and for the resources it uses, in many models it may operate autonomously in carrying out its charter.
- Maintain a relationship of mutual respect and trust with those who supply data and with all data subjects whose information it obtains. It must ensure appropriate confidentiality of individual data and inform respondents that individual records are not to be made available to other agencies for any other purpose.

Box 5.3. Changing Management Values

In common with other government departments, many statistical agencies in developing countries are run with a top-down management style. Although agencies have adopted many aspects of modern management, including the formulation of a clear vision of what they would like to achieve, the achievement of this vision requires managers to behave differently so that important changes can be implemented. It is not easy to empower staff to take responsibility at the operational level. Empowered staff can make suggestions, openly disagree with management decisions, and demonstrate skills and innovations that their managers may not possess. It is easier to run an ordinary bureaucratic public sector organization in which staff do not question directives and instructions or expect to be listened to.

If statistical systems are serious about making profound changes, however, they must not only change some systems and products, but also recognize the need to change the organizational culture. Managers will need assistance in implementing change of this nature and actively driving such changes. They will need both formal training and on-the-job advice.

The values an organization deems important are demonstrated not only through the management style but also by the way things are done. If staff are valued, they will be provided with reasonable working conditions. If customers are valued, products will be accessible and will meet a real demand. If resources are valued, equipment and the environment will be maintained before they fall into disrepair. Managers and staff consistently display organizational values by their everyday behavior. It is suggested, therefore, that putting change into effect requires a sustained commitment from senior management. Progress must be demonstrated by action at all levels, not just by pronouncements from the top.

- 3 Maintain close contact with users and policy analysts in planning its statistical program and activities.
- 3 Widely disseminate data and be open about the data provided and the means by which they are collected.
- 3 Provide information relevant to issues of public policy.
- 3 Commit to quality and scientific and professional standards to facilitate a correct interpretation of the data. Statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.
- 3 Support professional advancement and training of staff.
- 3 Establish an active research program.

Most countries have a formal statistical law that describes the structure of the national statistical system, spells out the responsibilities and functions of a central statistical agency, and governs the relationships between data suppliers and users, including the provision of individual information, the rules for the obligatory supply of information, and guarantees of confidentiality and nondisclosure. These aspects of the law are common to statistical legislation in almost all countries. In a number of cases, however, especially where the statistical agency has gone through some kind of recent restructuring (for instance, in which it has been set up as an independent agency), the law has a number of additional clauses. Key components of modern statistical legislation include the following types of provisions:

- 3 Some legislation guarantees that the statistical agency can publish information free from political interference, subject to the need to meet normal professional standards.
- 3 Some requires the statistical agency to publish and disseminate information, either without charge or for a fee. This may include a requirement for the agency to prepare and publish an advance publication calendar stating what is to be produced and when.
- 3 Some guarantees the independence of the statistical agency from political control so that the management has the freedom to publish information as it sees fit, subject to the need to account for the use of public resources and to meet professional standards. The legislation may establish, for example, that the head of the statistical agency may not be dismissed except in specific circumstances and with the agreement of some external body.
- 3 Certain legislation establishes a process requiring the statistical agency to account for its actions and outputs on a regular basis. This may involve setting up a statistical commission or perhaps requiring an annual report to be presented in Parliament.

Case study E.6 provides examples of modern statistical legislation in different countries. In the short run, it may not be easy to revise the statistical legislation; such a process needs careful planning and involves widespread consultation with the main stakeholders, discussions with parliamentary draftsmen, and the allocation of parliamentary time. However, in circumstances in which the legislation is out of date, the penalties are unrealistic, and the structure of the system is under review, it will be important to go through the legislation and identify where changes are needed.

Budgets

Poverty-related statistics are a public good; consequently, most statistical activities are financed from government revenue, and financial resources are allocated through the budget. The capacity of the statistical system, therefore, is determined to a large extent by the level and stability of the financial resources it receives. Because full cost recovery from users is not possible, the ability of the system to meet needs is determined by the success of managers in getting resources that compete with the other demands on the budget. In many countries statistical systems operate within a vicious cycle of limited resources in which output does not meet need, resulting in a lack of political support to increase resources.

The PRSP is an important opportunity to break out of this vicious cycle. By focusing on a principal area of statistics, with associated political and civil society support, it provides the opportunity for

managers of the statistical system to make the case for increased funding and for a sustained increase in budget resources. If this is to be successful, however, a number of factors must be addressed.

- Because the value of statistics generally increases when consistent data are collected over time, it is important to develop a budgeting system that provides for the sustained operation of data systems. Managers need to develop programs that can be financed within the context of the medium-term expenditure framework.
- Budget resources must be used efficiently to produce agreed-on outputs. The most successful national statistical systems are ones where increased resources result in improved outputs. In a number of countries, statistical agencies now have performance agreements with the treasury in which resources are provided in exchange for an agreed-on set of core statistics (see case study E.7 for some examples).
- While donor funds are important for statistical activities in many countries, the existence of a large number of separate donor-funded projects outside the budget can have a destabilizing effect, leading to reduced central support in the future. Over time, the number of stand-alone statistical projects financed from aid funds is likely to decrease, and more assistance is likely to be provided through the central budget or as part of sectorwide projects. Managers of statistical systems, therefore, need to be aware of this trend and improve their budget management.

Accountability and reporting

A significant requirement of statistical systems is to be accountable for the resources they use and to provide regular reports on activities, outputs, and future plans. Since the main resources used to finance statistical activities are provided from tax revenue, this accountability and reporting must be open, transparent, and regular. In part, this is the flip side of the performance contract discussed previously. In return for adequate resources, the managers of statistical systems must provide information on how those resources have been used, what products have been produced, and what plans are in place to improve performance.

Several countries have adopted different procedures for improving the accountability and reporting of the statistical system. Some examples include the following:

- The head of the statistical agency is required to make an annual report to Parliament, setting out the established targets and the performance of the agency.
- The agency reports to an independent statistical commission or board, which has the responsibility of ensuring that professional standards are observed and resources are used efficiently.

Relationships with users and customers

A statistical agency provides products and services for a number of different users or customers. Most countries lack an effective market for official statistics; prices do not convey much information, and the managers of the agency need alternative mechanisms for setting priorities and identifying where investment and improvements are needed.

In this situation, customer relations are very important, and in the context of the PRSP it is vital that processes be established that provide for regular consultation between data providers and users. An important starting point is for statistical agencies to know who their customers are; in addition, mechanisms must be established that provide for regular consultation and exchange of views. Case study E.8 provides some examples of good practice in this area.

Improving the public image of the statistical system

Ultimately, a statistical agency will be effective only if it develops and sustains a good public image—the data it produces must be perceived as objective, reliable, and useful, and its resources must be used effectively. In many countries, the opposite situation is all too common; the products from statistical agencies are not trusted and are seen as being late, inaccurate, and possibly subject to political manipula-

tion. Changing this image can be a long-term task, but the PRSP presents an important opportunity both to raise the image and to improve the effectiveness of statistics.

Other actions that have helped to improve the image of statistics in different countries include the following:

- improving public confidence by being more open about methods, techniques, and the means by which resources are used;
- using public relations campaigns linked to specific events such as a population census to emphasize the need for reliable, trustworthy, and timely data;
- improving the design and structure of statistical reports, abstracts, and other products to make them easier to use;
- providing training and special briefings for data users to help them use the data more effectively;
- providing briefings for journalists and other media personnel; and
- using external processes such as the GDDS to provide more information to users and a framework against which progress can be assessed.

5.6 Developing a Poverty-Focused Information Strategy

Chapter 3, “Monitoring and Evaluation,” reviews the steps required for designing an outcome monitoring system and an evaluation strategy for the PRSP. In this section we describe the steps required to put together a poverty-focused information strategy, specifically identifying both short- and long-term interventions to develop and strengthen the statistical system. The emphasis is on improving the supply of data and indicators to meet the needs of the PRSP that have been identified elsewhere.

The strategy needs to be built on two main building blocks: first, the current and expected future demands for information and indicators that will be generated by the PRSP and, second, the assessment of the strengths and weaknesses of the statistical system outlined in the previous sections of this chapter. In particular, the strategy should build on existing strengths, address specific weaknesses, and identify the important tradeoffs between what is desirable and what is feasible to resolve.

In developing the strategy, it should be remembered that the PRSP will not be the only source of demand for statistical data in a country. The national statistical system must continue to meet demands for information and indicators from other sources, including national and local governments, participants in both national and international markets, civil society organizations, the media, and international agencies. Although poverty reduction is usually the main priority for national development, the information strategy for the PRSP should not be developed at the cost of ignoring the needs for other kinds of data.

5.6.1 Ownership and participation

Stakeholders

One of the most important aspects of the design and development process is the need for a participatory approach in each phase of the process, one in which all stakeholders are involved. This approach could significantly improve the efficiency and effectiveness of the design process as well as the quality of the output. It also enhances the sense of responsibility for, and ownership of, the system designed. To achieve this, stakeholders need to be clearly defined and their involvement coordinated.

In general, the stakeholders will be the users of statistical data together with the organizations that allocate and provide the financial resources. Figure 5.1 identifies the users of statistical data to include the following:

- legislators, including members of national parliaments, regional and local councils, and so forth;
- government planners, analysts, and other officials working at national and local levels, including the staff of quasi-autonomous agencies such as central banks;

- lobbyists and people working for organizations such as NGOs, community groups, and similar bodies;
- researchers;
- media, including print, television, and radio journalists;
- general public;
- participants in both domestic and international markets, especially managers of businesses; and
- representatives of donors and international agencies.

Other stakeholders include the agencies responsible for financing statistical activities, especially the Ministry of Finance and organizations responsible for budget management.

Participatory approach

In the same way that the PRSP itself is developed through a participatory process, if the poverty-focused information strategy is to have wide acceptance and ownership, it is important that the process that develops the strategy be open, inclusive, and participatory. This can be accomplished through a variety of methods. Case study E.9 provides some examples of how information strategies have been developed in different countries.

Typically, the detailed work of developing the strategy will be overseen by some kind of national steering committee that includes representatives of the main stakeholders. It will be important to ensure that participation in this committee is at a sufficiently senior level to ensure commitment by all the key participants. Many countries have stressed that this committee not be composed of government officials only, but should also include representatives from other sectors, such as civil society organizations and academia.

5.6.2 Developing the strategy

In accordance with the PRSP generally, the information strategy has four main components:

- identifying where the strategy is starting from—an assessment of the strengths and weaknesses of the statistical system as described earlier;
- setting goals and targets that outline what the system is going to achieve within an agreed-on timeframe;
- deciding on priority action areas to achieve the targets; and
- putting in place mechanisms to monitor progress and to keep all stakeholders informed.

An important decision that will need to be made at an early stage entails the timeframe that should be used for the strategy. On the one hand, it will be important to concentrate on short-term needs, as the PRSP has a specific one- to three-year time period, especially where this is linked to the Heavily Indebted Poor Countries (HIPC) debt relief process. On the other hand, many statistical activities take place over a longer cycle, with population censuses, for example, usually carried out only once every 10 years. To deal with both aspects, it is recommended that countries develop a sequenced information strategy that has both short- and long-term components. In general, the short-term focus will be on meeting the immediate data needs of the PRSP, mainly through making better use of existing data systems and helping to improve dissemination and analysis. In the longer term, the emphasis is likely to be on making appropriate investments to develop new data systems and address constraints in human resources, equipment, and management systems. Case study E.10 provides an example of such a sequenced information strategy.

Short-term priorities and actions

The short term in this context is likely to cover a period of one year. Within this timeframe it is unlikely that the statistical system will be able to design, implement, and disseminate information from an important new information system. The planning cycle for an important new data initiative such as a

Living Standards Measurement Study (LSMS) or a household income and expenditure survey is likely to be in excess of two years from the initial planning to the dissemination of results. In the short term, therefore, the emphasis is expected to be much more on making existing data processes work better rather than on setting up important new data collection processes.

The key requirement is to meet the immediate needs of the PRSP for indicators for the paper itself and to monitor progress through annual reports and at formal reporting points such as the HIPC completion point. At the same time, however, improving existing data systems by, for example, reducing delays in publications, strengthening analysis, and widening dissemination can help improve the image and public standing of the statistical system and build up a constituency for more investment in the future. As noted already, national statistical systems in many poor countries are constrained by a lack of resources, but there is little support to increase resources because the statistical output is so limited. Concentrating on improving the quality of a few important data series can be effective in altering public perception, changing the vicious to a virtuous circle. In this scenario, the statistical system is responsive to demand, improving in both quality and efficiency, and, consequently, wide support exists for increased investment.

The kinds of short-term improvements in data quality that could be achieved in many countries include the following:

- improving processing of administrative data in key sectors such as health and education to reduce delays in making information available to users and to improve the reliability of the data;
- making survey data easily available to researchers so that key questions on targeting and resource allocation can be addressed;
- improving the design of statistical publications to make them more accessible to users and to include more analysis and interpretation for nonspecialist users;
- disseminating data through the Internet and in electronic format to reduce delays in the printing of reports and abstracts;
- publishing preliminary results from surveys and other data collection processes so that important data can be made available sooner;
- putting together a database of important data series from different sources; and
- publishing more information about data sources and methods (for example, the GDDS metadata) and making sure that users are kept informed about changes in methods, coverage, and so on.

Longer-term investments in statistical capacity

In the longer term, for perhaps 3 to 10 years in the future, the focus of the strategy is likely to be wider, covering most aspects of statistical development. It is suggested that the strategy cover the following areas:

- ***Improving data collection and processing systems and methods.*** Countries should develop a strategic program for data collection, setting out priority areas for censuses, sample surveys, and other field-based statistical inquiries. The aim is to establish a program that reflects the priorities of the stakeholders, not simply donors' needs. Such a program can then develop capacity for design, implementation, and data processing with an agreed-on timetable for publication and dissemination. Although it still may be desirable to include some capacity in the program for responding to ad hoc requests, the principal aim is to apprise all stakeholders of what is planned and to ensure that national priorities are not hijacked by donor agencies or others just because they have immediate financing. Such a program should identify specific milestones for monitoring progress.
- ***Improving organization, management, and strategic planning.*** Here the emphasis is on improving management and organization of the statistical system. The aim is to address the weaknesses identified in the assessment of internal organization and management. A key part of improving management is to strengthen the processes for financial management and budgeting.

- 3 *Developing human resources.* This strategy involves developing an appropriate human resource development plan that improves internal and external communications, makes the best use of scarce skills and expertise, and provides for regular upgrade through training and education. The human resource development plan should be integrated with the strategic plan and with management processes. It should ensure that each member of the staff is aware of what he or she is required to achieve, how goals are assessed, and what resources staff members can call upon to support their personal development.
- 3 *Strengthening the statistical infrastructure and equipment.* This component of the strategy is concerned with the development of a program to upgrade the facilities and equipment of the statistical system to improve capacity and take advantage of new information technology. The strategy should cover hardware (computers, networks, and communications facilities), software, and the staff's capacity for installation, and use and maintenance of the equipment. Other aspects include equipment to support data collection, including transport, data recording, and data capture.
- 3 *Improving statistical products and public relations.* The focus here is on improving relations with customers and users through better communications and then translating this into improved products and outputs. It aims at improving the format and design of products, making them more accessible to users, and facilitating the use of the data for planning and decisionmaking. Modern computer and printing facilities offer new opportunities for customizing the design of products for specific users. The use of electronic dissemination and the Internet can also dramatically reduce the cost of publication. Moreover, statistical agencies will need to develop appropriate release and publication policies. Factors that need to be considered include how to formally release data so that all users can have access as soon as possible and what charges, if any, should be imposed.
- 3 *Institutional arrangements.* As the complexity of the statistical system develops, it may be necessary to review the organization's structure. Within the strategic plan, it may be useful to include specific targets for institutional development. In a number of countries, changes have been made to make the central statistical agency independent of direct political control. Although the agency is still part of the central government, it is no longer formally part of an individual ministry and may well have a status similar to that of the central bank. Such independence offers the advantage of reducing the possibility of political manipulation of statistical output and improving public confidence in the various products. This change can also help increase the openness and accountability of the system by, for example, providing for an independent review and institutionalizing the reporting process. Case studies E.7 and E.8 provide ideas on different mechanisms for independent review and monitoring of the statistical system.
- 3 *Legislation.* Significant changes in the organization of the statistical system may well require new legislation, but even if this is not envisaged, it could be useful, in the context of the strategic plan, to review existing statistical legislation to determine if it needs to be updated. Changing legislation is not easy and takes some time to plan, so it is important to ensure that the timetable is well organized. In addition to the traditional aspects of statistical legislation, factors that should also be considered include protecting the independence of the system from political interference, providing for a regular process of reporting, accounting for the use of resources, and ensuring that the system publishes data on a regular basis.
- 3 *Budgeting.* The operation of a statistical system requires that adequate financial resources be made available through the budget to meet the running costs and provide for investment. In a number of countries governments are moving toward a system of medium-term expenditure frameworks that set out the course of public expenditure over a multiyear period. In this context, the strategic plan should describe how the statistical system will operate. It may be useful, for example, to consider establishing a performance contract between statistical agencies and the treasury in which specific statistical products are provided on a regular basis in return for an agreed-on budget provision.

5.6.3 International and donor support

In general, the donor community seems increasingly interested in supporting data-related activities, particularly in the context of poverty reduction and PRSPs. All donors subscribe to the IDGs and many

have specific programs to support capacity building in statistics. Recent years have witnessed an increasing interest in measuring the impact of poverty reduction activities, and this is now being translated into specific budget, program, and project support for statistics. In this section we review some of the donor programs and other initiatives in this area.

PARIS21

PARIS21 is a new international process by a global consortium of policymakers, statisticians, and users of statistical information in support of development. It is not a new international agency, but rather works through existing agencies. It aims to build statistical capacity as the foundation for effective development policies by helping to develop well-managed statistical systems that have appropriate resources. In the longer term, it seeks to help promote a culture of evidence-based policymaking and monitoring in all countries, especially in poor developing countries. This in turn will serve to improve transparency, accountability, and the quality of governance.

The consortium promotes and assists strategic planning to meet the information needs of national development frameworks. It is a source of international expertise and encourages South-South cooperation. It assists lesson learning and the sharing of best practices, fostering more effective dialogue and coordination in international technical cooperation and creating and disseminating advocacy materials. PARIS21 aims to raise awareness and demand for statistics and analysis. While the consortium has only limited funds for regional workshops, its membership includes both bilateral and multilateral development agencies. The goal is to build on existing national, regional, and international work and to generate a real increase in resources devoted to building statistical capacity. PARIS21 acts as a catalyst, stepping aside as the development partners take this work forward on a country-by-country basis.

Members of PARIS21 include people from governments, regional and international organizations, professional bodies, and academic institutions. In November 2000, PARIS21 had nearly 400 members from more than 100 countries representing 196 agencies. More than two-thirds of country members are from developing countries. Membership is open to anyone with practical experience and a desire to collaborate to improve policymaking through reliable, pertinent statistics.

The consortium has established a number of task teams to work on specified areas; it also organizes both regional and national meetings. Additional information can be obtained from the secretariat based in Paris, within the Development Cooperation Directorate of the Organisation for Economic Co-operation and Development.

World Bank Trust Fund for Statistical Capacity Building

The Trust Fund for Statistical Capacity Building is a worldwide technical assistance program managed by the World Bank on behalf of donors to help member countries improve their statistical systems. The trust fund helps member countries realize their full potential to produce, process, and disseminate timely, reliable, and comprehensive data for economic and social policymaking. It has a key role in promoting the PARIS21 agenda and in mobilizing resources for relevant projects. It also enhances the coordination and strengthens the partnership among the key players in international development and among technical assistance providers in the area of statistics.

The Trust Fund for Statistical Capacity Building supports global, country, and region-specific activities (including technical advice, workshops, publications, training and retraining, and project follow-up supervising and advisory services). It focuses on (a) assessing and reviewing the statistical capacity needs of member countries, (b) developing a strategic plan for statistical development linked to the PRSP and other national development strategies, and (c) restructuring or modernizing the statistical system of the country so it can eventually become self-sustaining.

Other source of assistance

A number of bilateral and multilateral agencies provide support and assistance for statistical capacity building. Some of the agencies active in the field are described below.

- The IMF provides technical assistance programs and training in economic, financial, and monetary statistics and supports the use of the GDDS as a framework for setting priorities for development.
- The U.N. Statistical Department coordinates work on international standards and classifications.
- The U.N. regional commissions help to coordinate statistical developments in their regions and to promote good practice.
- The U.N. specialized agencies support statistical development in their areas of concern, including the United Nations Population Fund; United Nations Educational, Scientific, and Cultural Organization; Food and Agricultural Organization of the United Nations; World Health Organization; United Nations Environment Program; United Nations Children’s Fund; and others.
- The World Bank’s lending program and other grants provide support for statistical activities. The World Bank Institute offers training in a number of related areas, particularly through the Poverty Analysis Initiative.
- The European Commission, with statistical activities coordinated by Eurostat, focuses on regional cooperation and the potential for action in light of the Cotonou agreement with the ACP (African, Caribbean, Pacific) states.
- A number of bilateral donors provide support for statistical capacity building; countries active in this field include Canada, France, Germany, Italy, Japan, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and the United States (through the U.S. Agency for International Development as well as international training programs).

5.6.4 Monitoring progress with the strategic plan

Indicators of statistical capacity

Section 5.6.3 reviewed the process of developing a strategy to strengthen the statistical system. A key part is to identify specific goals, targets, and milestones that can be used to monitor progress. We suggest that this can be done using the short- and long-term actions identified in section 5.6.2, together with specific targets for strengthening organization and management as described in section 5.5. Here it is useful to identify changes in terms of internal organization, which can largely be implemented by management and modifications to the external environment, requiring the support and involvement of other stakeholders.

Specific indicators and milestones will need to be developed for each country and each main participant in the national statistical system. In terms of data outputs and improved dissemination, the GDDS provides a framework for documenting priorities for improvement and setting a timeframe for action. Possible indicators of progress could include the following:

- improvements in specific data series in terms of timeliness, coverage, or level of disaggregation introduced and implemented;
- new data series developed and published;
- international standards for specific data items met;
- new data products produced—for instance, presenting existing data in new ways, or including new types of analysis and discussion; and
- improvements in response rates for specific surveys.

More general targets for data dissemination might include the following:

- a publication calendar, with specified release dates for the introduction of and adherence to different series; and
- introduction of new methods of dissemination, including the release of data through the Internet and the publication of detailed information in electronic formats.

Targets and indicators for improvements in organization and management will inevitably vary from country to country, but the areas to be considered may include the following:

- development and introduction of formal planning processes, including, for instance, an output-focused budget process with individual goals and targets for staff;
- stronger human resource management systems, with a regular training needs analysis and an annual training and human resource development plan; and
- stronger internal communications and team building.

Externally, targets will need to reflect the time required to involve stakeholders and manage the change process. Areas of concern may include the following:

- setting up regular consultations between users and providers of statistical data;
- establishing processes for receiving regular feedback from customers;
- updating statistical legislation; and
- developing and improving links with the media.

Reporting and accountability

Reporting and accountability focus on establishing formal processes for reporting on the progress achieved in implementing the strategic plan and on ensuring transparency and accountability in the use of public resources. Section 5.5.2 described some mechanisms to improve accountability and reporting. Here the emphasis is on putting these into effect. In addition to formal annual or other reports, statistical agencies can issue periodic press releases for dissemination through newspapers, radio and television, and the Internet. In this way, stakeholders in all parts of the process stay informed of progress in statistical development and the availability of new or revised datasets, aggregates, and indicators. This open dialogue could promote statistical awareness and interest in the wider community, which in turn could encourage cooperation in responding to statistical inquiries and build confidence in the national statistical system.

Notes

1. For example, the U.N. System of National Accounts for the real sector, IMF recommendations on balance of payments statistics, government finance statistics, and so forth. Technical note E.8 provides more details.
2. The term “metadata” denotes information or data about published statistics. The metadata provide the information required by users to determine how the data were collected and how they can best be used.
3. Technical note E.9 sets out the Fundamental Principles of Official Statistics adopted by the United Nations.

Guide to Web Resources

The United Nations Statistics Division provides a wide range of statistical outputs and services for producers and users of statistics worldwide. Available at <http://www.un.org/depts/unsd/index.html>.

UNECA (United Nations Economic Commission for Africa) is the regional arm of the United Nations, mandated to support the economic and social development of its 53 member states, foster regional integration, and promote international cooperation for Africa’s development. Established in 1958 and based in Ethiopia. Available at <http://www.uneca.org>.

The Economic and Social Commission for Asia and the Pacific (ESCAP) is the main organization for U.N. activities in that region. Available at <http://www.unescap.org>.

The Economic Commission for Latin America and the Caribbean (ECLAC) is headquartered in Santiago, Chile. It was founded for the purposes of contributing to the economic development of Latin America, coordinating actions directed toward this end, and reinforcing economic relationships among the

countries and with other nations of the world. Available at <http://www.eclac.org/English/statistics/statistics.htm>.

The Economic Commission for Western Asia (ECWA) was established in 1973 with objectives of enhancing the sustainable development of member states, promoting regional cooperation and policy coordination among member states and highlighting the linkages among the economic, social, cultural, technological, and environmental dimensions of development. Available at <http://www.escwa.org.lb/escwa/divisions/statistics.html>.

FAOSTAT (Food And Agricultural Organization Statistic Department) is an on-line, multilingual database currently containing more than 1 million time-series records covering the following areas: food balance sheets, fertilizer and pesticides, land use and irrigation, forest products, fishery products, production, trade, population, agricultural machinery, and food aid shipments. Available at <http://apps.fao.org>.

ILO (International Labour Organization) regularly collects, compiles, and publishes basic labor statistics, including the economically active population, employment, unemployment, underemployment, average earnings and hours of work, time rates of wages and normal hours of work, labor cost, consumer price indexes, household expenditure and income, occupational injuries and diseases, and industrial disputes (strikes, lockouts, and other action resulting from labor disputes). Available at <http://www.ilo.org/public/english/bureau/stat/index.htm>.

The International Monetary Fund's Dissemination Standards Bulletin Board (DSBB) provides access to the Special Data Dissemination Standard (SDDS), the General Data Dissemination System (GDDS), and the Data Quality Reference sites (DQRS). Available at <http://dsbb.imf.org>.

The World Bank Data Group provides national statistics for countries and regions, including data profiles and country-at-a-glance tables as well as methods, modeling tools, and technical assistance in statistics. Available at <http://www.worldbank.org/data>.

The World Health Organization (WHO) provides health and health-related statistical information. Available at <http://www.who.int/whosis>.

The Statistical Office of the European Communities (EUROSTAT) European Union Statistics Department provides the European Union with statistics that enable comparisons between countries and regions. Available at <http://europa.eu.int/comm/eurostat>.

The International Statistical Institute (ISI) is one of the oldest functioning international scientific associations in the world. Established in 1885, the institute is an autonomous society that seeks to develop and improve statistical methods and their application through the promotion of international activity and cooperation. Available at <http://www.cbs.nl/isi>.

Statistical committee of the Commonwealth of Independent States (CIS) was established in 1991 for coordinating activities of participating statistical organizations of the CIS countries, developing and implementing a unified statistical methodology on the basis of mutual consultations, securing comparability and continuity of statistical elaboration, facilitating wide-scale information exchange in the framework of the CIS, organizing seminars, and creating and maintaining a common statistical database. Available at <http://www.cisstat.com>.

Statistics Directorate of the Organisation for Economic Co-operation and Development (OECD). Provides statistical data on member countries as well as some selected non-member countries. Available at <http://www.oecd.org/std>.

The World Trade Organization (WTO) is the only global international organization that deals with the rules of trade between nations. Its mission is to help producers of goods and services, exporters, and importers conduct their business. Available at <http://www.wto.org>.

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Chapter 6

Public Spending

*Adrian Fozzard, Malcolm Holmes,
Jeni Klugman, and Kate Withers*

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6.1 Introduction

In many countries, the practice of public expenditure management is an obstacle to achieving poverty reduction objectives. Fragmented budgets and an exclusive focus on inputs are among the factors that have undermined the ability of budget systems to discipline policymaking and to facilitate performance feedback that would improve outcomes.

This chapter outlines good practices in budgeting and public financial management in the context of implementing affordable pro-poor policies. It considers the influence of institutional arrangements on public spending outcomes at the national, sector, and local levels, and the impact of budget design on the distributional and economic impact of public spending. The discussion also highlights possible solutions to common challenges faced by managers, budget analysts, and ministers when devising ways to finance policies, programs, and service delivery for reducing poverty. Moreover, it provides some guidance on getting started on key issues in the context of preparing a Poverty Reduction Strategy (PRS).

The chapter is organized around three themes in public financial management:

- understanding the budget system, including the actors involved, associated political processes, and budget coverage and structure;
- learning how to rigorously assess alternative spending options and re-evaluate the role of government in service delivery at different levels; and
- improving resource management and public sector performance.

Achieving poverty reduction goals will require adapting domestic budgeting and financial management systems to the needs of the PRS. Countries are at different stages in this process, and capacity building could take time. Developing a system to compile reliable fiscal data is obviously important. More generally, strengthening the country database on poverty and social indicators is critical to building national capacity to determine appropriate policies for poverty reduction and monitoring their impact over time (see chapter 3, “Monitoring and Evaluation,” and chapter 5, “Strengthening Statistical Systems”).

A number of measures are particularly important when developing and implementing poverty reduction strategies, including those described below.

- ***Improving the quality of expenditure analysis.*** Although the quality of analysis will be constrained by the available information and analytical capacity, significant improvements can be made in the short term by asking the right questions at key stages in the budget cycle. Good poverty diagnostics—both quantitative and qualitative—are essential (see chapter 1, “Poverty Measurement and Analysis”). In general, it is highly important that decisionmakers at all levels adopt a critical and questioning attitude toward expenditure decisions. Enhancing analytical capacity in agencies will have limited impact if decisionmakers (a) do not learn to ask the right questions and (b) are unwilling to act on the analysis.
- ***Developing a medium-term perspective to budget making.*** A medium-term perspective, like a Medium-Term Expenditure Framework (MTEF) can enhance the realism of a PRS. Where a medium-term perspective has yet to be introduced, this is a priority. Where an MTEF is already in place, two key challenges exist: to ensure adequate linkages to instruments at the policy (including the PRS) and operational (budget) level and to use the MTEF as a tool for policy debate inside and outside the government. Budget decisions should be driven by policy priorities, but policy choices need to be disciplined by resource and implementation realities over the medium term.
- ***Complying with minimum standards of public financial management.*** Strengthening public financial management will ensure that scarce resources are being used to achieve priority goals. Over the medium term, it will be necessary to improve accounting systems and procedures, along with the associated skills base. Developing a minimum expectations benchmark against which national performance in public financial management may be tracked can play a key role. The benchmark should include performance indicators for timely budget preparation; reporting on budget execution; accounting accuracy, timeliness, and follow-up; and audit findings (see section 6.4.2).

- 3 **Focusing on performance.** While developing performance management systems is a long-term task, in the short run it will be important to devise appropriate interim measures to monitor progress on poverty reduction. A Poverty Reduction Strategy paper (PRSP) needs to map out clear targets for poverty outcomes and intermediate indicators of progress. Institutional and budget incentives and sanctions should ensure that the goals of agencies, institutions, and individuals are aligned with those set out in the PRS.
- 3 **Promoting broad participation.** Opening up budget systems to public scrutiny—by publishing information on budget formulation, budget execution, and public accounts—can have a significant impact on the quality of policy debate and the accountability of public agencies. Formal processes for facilitating public participation in the budget process can help to ensure that citizens play an active role in decisionmaking. The success of these initiatives will depend on the government's commitment to an open participatory process. If the government prefers caution, experimental initiatives can be tested in key sectors.

Successfully moving the budget system to support the development and ownership of PRSs will require commitment and determination at every level of the system. There is a strong case for supporting those agencies that show a willingness to innovate and reform to meet national poverty reduction objectives. The active support of the Ministry of Finance is essential throughout the process, since it determines the incentive framework in which other agencies prepare their budgets.

This chapter does not analyze the substance of poverty reduction programs (for example, the types of programs that are most effective in addressing poverty reduction goals), since this is done in the sectoral and cross-cutting chapters of the book.

This chapter analyzes the challenges and best practices inherent in public expenditure management, with a particular focus on integrating PRS goals into budgeting systems and institutional practices. Budget systems and institutions influence outcomes through (a) their impact on aggregate fiscal policy, (b) the particular policies and programs funded in the budget, and (c) the resources allocated to and the effectiveness of service delivery agencies.

Aggregate fiscal policy is ideally embedded in a macroeconomic framework that ensures economic stability and promotes economic growth. Setting an aggregate level of spending that is consistent with the country's overall macroeconomic goals and resource availability helps to promote stability and predictability in program financing over the medium term.

Aggregate and sector spending decisions of the cabinet, committee of ministers, or an equivalent decisionmaking forum at the center of government (we refer to this body as “the cabinet” throughout the chapter), should reflect the country's poverty reduction strategy within the constraint of what is affordable over the medium term. Determining what is affordable requires significant technical analysis (see chapter 12, “Macroeconomic Issues”). The quality of the expenditure decisions made by the cabinet will depend, on the one hand, on the quality of policy and program analysis and the reliability of cost estimates and, on the other, on a budget system and process that places a premium on policy and program performance.

Even if budget allocations reflect poverty reduction priorities, the actual flow of resources to front-line service delivery agencies determines the extent to which stated budget objectives are realized during budget execution. The flow of resources to frontline agencies can only be understood within the overall incentive framework of the budget process and the public sector as a whole. If the budget formulation process is not credible, or if hard budget constraints at the sector level are lacking, then ad hoc reallocations of fiscal resources are likely.

Section 6.2 of this chapter provides an overview of the budget system to help users better understand the process, the players, and the importance of the coverage and structure of the budget. Section 6.3 sets out a framework for setting budget priorities, from determining the rationale for public intervention to evaluating alternative spending options. Section 6.3 concludes with a short guide on how to get started in this process. Finally, section 6.4 addresses a series of issues critical to improved public financial management, from better planning and awareness about costs to integrating external assistance in the budget, and concludes with recommendations to participate in the budget process.

6.2 An Overview of the Budget System

This section highlights key institutional factors that influence decisions about the aggregate level and allocation of public spending across sectors and programs. It focuses on three aspects of the budget system:

- the budget process (section 6.2.1);
- coverage and structure of the budget (section 6.2.2); and
- key agents (section 6.2.3).

The intention is to provide analysts with a broad understanding of the potential constraints facing budgetary decisionmakers and strategies for overcoming these constraints. A questionnaire like the Public Expenditure Management diagnostic may be used to guide the analysis of institutional factors at the country level. (See Guide to Web Resources at the end of this chapter.)

6.2.1 Understanding the budget process

The budget process can be portrayed as a cycle. Figure 6.1 shows an idealized version.

The critical steps in the budget cycle are worth examining in some detail because they can present several challenges, as described below.

Setting aggregate spending limits

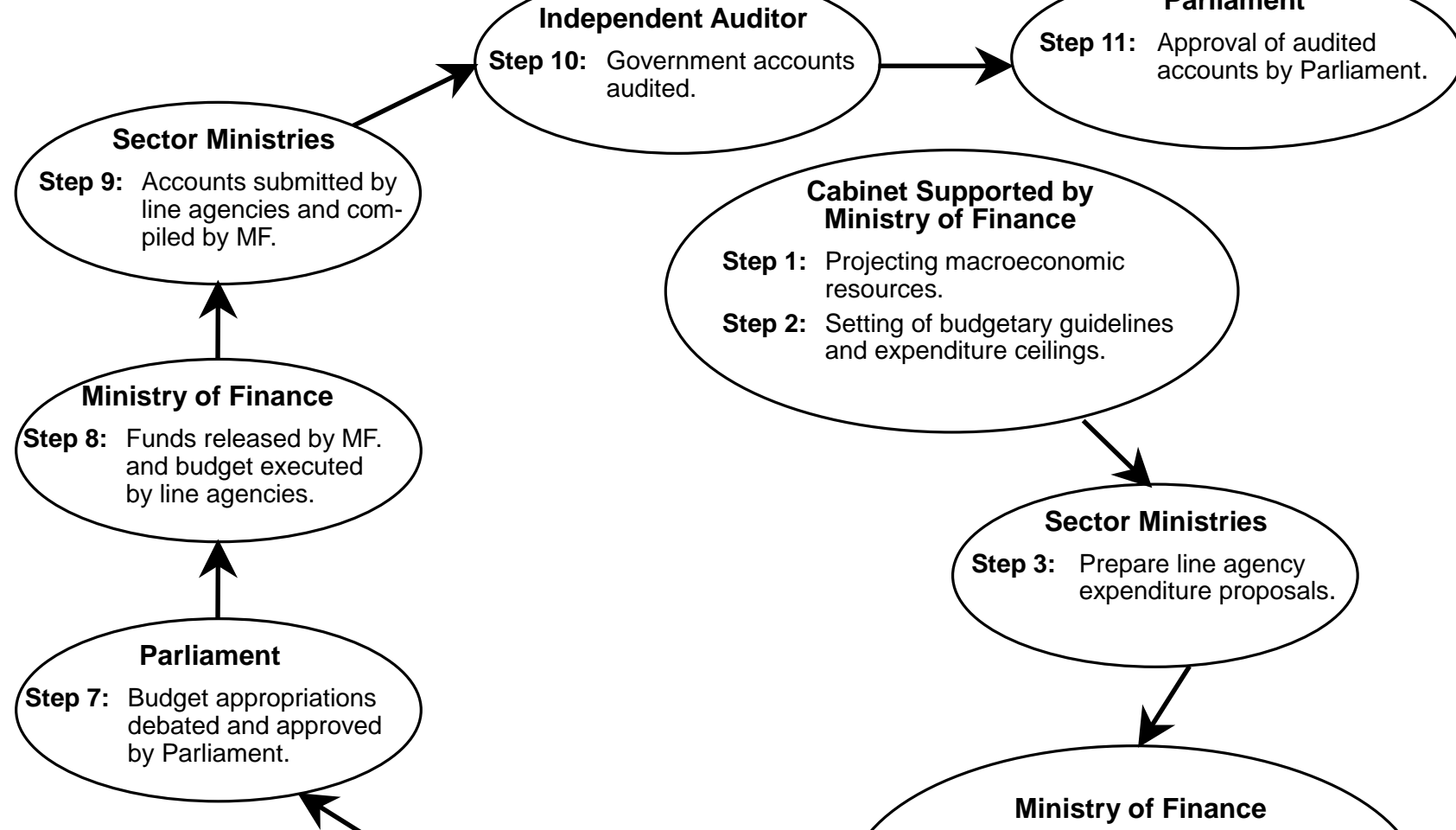
A feasible and credible budget can be prepared only on the basis of accurate forecasts of economic growth and resource availability (see step 1 in figure 6.1). Overly optimistic revenue projections cause serious problems for line agencies, since they will typically lead to mid-year cutbacks in spending or accumulation of arrears. If cutbacks become a regular feature of the budget process, the credibility of the budget is undermined, creating a web of perverse incentives for managers, line ministries, politicians, and donors. For example, managers may overestimate discretionary expenditures to provide a cushion against anticipated cuts, or underestimate nondiscretionary expenditures, such as salaries, which they know will be funded, or bring forward expenditures in anticipation of cuts later in the budget year. Legislatures also often earmark expenditures to avoid cuts, and donors sometimes encourage forms of earmarking to support their funding priorities.

If in-year adjustments are frequent, it will be important to periodically review variations between budget estimates and actual spending levels—at the aggregate and sectoral levels—to determine how much the adjustments reflect persistent overestimates of economic growth and revenue, technical problems in cost analysis, and discretionary reallocations during budget execution (see chapter 8, “Governance,” for additional discussion).

One approach is to be conservative in allocating resources to sectors so that the sum of the sectoral allocations, including all statutory expenditures such as public debt interest payments, is less than the aggregate expenditure level. The unallocated funds would be treated by the Ministry of Finance as a planning reserve or a contingency reserve and could be allocated according to clear rules if realized (see box 6.1). It is important to ensure parliamentary control of decisions on the allocation of any planning reserves or contingency reserves. Another approach is to identify priority programs whose budgets will be protected from revenue shortfalls, particularly programs with direct linkages to the well-being of the poor. However, the preferred solution is to address the “budget failure” by making the initial revenue estimates more reliable and minimizing ad hoc reallocations during budget execution. As discussed below, external assistance should be explicitly taken into account when setting expenditure ceilings.

Setting sector spending limits

It is not useful to begin the budget formulation process with centrally determined sector or agency spending limits if these ceilings lack credibility and will not be sustained over the course of budget



execution. As discussed below, sector spending ceilings are more likely to be credible when they are derived from medium-term cost estimates and robust revenue projections. These spending limits will reflect judgments on the nature and appropriateness of existing budgetary commitments. Examples of commitments include the following:

- *statutory commitments* covering transfers to local government, earmarked revenues for special funds, and welfare and pension entitlements;
- *contractual commitments* for the payment of personnel (and pension entitlements);
- *debt servicing and amortization* and, in some cases, contracts for the delivery of goods and services that extend between budget periods;
- *agreements* with bilateral and multilateral agencies for counterpart financing of projects and programs; and
- *changes to sector policy*, debated and approved by cabinet and Parliament outside the context of a budget process that, for example, result in statutory commitments to increase service delivery levels or transfer entitlements.

Faced with these constraints, the government may initially take existing sector allocations as given in the short run and adjust these allocations upward or downward to reflect prevailing economic conditions and sector priorities. This would precede the setting of sector ceilings. In this case, individual ministers should be required to reprioritize and reallocate within their respective sectors in order to contribute to poverty reduction goals. However, the approach presented in section 6.3 argues that all major programs should be open to re-evaluation. In the short run, one alternative is to undertake a rapid review of all policies and programs (a form of zero-base budgeting) with the aim of eliminating or cutting back funding for nonpriority activities and reducing inefficiencies.

The scope for spending reallocation is larger in the medium term. Budgets with an annual planning horizon tend to subordinate longer-term development priorities to immediate fiscal needs and thus serve to reinforce the status quo. Similarly, proposed cuts in program spending levels require careful sequencing, sometimes over extended periods to avoid undue disruption. These concerns can be best addressed by introducing a multiyear perspective to budgeting and gradually developing an MTEF (see section 6.4).

Preparing and analyzing line agency bids

The detailed composition of sector expenditures is determined after line agency bids are prepared and analyzed (steps 3 and 4 in figure 6.1). Typically, line agencies will have limited time to prepare their bids after distribution of the budget guidelines and limits. The allowed time may be insufficient for line agencies to consult with operational and regional departments regarding program costs and effectiveness and with users regarding satisfaction. Hence, line agency budget departments will often take the previous year's budget as the base and request a percentage increase rather than budgeting on the basis of planned service levels and their cost estimates. Negotiations with the Ministry of Finance will also tend to focus on the increment, giving little consideration to the relevance and effectiveness of ongoing programs or the administrative overheads that make up the bulk of expenditures. To overcome these practices, line agencies would need to draw up strategic plans in advance so that decisions are not driven simply by the central budget timetable.

Stronger connections between operational plans and budgets can be developed when line agencies are provided with credible forward forecasts of spending limits. This allows departments to project

Box 6.1. Expenditure Reserves During Budget Preparation

A *planning reserve* is a sum (usually 1 or 2 percent of total government expenditure) that is not allocated in the budget guidelines. The Ministry of Finance can later allocate this sum to new or existing programs, above the amount allocated during budget negotiations.

A *contingency reserve* is a reserve for in-year expenditures above appropriations for handling genuine contingencies. It should be modest in size so as to encourage ministries to stay within their budget constraints. In practice, this reserve rarely exceeds 2 or 3 percent of total spending. It should be under the control of the Minister of Finance and access should be granted only under specific conditions.

Source: Potter and Diamond (1999, p. 24).

program costs based on policy decisions (rather than request a percentage increase) and to adjust targets so that they are consistent with resource availability. The existence of a multiyear budget perspective allows the Ministry of Finance and the line agencies to budget and plan more effectively.

Introducing a multiyear budget that evolves over time into an MTEF does not end the need for annual budget formulation. The annual budget remains necessary in order to adjust policies and programs to reflect changing macroeconomic conditions and shifting priorities and to incorporate lessons from their past performance.

Ensuring budget compliance

Budget systems have to balance the need for flexibility to accommodate changing circumstances during budget execution against the need for adequate control to ensure that resources are used as intended by government and approved by Parliament. Policy and program changes should be confined as far as possible to the budget formulation phase of the cycle (discussed above). While hard budget constraints must be maintained in order to discipline politicians and managers, some flexibility is usually built into the budget through contingency reserves and through permitting the movement of funds from one budget category to another under certain circumstances (see box 6.1). Allowing the shift of budgetary funds between different administrative categories may facilitate expenditure switching toward priority activities at the sector level. However, the scope for such shifts is usually fixed by law. In most countries, it is not possible to shift funds between the salary and nonsalary recurrent budget, nor between recurrent and investment expenditure. Under a more performance-oriented approach to budgeting, such restrictions would need to be reviewed.

Potential signs of compliance weakness include the following:

- overspending on agreed-on limits at the agency level, diversion of resources from one department to support another, overcommitment of funds, and accumulation of arrears with suppliers; and
- restrictions on the flow of funds to the spending agencies rather than formal budget alterations when revenue falls below projections. If central managers then prioritize expenditures according to their own criteria—for example, cutting back on operational spending before head office—service delivery units will bear the brunt of cuts. This could subvert poverty reduction objectives.

Combating these weaknesses will require that government accounting and monitoring systems provide timely information on the financial status of all line agencies during budget execution (step 9 in figure 6.1) and that the government's final accounts be audited by an independent agency in a timely manner (step 10 in figure 6.1). To be effective, independent audit should be supported by sanctions on unauthorized spending.

Adequate control of budget execution and improved cash management are essential to ensuring that the budget is executed as originally intended. Where controls have traditionally been weak, it will be important to balance any increased flexibility with strong accountability mechanisms. Where controls have been overly tight, managers may be given greater discretion in using funds by providing broader appropriations and relying on ex post controls to ensure they have used resources efficiently and effectively and in ways that are consistent with the government's strategic poverty reduction goals.

Providing adequate feedback on budget execution

Ideally, the budget cycle includes a feedback loop in which ex post monitoring and evaluation inform next year's budget development (linking steps 9 and 2 in figure 6.1). Actual expenditure levels combined with data on achievement of performance targets for service delivery and program performance can be used to appraise spending efficiency and output. Decisionmakers can also identify areas in which controls on spending are too tight (or loose) and make the adjustments needed to improve the poverty impact of public programs.

If the Ministry of Finance's budget limits and proposals by line agencies are prepared without reference to actual expenditures and program impact, this will likely lead to underfunding of certain categories of spending and a potential mismatch between planned and actual expenditures (if the

previous year's spending deviated significantly from the budget allocation). The entire credibility of the budget may be undermined in this manner.

The scope for analyzing prior years' budget execution results may be constrained by lack of time for proper evaluation or by poor data availability. If data on actual expenditures are outdated (more than two years old), analysts will have to work with incomplete provisional estimates of expenditures at the start of the next budget preparation process. If accounting information is prepared only to verify compliance, it will lack the analytical content needed to support budget formulation and expenditure switching measures. Box 6.2 lists the types of budget breakdowns that might be useful.

The problems identified above can be best addressed by improving the timeliness and quality of data on budget execution and operating costs and by improving coordination between accounting departments and those responsible for budget formulation. Strengthening accounting and fiscal data collection systems is likely to be a long-term task (see chapter 5, "Strengthening Statistical Systems"). In the meantime, the information constraints facing decisionmakers can be alleviated by complementing routine monitoring information with tracking studies and periodic detailed studies of public expenditures (see technical note F.3). See chapter 3, "Monitoring and Evaluation," for more discussion on the topic.

6.2.2 Budget: Coverage, structure, and coordination

The budget should provide information on all the resources available to public agencies, including external assistance. This will help decisionmakers to address spending imbalances adequately and promote poverty reduction throughout budget preparation and execution. The budgetary information should allow analysis of the composition of spending within sectors and across spending categories in order to ensure consistency with poverty and efficiency concerns. As described below, however, many budget systems do not fulfill these criteria.

Covering all government financial operations

In principle, all government revenues and spending should be accounted for prior to budget formulation. This allows the government to consider all the resources at its disposal when setting aggregate spending levels, making allocations, and deciding on how to reorient spending to achieve its poverty reduction objectives.

The System of National Accounts concept of general government (which is also accepted by the "Government Finance Statistics Manual") includes the central government, all subnational levels of government, social security institutions, and autonomous nonprofit government agencies. Where subnational levels of government have constitutional authority for their own budget, this authority

Box 6.2. Budget Classifications

Line Item classification: Spending by object according to the categories used for administrative control, for instance, salaries, travel allowances, telephone, and office materials.

Administrative classification: Spending by the organization responsible for the management of funds. The structure of administrative classification will vary from country to country, as will the number and administrative level of the budget holder.

Functional classification: Government activities and spending according to their purpose, for instance, policing, defense, education, health, transportation, and communication.

Economic classification: Government financial operations according to their economic categories, distinguishing among capital and current spending and revenues; subsidies; transfers from the state to families and other public institutions; interest payments; and financing operations. This classification is used in "Government Finance Statistics Manual" (1996) prepared by the International Monetary Fund (IMF).

Program classification: Spending by program (that is, by sets of activities undertaken to meet the same goals). The program classification may correspond to a disaggregation of the administrative classification or may cross administrative units.

Territorial classification: Revenues and spending by the geographic area of impact (rural/urban, province, and so on).

Source: Based on Schiavo-Campo and Tommasi (1999, chapter 2), Web version.

should be respected in the budget process. From a strategic perspective, however, it is desirable to develop a comprehensive picture of the scope of general government revenues and expenditures.

In addition to accounting for state and local government, the budget must cover autonomous and semi-autonomous government agencies. Coverage should vary according to the type of the body. Autonomous public entities include rural road funds and special development or social security funds. They will generally have their own legal supervisory structures and revenue sources. If this is the case, the state budget and accounts should record only the transfers between the two—outflows for subsidies and transfers on the spending side and inflows from royalties or shared receipts on the revenue side. However, autonomous public bodies should also be required to divulge detailed information on their financial situation and performance in the interest of transparency and accountability and because these entities may be responsible for a large share of public spending at the local level. Hybrid organizations that are set up using earmarked receipts or revolving funds, and that are legally and financially autonomous from the state, should be treated the same as other autonomous organizations. Transfers to and receipts from public nonfinancial corporations should be recorded under appropriate expenditure and revenue categories.

It should be noted that nonautonomous bodies that are run with own-source funds are treated slightly differently from those bodies that lack such funding (the latter's expenditures and revenues are simply added into the state budget). For example, schools that retain user fees must submit a forecast of receipts to the central government. These receipts are included in the revenue side of the state budget—usually in a specific category of receipts that identifies them as retained. Gross expenditures, including expenditures financed by user fees and by other funds from the education budget, are also submitted to the budgetary authority.

Adequate budget coverage is often difficult for various reasons:

- ⌘ Extrabudgetary funds from earmarked revenues, such as gasoline taxes, may not be captured by the budget process because different reporting schedules and formats are used.
- ⌘ Lack of transparent reporting guidelines and oversight arrangements for extrabudgetary funds and other revenue sources.
- ⌘ Line agencies may fail to report revenues derived from sales of goods, user charges, and other levies (often because of concerns that there will be a corresponding reduction in their budget financing).
- ⌘ Information on local government budgets and accounts may be of poor quality. Furthermore, these may use differing reporting procedures and classifications.
- ⌘ External assistance may be accounted for outside the budget.
- ⌘ Donors may deal directly with line agencies. The donor and the beneficiary institution may then fail to provide the Ministry of Finance with information on disbursements and forward commitments.
- ⌘ Line agencies may find it difficult to provide information on external financing because of different accounting classifications and payments in foreign currencies.
- ⌘ Line agencies may be unwilling to divulge complete information on aid received, since this may result in reduced domestic budget allocations for the sector.
- ⌘ Line agencies may be reluctant to present the full cost of some high-cost spending items, such as technical assistance, since this could distort the overall picture of resource allocation within the sector.

Clearly, these problems can be overcome only through the concerted action of external partners and government. Section 6.4 suggests several measures.

Measures to improve budget coverage include (a) developing a database of public entities that includes their sources of finance and areas of spending; (b) integrating all spending and revenues under the state budget unless there is a legitimate reason for extrabudgetary financial management; (c) minimizing fragmentation of fiscal planning and disbursement, including earmarking; and (d) designing transparent oversight mechanisms and standardized reporting systems for those areas of spending that remain off-

budget. Improving the information about spending financed by external assistance is also key and may be achieved only through the concerted action of donors and government.

Poverty funds are sometimes suggested as a method to allocate resources to poverty reduction. A poorly functioning budget system is sometimes cited as a reason to circumvent the budget and establish a dedicated poverty fund. Such funds have taken one of two forms in practice and pose important questions for budgetary integrity and the appropriate longer-term strategy to achieve good practice in expenditure management. Whereas virtual funds work through existing government budget formulation, execution, and reporting systems, institutional funds are extrabudgetary in nature.

Two distinct types of poverty funds, known as virtual funds and institutional funds, have been used by governments in regards to the PRSP and the Highly Indebted Poor Countries (HIPC) Initiative.

Accounting or virtual poverty funds are constructed for accounting purposes only. Program or expenditure items in the budget identified as poverty reducing are tagged and monitored in overall budget implementation. Fund resources are held centrally in consolidated fund accounts or subaccounts and are fully on-budget. Resource allocation occurs during the general budget process, within the general macroeconomic framework, allowing normal planning of medium-term cost implications. Programs financed by poverty funds are implemented by line ministries or local governments, or are contracted out. Execution and annual audits of poverty fund accounts occur through normal government procedures, although some additional requirements, such as civil society monitoring, pertain. Like general public expenditure systems, virtual poverty funds should use sound classification systems and have timely reporting systems.

Uganda, for example, has established a poverty action fund as an accounting framework. The poverty action fund specifies poverty-reducing programs at the level of budgetary line items. These programs are identified in the accounting coding structure to enable automatic tracking, becoming a vehicle for relating incremental debt relief and donor resources to specific program expenditures.

Tanzania operated a multilateral debt fund, established by the Nordic countries and the United Kingdom as a general government account in the central bank to be used for debt servicing to the multilaterals. The multilateral debt fund is now being transformed into a poverty reduction, budget support fund to allocate HIPC assistance to programs according to PRSP priorities.

In Guyana, certain line items are tagged as poverty-reducing spending, based on administrative, economic, and highly aggregated functional classifications.

In contrast, *institutional poverty funds* are autonomous institutions where revenues are set aside in a separate account, with expenditures occurring outside a country's normal budget execution and reporting system, subject to different reporting and accountability standards.

Road and pension funds serve as examples of institutional funds. Arguments in favor of poverty-related institutional funds are linking poverty-related work and HIPC debt relief; satisfying donors' objectives of identifying financial resource flows and tracking project output, particularly when existing governmental program and financial management capacity is weak; and, in some cases, empowering local communities and increasing donor and nongovernmental organization involvement. Institutional funds may also be used to ensure resources for operations such as road maintenance.

There are, however, important counter arguments. First, institutional funds do not ensure that additional resources are being allocated to poverty reduction. Because resources are fungible, earmarked assistance for poverty-reducing programs can be offset by reduced public spending in other parts of the government budget for related programs. Second, an institutional fund does not mean that sufficient resources are being committed to achieve PRS targets. Assistance channeled through such funds accounts for only a small share of both public revenue and spending. Third, creating institutional poverty funds would, in many cases, undermine the significant progress already achieved toward comprehensive budgets. Separate funds prevent a holistic view of resource allocation, especially when set up for a specific sector, and lead to enclave management of poverty-focused programs. If institutional funds have autonomous (financial and governance) structures, there exists increased risk of both duplication in poverty reduction efforts and loss of control over financial resources. Diverting limited technical skills to

create and manage these funds could aggravate problems of transparency and governance in the budget as a whole.

In countries where poverty-related institutional funds are used, these risks can be reduced if financing of the fund appears on-budget. Funds should have their own bank accounts and be subject to adequate reporting requirements. Funds should also be held accountable to Parliament and subject to a dual audit.

Structuring budget information

A key element is the manner in which budget information is presented. Where it is well presented, it enables analysts to answer the following questions:

- **Accounting.** What is public money being spent on?
- **Monitoring.** Are public funds being disbursed and spent in a timely manner? Is it possible to monitor donor-funded spending?
- **Auditing.** Are we confident, based on an independent audit of government expenditures, that moneys have been spent consistently with the budget?
- **Outcome (and output) evaluation.** Are expenditures on key programs effective in reducing poverty or achieving other objectives? Are the projects being undertaken efficiently?

In practice, improvements are needed in the way budget information is presented in order to facilitate meaningful analysis. At a minimum, the budget system should provide a classification of government expenditures by functional category as well as by administrative unit (see technical note F.1). Ideally, budgets are disaggregated by programs or activities to enable more sophisticated analysis and evaluation.

Improvements to the structure and quality of budget information can be undertaken on several fronts. First, with respect to accounting, there may be a need to strengthen basic reporting systems, to enhance the agency-level capacity to provide data in a timely and accurate manner, and to extend coverage of budget information systems to include subnational governments. However, in terms of sequencing, activities aimed at expanding government capacity to provide *new* information should be pursued only when existing budgetary information is consistent and relevant for fiscal management. Coverage can always be extended in the future, as information bases and analytical skills are further developed.

Second, there may be scope for better monitoring of spending by agencies, though this should not be so detailed as to interfere with agencies' ability to deliver services efficiently. Excessive controls can provoke attempts by line agencies to develop extrabudgetary resources. Evidence suggests that there may be a tradeoff between the detail of the classification used for control by central ministries—the more detailed the classification, the better the administrative control—and the degree of flexibility given to fiscal managers in line ministries. Detailed line item classifications, for example, give managers little flexibility to swap funds from transport costs to the contracting of services. Greater autonomy over allocated resources should be complemented by arrangements to enhance accountability—ones that not only improve probity and stewardship in the use of budget resources but also enhance the quality of associated outputs and outcomes.

Third, better coordination, if not unification, of investment and recurrent budgets would be an important step forward for many countries, as explained in the next section.

Unifying capital and recurrent budgets

Many countries have a dual budget structure in place—the recurrent budget and the investment budget. The recurrent budget is typically prepared by the Ministry of Finance and presents spending on salaries and operations and maintenance (O&M). Interest payments are also included. The investment or development budget in principle presents one-off capital expenditures on projects and programs and, in many countries, is prepared by a separate planning ministry. In practice, the development budget may

also include various expenditures on recurrent items that are paid for by donors, so the dual budgets often do not in fact represent a neat separation of recurrent and capital budget items.

Dual budgets make it difficult to achieve resource allocations consistent with a government's development priorities and to deliver high-quality services at a reasonable cost. It is common for the government to finance capital expenditures without considering the medium-term recurrent needs of the capital investment (see table 6.1).

Ideally, the recurrent and capital budgets would be coordinated, if not merged, to enable coherent and strategic analysis of expenditure decisions. A unified budget can still distinguish between current and capital expenditures. Many governments keep the investment and recurrent budgets separate for appropriation but ensure that they are considered as a unit during budget formulation, and that they are managed by the same functional agencies at all levels.

Budget unification has broad managerial implications because projects (the basic managerial unit of the development budget) are not the appropriate unit for managing the unified budget. It often becomes necessary, therefore, to merge the planning commission and the Ministry of Finance. However, this is generally not sufficient to bring about the required degree of integration between the recurrent and development budget in budget formulation.

Systemic integration of the development and recurrent budgets is more naturally developed under an MTEF, which, by design, requires the medium-term cost consequences of both types of spending to be estimated and budgeted for as part of an integrated process (see section 6.4.1 for more details).

In countries that choose to maintain dual budgets, it is nonetheless possible to identify incremental reforms that would improve the strategic value of the public investment program (PIP). The PIP generally has a multiyear (typically three-year) horizon and covers both domestic- and donor-financed projects. Table 6.1 outlines common weaknesses associated with PIPs and possible reforms that could be undertaken even if merging of the dual budgets is not adopted.

The key elements necessary for useful budget coverage and structure identified in section 6.2.2 have equal relevance in situations in which dual budgets are maintained.

6.2.3 Key agents

All public institutions are involved, directly or indirectly, in the budget process. Civil society and nongovernmental actors also play a key role in defining budgetary priorities. While it would be ideal to think of these institutions as members of a team that pursues common goals, it is more helpful to consider their divergent interests. In doing so, one can identify the constraints that a government is likely to face in reconciling competing priorities and in developing a coherent financial plan to support its poverty reduction goals. The key players are described below.

Table 6.1. Common Weaknesses and Possible Reforms in Public Investment Programs

<i>Common weaknesses</i>	<i>Consequence</i>	<i>Possible reforms</i>
Screening procedures are not rigorously applied to donor projects.	<ul style="list-style-type: none"> ➤ Projects are included in the PIP solely for attracting donor funding. ➤ Nonpriority and poorly formulated projects are included in the PIP. 	<ul style="list-style-type: none"> ➤ Develop clear strategic priorities. ➤ Increase scrutiny of the poverty impact of donor programs. ➤ O&M budgets should be prepared for new investment projects.
The distinction between recurrent and investment spending is not clear-cut.	<ul style="list-style-type: none"> ➤ PIPs often include "projects" initially paid for by donors and now financed domestically. ➤ Recurrent expenditures are hidden in the PIP to avoid tight spending limits. 	<i>As above.</i>
The PIP and recurrent budgets use incompatible classification systems and different macroeconomic assumptions.	<ul style="list-style-type: none"> ➤ Investment decisions are not matched by the provision of adequate recurrent funds so that, for example, new schools have no budgets for teachers or materials. 	<ul style="list-style-type: none"> ➤ Reclassify information using consistent definitions in both budgets. ➤ Require that the same macroeconomic assumptions be used.

The cabinet

The legitimacy and successful implementation of the budget depend on its ownership by the executive branch, especially the cabinet. The cabinet is the institution that enforces common or collective interests in pursuit of a country's poverty reduction objectives. The cabinet must endorse the government's fiscal policy stance, reconcile the conflicting demands of different line ministers, and manage the tradeoffs between macroeconomic targets and the demand for public services. However, the cabinet's ability to determine appropriate spending levels and allocations depends on availability of information and analysis of needs and tradeoffs and whether there is sufficient time to assimilate the available information. The cabinet will tend to focus on approving significant changes to allocated resources, particularly new or expanded programs and those areas that have been singled out for cuts. Responsibility for approving minor changes in spending structure is generally delegated to the Ministry of Finance or the respective line agency. Since aggregate spending levels need to be approved by the cabinet, it is here that pressure is most intense for the Ministry of Finance to take a more permissive stance in relation to the cabinet. Most ministers tend to argue for increased spending in their sector, and it is unlikely that there will be widespread support for cuts in any area.

Cabinet-level decisionmaking is best supported by information that highlights the tradeoffs between different spending levels and sectoral allocations. This allows decisionmakers to assess spending levels and sectoral allocations in relation to the government's development and poverty reduction goals. Some form of an MTEF, by providing a longer-term perspective to budget formulation, has been shown to be very helpful as well (see section 6.4.1). Where there is a risk that long-term economic stability may be sacrificed as a result of intense pressure to increase spending levels in the short term, more formal controls on spending may be considered. These may take the form of legislative limits on the level of aggregate spending, on public borrowing, or on the size of fiscal deficits.

Ministry of Finance

Although the Ministry of Finance plays a central role in the budget process in all countries, its authority to intervene in sector spending decisions varies considerably. In some cases, spending decisions may be centralized within the Ministry of Finance; in others, the ministry may take a more passive role.

The relationship between the Ministry of Finance and line agencies is strongly influenced by their conflicting priorities. Line agencies regard resources as a means to an end—the delivery of more and better-quality services—and seek to maximize the resources at their disposal by inflating estimates of costs and lobbying for higher sector allocations. The Ministry of Finance, on the other hand, has to reconcile the demand for higher levels of sectoral spending with the need to control aggregate spending. Hence, it tends to restrict spending levels and encourage greater efficiency in the use of public funds. Line agencies may resent the interference in their internal operations by the Ministry of Finance and may use a variety of tactics to maximize and protect their resource allocations (see below). Ministry of Finance personnel typically lack detailed information about actual costs and budgetary needs at the ministry level, and may resort to arbitrary cuts in allocations to particular categories of spending or across-the-board cuts.

The ministry's internal organization may compound these problems. Where the recurrent and investment budgets are prepared by separate departments, it is difficult to analyze overall sectoral resource allocations in their different components. Similarly, where budget formulation and execution are separated organizationally, personnel responsible for approving alterations may not know the policies underlying budget allocations and may therefore fail to consider them.

Closer cooperation between the Ministry of Finance and line agencies can be fostered by considering the relationship and tradeoffs between resources and performance rather than focusing on resource volume alone (see section 6.4.3). At the same time, the relationship between the Ministry of Finance and line agencies can be improved by clarifying the former's role as the designer and watchdog for ensuring sound budgetary and financial management overall as measured by the relationship at the ministry level between budget inputs, outputs, and outcomes. This responsibility includes monitoring performance consistent with these rules, providing a second opinion on policy design, acting as the principal financial

adviser to the cabinet (the costing of all policy proposals should be agreed on with Ministry of Finance before they are submitted to the cabinet), and compiling the budget.

Line agencies

Faced with the unenviable task of meeting demand for services with limited resources, line agencies could seek to maximize the resources at their disposal, regardless of broader welfare concerns. If this is the case, line agencies will tend to bid high. When sectoral budgets are cut back without adequately consulting the line agency or fully considering the output targets, the line agency may regard the resulting budget as unrealistic and will have little commitment to its limits. Another problem arises if unspent balances are collected by the Ministry of Finance at the end of the financial year. If this happens, line agencies will have little incentive to achieve efficiency savings. Instead, they will tend to spend all of their annual appropriations, possibly through a spending spree in the last quarter of the financial year.

As previously mentioned, centralizing the budget preparation process, without systematic consultation with operational departments and service delivery units, can create problems. It can undermine operational effectiveness as a result of underfunding of services or create a mismatch between the demand for certain services and the targets developed by the center. It also weakens accountability. This situation is aggravated where appropriations are made at the broad agency level and managed centrally. Tracking studies in Tanzania and Uganda show that resources tend to get delayed at higher levels of the administrative hierarchy, preventing the operational departments from accessing the resources nominally allocated to them in the budget. Studies in other countries also suggest that senior personnel in charge of institutions will serve their own interests (by allocating resources to administrative overheads and perquisites) if they are not held accountable for the level and quality of services provided to the public or if they lack incentives to prioritize service delivery. These concerns can be addressed by the following:

- requiring sectors, ministries, and line agencies to develop strategic plans as inputs to the overall poverty reduction strategy;
- giving line agencies, operational departments, and associated service delivery units greater autonomy and flexibility in using resources to meet poverty reduction objectives (within the operating budget constraint);
- holding agency heads accountable for adherence to spending limits;
- linking resources to performance targets, focusing attention on the services provided rather than on the institution's needs;
- monitoring performance and rewarding personnel based on results that can be linked to poverty reduction and efficiency goals;
- making public agencies directly accountable to users and citizens; and
- promoting competition in the delivery of services, including private sector providers (see section 6.3.2).

Parliament

A representative Parliament in a well-functioning democracy is important in providing a clear indication of society's preferences. Parliament's enactment into law of the annual budget provides an opportunity for the people's representatives to scrutinize the government's budget proposal. They can ensure that the overall level of public spending and resource allocation is consistent with society's development goals and spending preferences. They can also assess the soundness of public sector financial management. Unfortunately, parliamentary scrutiny may be inadequate for a number of reasons:

- The information provided by the chief executive may not support meaningful analysis.
- Parliamentary representatives may lack the capacity and staff resources to undertake detailed analysis of the budget, even where the information is available.
- Parliamentary representatives may lack incentives to critically analyze the overall composition of spending. This can occur when legal procedures require Parliament to approve or reject the

budget in its entirety without amendment. Incentives can be an issue even when parliamentary amendments are possible. For example, representatives may try to advance special interests on behalf of their electorates. This pork barrel approach will tend to increase aggregate spending and result in suboptimal resource allocations from an efficiency and equity point of view. If this approach is prevalent, the disorganized poor are likely to fare worse than influential lobbyist groups representing particular regions, industries, or other interests.

Improving the quality of information available to Parliament and the wider public can promote a better understanding of the tradeoffs between spending options and partly overcome the shortcomings of parliamentary oversight functions. The government should provide adequate information on programs affecting the poor, as well as on tradeoffs at the macroeconomic and sectoral levels, to Parliament and to the public more generally. The capacity of members of Parliament to critically review the budget may be enhanced through training opportunities specifically designed for parliamentarians through access to relevant technical materials either on-line or in parliamentary libraries, as well as allowances for trained staff to help review and advise members. Measures can also be taken to improve decisionmakers' understanding of society's preferences through broad consultative exercises (see section 6.4.7).

Civil society

Civil society institutions, such as local citizens' groups and parent-teacher organizations, can play an important role in the budget process. Their role includes the following:

- influencing decisionmakers in setting priorities;
- providing feedback on budget decisions;
- sharing information (such as budgeted amounts and priorities) with their constituencies and community;
- monitoring the achievement of intended outcomes at the local and national levels;
- reporting suspected corruption; and
- calling attention to inefficiency and waste at the local level.

For local groups to play these key roles in the budget process, it will be important for public officials in government and local political leaders to establish a regular system of communication to provide the public with clear and timely information about the budget process, budget allocations, and outcomes. A variety of communication channels is needed, including radio programming in local languages and printed materials that are easy to read and understand and that make minimal use of technical jargon (see chapter 7, "Participation").

6.3 Assessing Spending Options

All governments face a wide range of conflicting demands on the limited resources available to them. They must make difficult choices in their poverty reduction efforts. In theory, governments should be able to devise the best spending allocation to maximize social welfare. Although optimal allocations may be unattainable in actuality, the poverty impact of public spending allocations can often be improved.

This section provides guidance on how to improve the quality of fiscal analysis to support the design of poverty reduction strategies. Some of the methods presented in this section are demanding and may be difficult to apply in many countries because of the lack of data. The basic principles that support these methods, however, can always be applied when analyzing and planning public expenditures, regardless of the availability of detailed information.

The framework outlined in figure 6.2 has several parts, which are described below. The approach suggested is most easily applied at the sector level in appraising individual services and programs. The informational demands for a comprehensive analysis of spending allocations between sectors are substantial. In practice, only the largest programs will be subject to this type of scrutiny. The last part of this section provides some guidance on how governments can get started and make decisions based on

available data and analysis while longer term improvements are being put in place. The three steps in figure 6.2 are highlighted below.

Step 1. Determine the rationale for public intervention. One rationale is to address market failures that lead to inefficient resource allocation and cause divergence of private and social costs or benefits. Public intervention can also be justified on the grounds of equity in which private provision of goods and services will lead to a socially unacceptable distribution of income or large inequities in human development outcomes across socioeconomic groups. The results of national poverty diagnostics, public expenditure reviews, and benefit incidence analysis will help to inform policymakers about the extent to which income inequality may justify policies for redistribution (see section 6.3.1).

Step 2. Decide on an appropriate instrument to offset market failures or improve distributive outcomes. That there is a strong rationale for public intervention to alter access to a particular service does not mean that the government can best respond by providing a good or service. Indeed, cases of government failure may be as common as those of market failure. Deciding on the most effective response involves examining the scope for using a mix of public and private delivery mechanisms, or for regulation, public financing of subsidies, and user fees (see section 6.3.2).

Step 3. Assess expenditure options. If the analysis above concludes that the public sector should directly provide certain important services, the next step is to assess the best way to provide them. Various techniques can be used to guide this assessment, depending on the level and type of data available, including cost-effectiveness analysis (based on measured inputs), multicriteria techniques, and social cost-benefit analysis. Although cost-benefit analysis allows decisionmakers to rank spending options based on a measure of net-present social value that applies across all sectors and programs, it is much more demanding in terms of data requirements and analysis than the other techniques (see section 6.3.3).

The rest of this section elaborates on the steps suggested by this analytical approach. Finally, section 6.3.4 offers recommendations on getting started in the short term, when data and time are limited.

6.3.1 Determining the rationale for public intervention

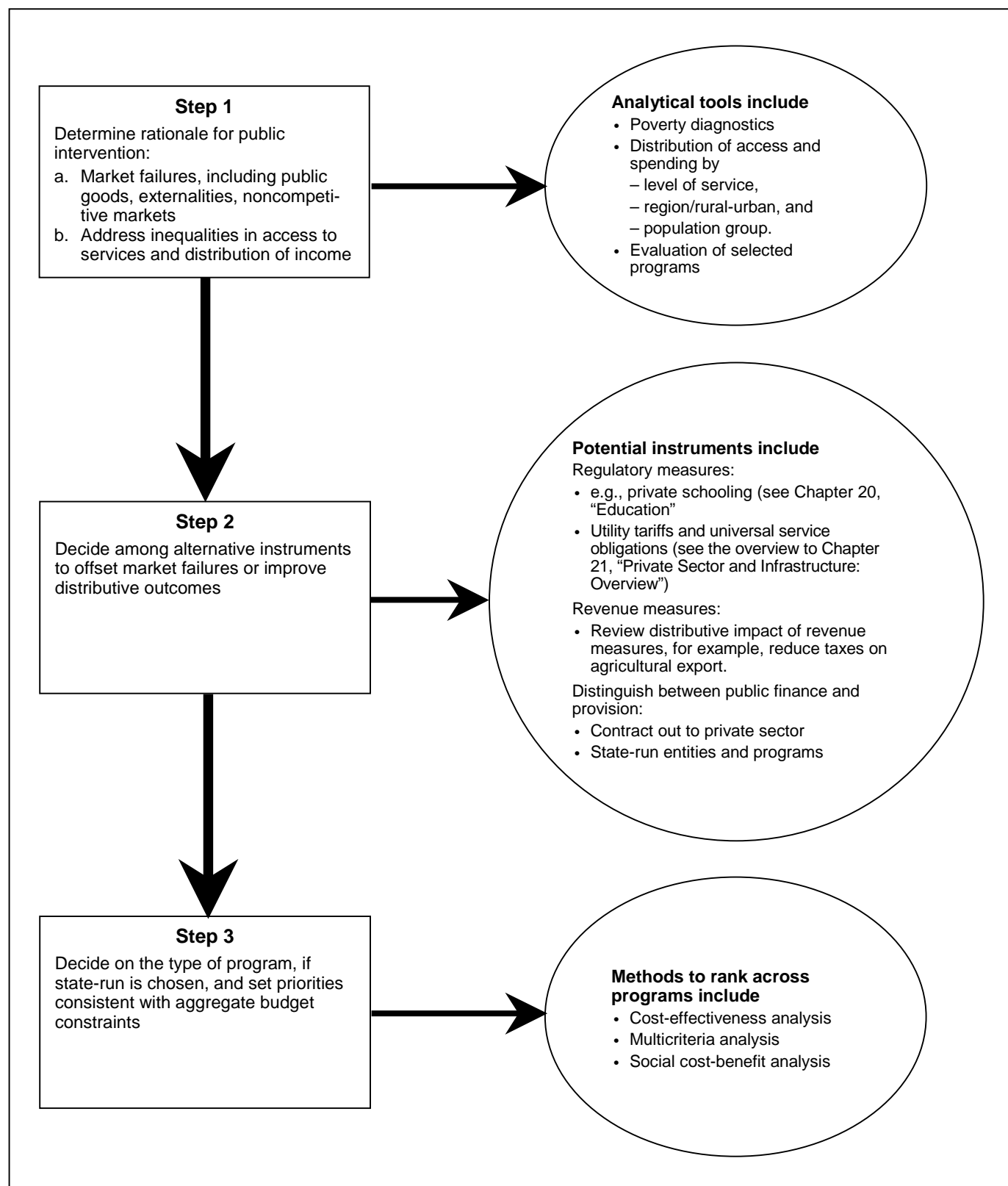
Analysis of the underlying rationale for programs and services can begin at the sector level. At a minimum, line agencies could be required to identify the market failures and equity concerns that they intend to address during periodic reviews of public spending or preparatory stages of an MTEF. This section sets out different ways to assess equity concerns addressed by public intervention—looking at the level of service, regional composition of spending, benefit incidence analysis, and results from available program evaluations. It then examines the rationale for intervention in terms of efficiency considerations, to offset market failures in the case of externalities, public goods, noncompetitive markets, and so on. Understanding the cause of the problem before interviewing is important, not least because different problems can be tackled with different instruments.

Spending on all significant programs and projects should be subject to detailed scrutiny. To this end, finance ministries may find it helpful to draw up—and gain cabinet approval for—a medium- to long-term public expenditure review strategy. The strategy would require systematic review of the principal existing or proposed programs to identify the market failure or distributional problem being addressed and the scope for shifts and reallocations. Many countries have adopted such a review plan and, consequently, decided to privatize industrial and agricultural enterprises. Areas providing scope for substantial reallocation of resources may be identified in public expenditure reviews, or it may be appropriate to target sectors and programs based on the criterion of the largest having first priority.

Examining equity concerns

Looking at the rationale for public intervention from an equity perspective is critical in the context of PRSs. Poverty diagnostics—based on household surveys and other forms of information—may reveal substantial gaps in access and utilization for poorer groups in the country. The disparities may generally affect the poor, or females, or be particularly serious in some regions, for example. A number of the sectoral chapters—particularly those on education, social protection, and health, nutrition, and

Figure 6.2. Deciding When and How Governments Should Intervene: A Simplified Framework



population, in addition to the chapters on private sector and infrastructure—suggest useful tools and sample tables that can be used to assess inequities in access. Poverty mapping can cast substantial light in this context. However, it is important to look at utilization as well as access, which is ostensibly available to households, since demand-side constraints and poor quality may put a wedge between access and utilization, even where services are formally free of charge.

This type of analysis requires various data sources, including (a) data from a national census or a household survey with income and demographic variables and (b) comprehensive data on the level of spending by the central and local governments and projects financed by external aid, disaggregated by service level or by region. If good fiscal data are not available, or the coverage of available data is incomplete, it is generally possible to conduct analysis using service utilization data or qualitative surveys of end users.

Some simple tools for examining the extent to which equity concerns are addressed by public spending are presented below. They are based on examining patterns of spending allocations (a) between levels of service, (b) across regions, (c) among different socioeconomic groups, and (d) between program evaluation techniques; these are addressed in turn.

Level of service

Cross-country studies show that the poor tend to use lower rather than higher levels of service in the education and health sectors—that is, primary rather than tertiary education, and local clinics rather than central hospitals. Accordingly, the poor tend to enjoy a larger share of the benefits of spending on basic services. Although the distribution of benefits accruing to the poor varies across countries, it is generally safe to assume that primary education is more pro-poor than secondary education, which is more pro-poor than tertiary education. Similarly, in the health sector, clinic health services are more pro-poor than hospital services.

Some insight into the distribution of benefits, therefore, can be gained simply by disaggregating education and health expenditures by level of service. The example given in table 6.2 shows that the spending per student at the secondary school level is three times that at the primary level; the ratio of university-to-primary spending is a massive 157-1. Differences of this order of magnitude are not uncommon.

This simple tabulation reveals the need to reorient sectoral spending toward the primary levels of service that disproportionately benefit the poor. Where there is a bias toward tertiary-level services in the health and education sectors, simply increasing the total sectoral budget allocations may not significantly increase the volume of resources available for services used by the poor. Reallocation of resources toward primary services within the existing sectoral envelopes is important; it may be equally important, however, to adopt policies and programs that expand utilization of services by the poor (see chapter 18, “Health, Nutrition, and Population,” and chapter 19, “Education,” for examples).

Of course, these distribution concerns have to be weighed against the need for skill acquisition and labor productivity growth facilitated by tertiary investments, which in turn affect the rate of economic growth, and poverty reduction over the medium term.

Regional composition of spending

Poverty rates and public expenditure levels tend to differ significantly across regions and between rural and urban areas (see chapter 1, “Poverty Measurement and Analysis”). Analysis of the levels of sector or aggregate public expenditure per capita by region often reveals marked spatial disparities (see table 6.3). The net flow of resources to and from the public sector, taking into account revenues channeled to the central government from local governments, often exhibits significant regional variation. Regional differences in spending levels can arise when the government intends to stimulate growth in a few highly productive areas in the short term in order to create a “growth pole” for broader regional development to trickle down in the future. This is the logic behind substantial investments in development corridors along main transport routes and in economic infrastructure such as ports and irrigation schemes.

Table 6.2. Government Current Expenditure per Student, by Education Level, in Uganda
(ratio to primary)

Primary	1
Secondary	3
Teacher education	25
University	157

Source: World Bank (1994).

However, the government may better serve poverty reduction goals by increasing the equity of the distribution of public spending, particularly on basic services in the poorest regions.

It is helpful to analyze the relationship between aggregate and sector spending levels and poverty rates by constructing a geographic poverty map. A poverty map visually matches public spending levels and poverty rates across small geographic areas (by district or region, for example) so that one can observe concentrations of public spending and poverty on a geographic map. The same technique can be used to reveal an urban bias in levels of spending and service provision. Such poverty maps are powerful tools for presenting and analyzing the poverty focus of public spending and the existence of spatial poverty traps. Poverty maps can be constructed if disaggregated fiscal and household poverty data are available (see also chapter 1, "Poverty Measurement and Analysis").

Distribution of benefits of spending

Benefit incidence analysis allows scrutiny of existing spending programs, comparing the distribution of benefits from public spending to the distribution of income to determine whether the overall impact is progressive. Household- or individual-level data can be used to measure the share of spending that goes to different income groups. The technique can be applied to any government service, although most applications have focused on the use of education and health services and participation rates in public works programs.

Benefit incidence analysis involves three steps (detailed in an example in technical note F.5):

- 3 Estimating the unit cost, or unit subsidy, per person of providing a service based on expenditure data. *Average* benefit calculations require data on capital and recurrent costs whereas *marginal* benefit analysis requires data on recurrent costs only.
- 3 Imputing the unit subsidy to households (individuals) based on their use of public services, usually derived from household surveys.
- 3 Aggregating households (individuals) into groups and comparing subsidy incidence across these groups. The most common grouping is based on income or expenditure quintiles. The population can be further broken down by region, ethnic group, or gender to allow various other dimensions of analysis.

Table 6.3. Per Patient Recurrent Expenditures on Health by Region in Guinea (1994)
(spending ratio relative to the national average)

<i>Region</i>	<i>Health center/clinic</i>	<i>Hospital</i>
Conakry (capital)	2.99	1.08
Lower Guinea	0.67	0.80
Middle Guinea	0.84	1.34
Upper Guinea	0.88	0.97
Forest	0.61	0.95
All of Guinea	1.00	1.00

Source: World Bank (1999).

Table 6.4 presents the results of a cross-country study of average benefit incidence analysis in the education sector. It shows public spending on education disaggregated by the level of service—primary, secondary, and tertiary—and the share of the top and bottom income quintiles in total spending at each level. The highest-income group benefits disproportionately from secondary and tertiary education, largely because the poor have little access to these services. Although the share of benefits in primary education going to the poorest quintile is less than 20 percent, in most of the countries shown, it is substantially higher than in secondary and tertiary education. These results suggest that increased spending on primary education will most likely benefit the poor, and that there may be scope for some targeted cost recovery from students in secondary and tertiary education.

Benefit incidence data can also be presented graphically by using concentration curves (see technical note F.5).

Policymakers may be less concerned about average program benefits—as revealed by average benefit incidence analysis—than about the distribution of marginal benefits from an increase in spending across different groups. Since government programs lend themselves to capture by different income groups over time, the average and marginal distribution of benefits will generally differ. In some cases, the nonpoor capture early and the poor benefit later, while in other cases, it works the other way around. For example, public works programs may be subject to early capture by higher-income groups, although the poor may disproportionately benefit later. As such, a program that currently benefits mainly the nonpoor may still warrant expansion, as the poor may benefit disproportionately from increases in spending levels.

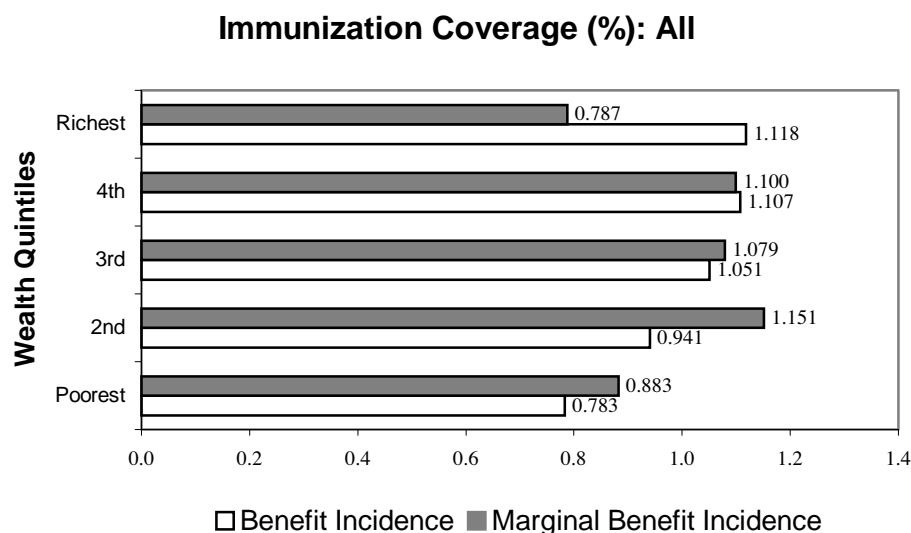
Marginal benefit incidence, often the preferred measure for program appraisal analysis, allows policymakers to identify those who benefit from additional spending—information that is concealed by measures of average benefit incidence. Technical note F.6 gives examples of marginal and average benefit incidence calculations. In the case of immunization, for example, as shown in figure 6.3, the marginal benefit incidence is much more pro-poor than the average. (All indicators are relative to the mean incidence, so that a value of 1 in the figure on the right for a quintile means that that quintile receives benefits in the same proportion as the overall population; the fifth quintile is the richest, the first is the poorest.)

Whether carried out using marginal or average benefits, benefit incidence analysis does have drawbacks (see box 6.3). The shortcomings, however, do not undermine the validity of the approach as a useful first approximation of the distributional impact of current programs. Benefit incidence analysis may reveal those parts of public spending that have a significant impact on poverty in the short term, but risks underemphasizing supporting functions that may be more important for the poor in the long term, such as training teachers or improving service management.

Table 6.4. Benefit Incidence of Public Spending on Education in Selected African Countries

	<i>Quintile shares of total spending</i>							
	<i>Primary subsidy</i>		<i>Secondary subsidy</i>		<i>Tertiary subsidy</i>		<i>Total subsidy</i>	
	<i>Bottom</i>	<i>Top</i>	<i>Bottom</i>	<i>Top</i>	<i>Bottom</i>	<i>Top</i>	<i>Bottom</i>	<i>Top</i>
Côte d'Ivoire, 1995	19	14	7	37	12	71	13	35
Ghana, 1992	22	14	15	19	6	45	16	21
Guinea, 1994	11	21	4	39	1	65	5	44
Kenya, 1992	22	15	7	30	2	44	17	21
Madagascar, 1993	17	14	2	41	0	89	8	41
Malawi, 1994	20	16	9	40	1	59	16	25
South Africa, 1994	19	28	11	39	6	47	14	35
Tanzania, 1993	20	19	8	34	0	100	14	37
Uganda, 1992	19	18	4	49	6	47	13	32

Source: Castro-Leal and others (1999).

Figure 6.3. Comparison of Average and Marginal Benefit Incidence

Program evaluations

Good program evaluations can be invaluable in judging the impact of existing or past public interventions. A rigorous methodology exists for undertaking this analysis that involves various statistical techniques for assessing the consequences of a program intervention in relation to what would have occurred in the absence of the program by, for example, using control groups (see chapter 3, “Monitoring and Evaluation”). This is preferably combined with qualitative and participatory information to understand the underlying processes and constraints. Where this exists, it provides robust information on the effects of a program on income or other poverty-related objectives.

In many countries, however, there are few, if any, rigorous evaluations of programs, though the extent of this needs to be assessed in each case. Indeed, even in countries with a relatively strong evaluation tradition, only a few public development programs will have been subjected to full evaluation. Developing a more systematic evaluation strategy with respect to key programs is an important part of a PRSP (see chapter 3, “Monitoring and Evaluation”).

Identifying efficiency rationales for public intervention: market failures

Different types of failure in the operation of markets can justify public intervention. Economists generally classify such failures into several types, namely, public goods, externalities, merit goods, and the

Box 6.3. Caveats About Benefit Incidence Analyses

Benefit incidence analysis offers important insights into the social distribution of the benefits of government service provision and spending. However, the technique has its limitations:

- For average benefit incidence analysis, the cost of services is an inadequate proxy for the benefits received and fails to consider the ability of different social groups to transform access to the service into improved well-being as measured by, for example, higher incomes.
- Similarly, government spending on a particular service may not represent the full cost to users, which may include direct payments—official and unofficial—to service providers, travel expenses, and the opportunity costs of time lost to productive activities.
- Analysis at the program level will not capture differences in the quality of services provided—for instance, differences in class size in education—which may vary by location and, in some cases, by social group.
- It is often difficult to allocate benefits across social groups. For example, it is difficult to quantify the indirect benefits accruing to different income groups from road surface improvements.

Care should also be taken when interpreting results since the method tends to give greater weight to short-run service delivery functions as opposed to longer-run capacity building.

presence of market power. This section briefly defines each of these. The main task in practice is to assess the size of market failure.

Public goods are nonrival in the sense that consumption by one user does not reduce the supply available to others. They are also nonexcludable. Users cannot be prevented from consuming them. These characteristics make charging consumption of public goods (such as defense, law and order, and public health) difficult, so that public goods will not be provided by the private sector and must be financed by the state, if at all.

Externalities arise when the actions of someone—citizen, firm, or institution—hurt or benefit others without that someone paying or receiving compensation. Negative externalities, such as traffic congestion, impose uncompensated costs on society. Positive externalities, such as those arising from the treatment of sexually transmitted diseases, are benefits that extend to society from the action of individuals. Externalities arise in production—for example, where economic activities lead to environmental degradation and consumption—such as when the benefits in improved childcare and nutrition arising from basic education for girls are not fully enjoyed by the family. Governments can curb negative externalities by taxing individuals for the costs they impose on society or by regulation, and promote positive externalities by subsidy or direct provision.

Where there are **merit goods**, public subsidies may be justified in encouraging consumption to be higher than it would be otherwise. There may be systematic undervaluation of services by consumers, as is often the case in primary education and preventive health care. For example, the value of prenatal checkups may be underestimated by women with many other demands on their time. The value of education for girls, whose parents expect them to get married and have children at a relatively early age, may likewise be underestimated by the family. The use of clean fuels in home cooking may be another example in some countries. Where there are merit goods, the fact that potential consumers undervalue the private benefits of those goods would lead to underprovision and underconsumption of those goods and services if left solely to the market.

Noncompetitive markets may arise for various reasons, including natural monopolies or asymmetrical information. Natural monopolies occur when the technical factors preclude the efficient functioning of more than one producer, allowing the provider to restrict output and increase prices and profits. This argument was historically used to justify the existence of public utilities, such as electricity and urban water supplies, although the competitive sale of licenses and regulation of private enterprises may be viable alternatives (see chapters 20–25 pertaining to private sector and infrastructure). Market power can also arise even when there are many producers, for instance, when consumers face large costs of switching suppliers. This may occur because of information constraints, such as in the case of doctors and medical care, or private schools, when it is difficult for individual consumers to judge the quality of alternative providers.

The appropriate response to market failures may or may not involve public spending coupled with public provision, as section 6.3.2 explains. Section 6.3.4 provides some guidance on how authorities might begin to evaluate the rationale and impact of existing spending programs and identify redundancies and gaps.

6.3.2 Deciding on an appropriate instrument

The existence of market failures or adverse distributional outcomes does not necessarily justify public provision of services, even to the poor. The next step is to decide on an appropriate instrument to offset market failures or improve distributional outcomes. Figure 6.2 distinguishes broadly among three types of responses: regulatory measures, revenue or taxation measures, and public spending (with or without direct government provision). These options are not mutually exclusive, however, and more than one may be pursued to address observed problems in outcomes.

In practice, policymakers do not usually have to choose between government and private provision. Rather, they have to determine the appropriate balance and relationship between the two. Governments should provide a permissive environment for private sector service provision, although some regulation might be needed to maintain minimum standards of service delivery and to ensure competition. Where

public and private providers operate alongside each other, the private sector can be expected to provide services selectively, concentrating on private or club goods (the fact that these goods are excludable allows the private sector to charge) and focusing on wealthier clients. The public sector, in contrast, can be required to provide basic services to all areas and citizens. This allows consumers to choose between service delivery options when they can afford to pay for the private sector alternative, introducing an element of competition into service delivery.

The rest of this section provides an overview of issues related to choice of instruments, that is, the appropriateness of regulatory measures, revenue actions, or public spending.

Regulatory measures. Regulatory responses may be appropriate in various contexts, particularly in cases of market failure. There are well-developed bodies of practice as to how to regulate monopolies, for example. Regulations can be instituted to provide better information to consumers to help them make decisions. Rules about pollution, including sanctions and fines as necessary, can be used to reduce negative externalities, and so on.

In the sphere of private provision of services that are important to the poor, government needs to determine an appropriate regulatory role. The chapters on private sector and infrastructure in the book, including chapter 21, “Energy,” for example, show the importance of regulations in standards. Chapter 19, “Education,” refers to the types of regulations on private schools that can inhibit the role of education and those that can enhance its contribution to human development.

Revenue measures. Taxation instruments can be used to encourage or discourage certain types of activity. At the same time, a primary objective of the tax system is to raise revenue as efficiently and equitably as possible. There are several dimensions of tax reform, which is a broad topic not dealt with in detail in this book. These dimensions include increasing transparency and certainty and addressing the problem of eroded tax bases—especially in conflict countries—and dealing with evasion. Certain reforms will reduce revenue in the short term—for instance, elimination of export tax and excess wage tax. Technical note F.4 addresses some of the distributional issues on the revenue side of the budget.

Public spending. Once spending by government is determined to be an appropriate option, the decision of whether to operate state-run programs, or contract out to the private sector (profit or not-for-profit), remains. Where contracting out is the appropriate option, government capacity in oversight is important.

Various criteria can be applied in appraising alternative service delivery options, including relative efficiency, viability of private provision, and access of the poor to private services.

Relative efficiency. This can be estimated by working out the unit cost of provision under public and private regimes. The comparison between public and private providers should be made on a competitively neutral basis. For example, one might examine the cost of treating a child for acute respiratory infection in a public versus private health clinic. When conducting these calculations, care should be taken to control for quality differences and attribute the full costs of the services provided, including the requisite share of administrative and fixed capital overheads, to remove any hidden subsidies for public provision. Cost differentials between the private and public sector may arise from the different effects of credit and staffing constraints across private and public institutions. For example, the private sector may be more credit constrained than public sector institutions, although the public sector may face more staffing constraints in recruiting, hiring, and dismissing staff.

Viability of private provision. Private sector capacity and willingness to provide the desired level and distribution of services need to be assessed. An indicator of the capacity of the private sector is the extent of private sector involvement in the sector or related industries. However, the current situation may be misleading where the regulatory environment discourages private provision or where public provision crowds out private sector providers. It may also be helpful to examine the level of profit needed for the private contractor, given country- and sector-specific risks, to enter the market.

Access of the poor to private services may be limited. It is important to consider the possible deficiencies in private sector provision of services in remote and poor communities. Even if the private sector has demonstrable cost advantage, it will tend to cherry-pick by providing services to wealthy, urban, and more densely populated areas because the costs of providing these services are lower than in poorer and

more remote areas. Government regulation of fees would tend to discourage private sector provision in high-cost areas, such as rural areas. Public intervention, in the form of subsidies or service provision contracts, might be considered to ensure that enough coverage is provided in all areas. Perhaps subsidized private provision, even with problems in implementing user subsidies, will more efficiently reach the poor than higher-cost public provision.

When private sector providers enjoy a clear cost advantage, selective contracting out of service delivery to private sector operators might also be considered. Competition, however, will not necessarily have a positive impact on the quality of public services. This is particularly true when the number of skilled staff—doctors and teachers, for example—is limited and the private sector is able to pay premium rates. Hence, public sector capacity to provide key services will likely be weakened as skilled workers attracted by higher salaries move into the private sector in better-off areas. Although competition may be consistent with supporting consumers' right to choose, it could raise important equity and welfare concerns.

Any contracting out of service delivery should specify in the contract the qualitative and quantitative nature of the goods and services being bought from the private sector. A contract should be sufficiently flexible for reasonable subsequent changes without punitive consequences. To summarize, it is important that the public sector maintain efficient oversight and supervision of service delivery.

6.3.3 Evaluating spending options

Once the government has decided to intervene, it will have to choose among various programs that could potentially achieve the same goals. Different methods are available to guide this choice, including cost-effectiveness analysis, multicriteria analysis, and social cost-benefit analysis. The best approach would be full cost-benefit analysis, described below, although this may be too demanding, especially in its data requirements. It should be possible to at least carry out a basic assessment of cost-effectiveness as described in this section for all principal programs.

Cost-effectiveness analysis

Cost-effectiveness analysis is not used to value benefits or quantify externalities. Instead, a goal or desired outcome is defined, and the alternative interventions are appraised and ranked solely on the basis of cost. This allows decisionmakers to compare the costs of alternative interventions that share the same goal. However, cost-effectiveness analysis does not measure the intrinsic value of the outcome and cannot be used to compare programs that have different outputs.

This method has been applied extensively in the health sector in which the cost per disability-adjusted life year (cost/DALY) has been used as the cost-effectiveness criterion. On this basis, the *World Development Report 1993* (World Bank 1993) was able to rank a range of health services on the basis of their cost-effectiveness. Similar exercises have been carried out in many Organisation for Economic Co-operation and Development (OECD) countries and in some developing countries (see chapter 18, "Health, Nutrition, and Population").

Measures of cost-effectiveness can be used to support the ranking of spending options in all sectors. However, it involves identifying a suitable outcome measure that is valid across the range of services provided. In the education sector, for instance, the level of literacy may be a suitable outcome measure for primary education, but it is not applicable to secondary, tertiary, or vocational education. Where no suitable outcome measure can be identified, output measures may be substituted, although these are usually program specific and so have a more narrow application. For instance, the cost per primary school graduate can be applied only as a measure of cost-effectiveness to appraise alternative interventions in support of primary education.

Multicriteria analysis

Multicriteria analysis is flexible but lacks technical rigor. It entails identifying a series of appraisal criteria that generally reflect policy goals or desired outcomes and assigning weights to each criterion. Alternative interventions are then appraised by each criterion based on the anticipated outcome of each

intervention. A score is given to each subcomponent of an alternative, and the scores are multiplied by the weight and summed for each intervention. Various scoring methods can be applied to accommodate quantitative and qualitative information.

Clearly, this method has limitations.

- ⊃ The selection of the criteria and the relative weights are not based on any fundamental principle and can be altered at will.
- ⊃ The scoring against qualitative criteria can be arbitrary.
- ⊃ The criteria used can overlap and cause double counting.

At the same time, the method presents some advantages compared to other alternatives.

- ⊃ Appraisal criteria and their weights can explicitly integrate poverty reduction goals into the appraisal of competing interventions.
- ⊃ The method can be used at various levels of government in a participatory way because the criteria, weights, and scores can be determined through consultation with experts, decisionmakers, the public, and stakeholders.
- ⊃ Quantitative and qualitative information can be used, which allows for the consideration of externalities that are not captured by other methods.
- ⊃ The method is relatively cheap to implement and does not necessarily require substantial amounts of information.

This technique can never be more than a rough guide for decisionmakers. It can, however, provide significant insights into the relative importance of different policy goals and their implications for government intervention options. It is particularly helpful as a tool in participatory or consultative exercises (see box 6.4).

Qualitative criteria can be scored and used, such as the managerial capacity of the parents association. Similarly, the method can be scaled up to the policy level to assess, for example, options for policing using such criteria as cost, impact on crime reduction, and community participation. Intersectoral applications are more problematic, however, since appraisal criteria tend to be sector specific, although cross-sector criteria, such as employment or income generation, have been applied to poverty reduction funds.

Social cost-benefit analysis

Cost-benefit analysis lets decisionmakers determine whether net-present social value of a particular public intervention exceeds its discounted social cost and, therefore, justifies financing. The relative merits of spending options can then be appraised based on their contribution to social welfare. Cost-benefit analysis is a powerful tool for analysis—it allows for the appraisal of spending options across the public sector as a whole and the identification of the intertemporal distribution of costs and benefits of public spending. However, it presents several methodological difficulties, including the valuation of benefits accruing from public intervention.

Since social cost-benefit analysis is well established as a tool for public spending analysis, and is featured in many government manuals and a wide range of supporting texts, readers are referred elsewhere for guidance on detailed methodologies. The present discussion is limited to issues of particular significance to its application in poverty-focused public expenditure analysis, including the following:

Benefit valuation. The fundamental principle of social cost-benefit analysis is that benefits derived from a particular activity should be valued so that they can be examined against the corresponding costs. While this is straightforward for monetary transfers, it is more complicated in the case of in-kind benefits and services that need to have a value imputed. The above points about benefit valuation in the case of benefit incidence analysis are also relevant here.

This problem can be approached in two ways. First, we can assess the amount individuals would be willing to pay for a particular service, either by identifying the preferences revealed by their behavior or by using surveys to determine the contingent valuation of services. Although these techniques present a number of methodological problems, they have been widely used in the health sector. Second, we can deduce the value of the benefit from other market-type information in order to derive a surrogate price. Benefits from education are usually measured by the discounted rate of return from the stream of higher earnings enjoyed by individuals because of schooling. A similar approach can be applied to the health sector whereby the cost of death or ill health to an individual is measured by the forgone earnings or productivity.

This approach also has its shortcomings: (a) forgone income is certainly an inadequate measure of an individual's value of life and good health, and income may also be an inadequate measure of the personal benefits gained from education, especially among the poor; (b) a range of variables that may be important in determining the level of earnings of individuals and use of services is omitted; and (c) when valuing benefits, the approach makes no allowance for differences in service quality. The inherent difficulties of benefit valuation have led some to sidestep the issue altogether, focusing instead on the specific outputs of public intervention, such as cost-effectiveness and multicriteria analysis.

Addressing equity concerns. The use of “willingness to pay” or income-based valuations of benefit will give a greater value to benefits that accrue to higher-income groups than to benefits accruing to the poor. Benefit valuations can be adjusted by applying distribution weights that increase the relative value of benefits to the poor. However, choosing the appropriate weight is a matter of subjective preference.

Considering externalities. The benefit valuation approaches described above focus on the benefits accruing to the direct users of services. These approaches ignore the externalities generated by public services, such as education, which would have to be quantified and valued to include them in a monetary benefit estimate. This is often impractical or can only be done by attempting to value, for instance, the

Box 6.4. Applications of Multicriteria Analysis

One common application of multicriteria analysis is in the prioritization of project proposals, such as the submissions of communities in demand-led investment funds. A simple example is presented below in which projects for the construction of primary schools are appraised against four criteria: the existence of teachers in post for a period of more than six months (indicating the availability of resources for operation), existence of a parents association (indicating a basis for community participation in school governance), the school-age population in the intended catchment area (indicating need), and current distance to the nearest alternative primary school (indicating access). The first two of these criteria are considered fundamental to the success of projects, making failure to comply result in a veto of the project (line A). Data on the school-age population and distance to nearest alternative school are entered (line B), then normalized (line C) by applying the following formula:

$$E = [e - e_{min}] / [e_{max} - e_{min}]$$

The normalized values are then multiplied by the respective weights for each of the criteria (line D) and then summed to give a final project score (line E). Changes in the weights, reflecting differing policy priorities—need versus access, for instance—alter the final scores (line F).

	Project 1	Project 2	Project 3	Project 4
A Veto criteria				
Teachers in post longer than six months	Yes	Yes	Yes	Yes
Parents association in place	Yes	No	Yes	Yes
B Absolute values				
School-age population in catchment	1,650	1,600	1,350	1,400
Distance to nearest school (kilometers)	22	9	21	17
C Normalized values				
School-age population in catchment	1.00	0.83	0.00	0.17
Distance to nearest school (kilometers)	1.00	0.00	0.92	0.62
D Weighted values				
School-age population in catchment area x	7.0	5.8	0.0	1.2
Distance to nearest school (kilometers) x 3	3.0	0.0	2.8	1.8
E Final project score	10.0	5.8	2.8	3.0
School-age population in catchment area x	3.0	2.5	0.0	0.5
Distance to nearest school (kilometers) x 7	7.0	0.0	6.5	4.3
F Final project score with inverted weights	10.0	2.5	6.5	4.8

ethical and social values instilled in children through education, or the benefits of improved childcare. Hence, the full benefit of public provision of goods and services will tend to be underestimated using the standard benefit valuation methodologies described above. This has significant implications for comparing public and private provision of services when relative efficiency is assessed. The private sector will not consider externalities in designing its services; therefore, private sector operators may provide fewer services than would be socially optimal, since the additional costs or benefits of externalities are not taken into account.

Pricing government funds. Financial and opportunity costs should be considered when undertaking cost-benefit analyses. In principle, this includes the cost of government funds. The financial cost of a program may be determined by the cost of borrowing—the prevailing rate of interest for government bonds, for instance. This will usually be significantly lower than the opportunity cost of private sector use of resources. On the contrary, there are the distortionary costs of taxation used to raise revenue and finance public services. Browning (1987) has estimated that the shadow price, or opportunity cost, of government funds in the United States is between 1.1 and 1.5; the figure is likely to be much higher in some developing countries, depending on the tax system. If the shadow price is set at 1.4, this implies that public interventions should achieve a rate of return superior to 40 percent to justify the imposition of taxes needed to finance public spending. Given the difficulties in calculating the distortionary cost of taxes, shadow prices are unlikely to be applied. Nonetheless, it is important for decisionmakers to consider the cost public spending imposes on society when appraising interventions.

The informational demands of cost-benefit analysis are taxing. For this reason, the technique has generally been used to appraise specific programs and projects in which the costs and benefits can be quantified. Despite the technical demands, the analysis of aggregate and sector spending composition can draw on the basic principles of cost-benefit analysis.

6.3.4 Assessing options in the short term

A pragmatic approach for making judgments within a limited space of time is given below in order to help get countries started. A small amount of reliable fiscal and poverty data is still needed to get started, especially reasonably good information on actual spending patterns in addition to a poverty profile. Ideally, this would be complemented by evaluative information on the impact of programs, although this is typically limited.

In the short term, it should be possible to work through the five steps set out below. As time, data, and other constraints allow, this should be enriched by the types of analysis described above.

Overall fiscal analysis. It is useful to start with a description of the overall pattern of spending and revenues of the appropriate level of government over the past 5 to 10 years, depending on data availability. Having a long-term view on spending is valuable, since the effect of some programs on dynamic processes will create long lags. See section 6.4.4 and technical note F.1 for the types of information needed, which should include sectoral disaggregation; budgeted and actual spending; and, for the recent past, a functional distribution of expenditures.

Program descriptions. The unit of analysis of much public development effort is the program. The second step lists all the principal development programs, with a summary account of the objectives; intended and actual beneficiaries; the relationship to potential target populations (see below); and program cost information. See chapter 17, “Social Protection,” for an example of how this can be usefully put together.

The population poverty profile. A standard instrument of poverty analysis is the poverty profile (see chapter 1, “Poverty Measurement and Analysis”). It is useful to extend this to the nonpoor in order to look at income inequality as well as absolute poverty; many fiscal programs will reach nonpoor groups by design or accident, so any analysis of actual and alternative impacts has to include the whole population. Approaches to distributional analysis were set out in section 6.3.1; also see technical notes F.5 and F.6.

Initial analysis of the relationship between the program and population profile: Bringing together the fiscal or program analysis with the population profile. This simply compares the needs or opportunities of different groups with current government programs. It would include (a) a listing of all programs

against target groups in order to get a full mapping (this will give an initial account of which programs are directed at which poor and nonpoor groups); (b) an initial overall coverage and cost analysis designed to show which population groups (poor and nonpoor) are covered by different programs and how much is being spent (benefit incidence analysis surveys are useful when the data are available; complementing this, a qualitative review of coverage and incidence could be undertaken, allowing an initial analysis of the extent to which key groups are or are not covered, and the overall pattern of effort in relation to poverty reduction objectives); and (c) identifying a set of key questions concerning both the effect of different programs and potential areas for reform and reallocations based on the initial assessment in (a) and (b)—from the perspective of different population or income groups and from the effort and coverage information.

The example in table 6.5 was used as an initial basis for discussion in Ceará, Brazil. This table can be presented with various degrees of disaggregation and with different groupings, such as by gender or administrative region. Within each group, it is also useful to distinguish different age groups. It will frequently be desirable to present both larger groupings, such as all rural, with the distributional incidence within groupings.

Overall evaluation. In order to determine which public interventions, compared with other interventions, have made a difference, it is necessary to analyze the impact of a spending category or specific program on the income, or other dimension of well-being, of a particular population group (see section 6.3.1).

What can be done when evaluation results are unavailable? In the short term, two sources of information can develop more informed judgments on shifts in budget priorities: (a) the use of the rich body of experience on how programs work in the country, including the use and results of client and qualitative surveys; and (b) a systematic comparison of selected existing or potential programs with experiences in other countries having similar characteristics where rigorous evaluations have been done.

Together, these two sources can enable an assessment of the current or likely effect of different programs that, combined with the analysis of cost and coverage information in the previous section, will allow an informed analysis of the desirability, cost, and potential impact of shifting budgetary allocations on the different population or income groups. Even this level of analysis will take time, making it feasible for only a limited set of significant spending programs.

6.4 Improving Public Finance Management

There are various obstacles to making the budget system a solid foundation for the development and implementation of PRSs. This section identifies seven ways in which scarce public resources can be managed more effectively to reduce poverty:

1. planning resources more effectively;
2. improving accounting, auditing, and procurement practices;
3. increasing the focus on performance in public resource management;
4. creating an awareness of costs in line ministries;
5. ensuring an appropriate balance of inputs for programs;
6. integrating external aid in the budget; and
7. encouraging consultation in the budget process.

There are no quick ways to improve the effectiveness of public spending. On the contrary, improved effectiveness is a long-term goal that requires developing appropriate expenditure management and accounting systems along with strengthening associated institutional and staff capacity. Transparency and accountability are also important components of a set of public expenditure reforms that aim to improve the effectiveness of public spending. Hence, the issues addressed in this section should be considered within the context of the broader public expenditure and administrative reforms under way in each country.

6.4.1 Ensuring better resource planning: The role of MTEFs

Good resource and expenditure planning implies a long-term perspective that informs policy and budget decisions because such decisions typically commit government to expenditure beyond one year. Good resource planning would imply an institutional system that achieves the following:

- disciplines policy choices within a realistic aggregate resource constraint over the medium term;
- requires programs to compete for funding and ensures that policy and spending decisions are based on full disclosure of their expected effects and costs over the medium term (this applies to both increases and decreases in funding); and
- translates long-term strategic priorities into sustainable programs.

In turn, the above should be reflected in the following:

- better matching of spending with overall resource availability over the medium term, thereby increasing the likelihood that policies in the PRS will have their intended impact and will be consistent with short-term financing and stabilization needs;
- sectoral allocations of spending more in line with government priorities, on the basis of a comprehensive review of resources and policy options and their respective costs;
- improved sector planning and management by requiring the simultaneous programming of recurrent and investment expenditures, among other reforms; and
- increased effectiveness and efficiency of spending by requiring line agencies to better define their goals and activities and, where possible, link spending amounts to measures of performance in terms of outputs and outcomes.

The typical annual budget fails most of these tests. It does not capture the long-term implications of current spending decisions and so does not provide an adequate basis for matching future program financing needs with projected fiscal resources. The short-term focus is likely to subordinate longer-term poverty reduction and development priorities to immediate financial needs. Even countries with a tradition of five-year plans have not been successful in integrating the plan with the annual budget. Effective and efficient resource management requires adopting medium- to long-term perspective to budgeting in order to effectively link policies, plans, and budgets.

Many Organisation for Economic Co-operation and Development (OECD) governments have introduced an MTEF. The MTEF represents a top-down resource envelope consistent with macroeconomic stability and explicit strategic priorities, a bottom-up estimate of the current and medium-term costs of existing and new policies, and an iterative decisionmaking process that matches these costs with available resources. Box 6.5 shows the broad steps involved in this process.

Table 6.5. Mapping Existing Public Spending Programs into a Population Profile in Ceará, Brazil

<i>Household group</i>	<i>Key income characteristics</i>			<i>Program type</i>	
	<i>Absolute numbers</i>	<i>Mean income</i>	<i>Poverty incidence (percent)</i>	<i>Human development</i>	<i>Risk management (transfers, etc.)</i>
Rural landless					
Small farmers					
Rural nonfarm					
Small town (all)					
Metropolitan informal					
Metropolitan manual formal workers					
Metropolitan skilled formal workers					
Urban inactive households					
Total (all Ceará)					

Source: IPLANCE/SEPIAN and The World Bank (2001).

Preparation of an MTEF is an iterative process. Various aggregate resource forecasts can be estimated by assessing the tradeoffs between different macroeconomic and fiscal policy options (step 1). This allows decisionmakers to set aggregate expenditure and sectoral limits that best fit the country's broad development and poverty reduction goals (see chapter 12, "Macroeconomic Issues"). Given inherent uncertainties about economic conditions and spending priorities, a contingency reserve can be created before informing sectors of their medium-term spending limits. Part of this reserve can be reallocated to accommodate revised spending limits once the sector programs have been prepared (steps 3–5).

Expanding poverty reduction programs will often require reallocating spending from other areas of government activity. Scope for reallocating spending may be identified in public expenditure reviews or by analysts examining the poverty focus of current spending (see section 6.3.1). By accounting for the costs of existing policies over the medium term, including statutory and contractual commitments (step 2), the MTEF allows policymakers to assess the real scope for spending reallocations. The MTEF also allows sectors to plan the release of resources from ongoing or terminating programs over an extended period, thereby minimizing unforeseen disruption (step 3). Although a significant number of developing countries have embarked on the MTEF path, most are still at an early stage, and a number of areas merit attention to increase its effectiveness as an expenditure-planning tool. These are as described below.

- *Improving the reliability of resource and spending forecasts.* Unanticipated, large reductions in revenue or increases in costs can make forward estimates useless, since spending limits would need to be revised drastically at the beginning of each budget year. This risk can be reduced by a continuing focus on macrostability, developing more accurate macroeconomic forecasting tools, understanding the incentives facing public officials responsible for revenue and expenditure estimation (see chapter 8, "Governance," and chapter 1, "Poverty Measurement and Analysis"), and improving estimates of the costs of ongoing and new programs. A contingency reserve can help mitigate the effects of uncertain revenue and expenditure estimates in the later years.
- *Identifying key poverty reduction programs.* Since variations in resource flows cannot be overcome completely, it may be helpful to identify high-priority spending programs within the PRS. These can then be protected from any cuts that prove necessary. When identifying key programs,

Box 6.5. Steps in Preparing an MTEF

Step 1. (Re)estimate the resource envelope. Revenue estimates can be derived from three- to five-year forecasts of economic performance and development assistance flows.

Step 2. Set medium-term sectoral resource limits. The resources available for reallocation (to meet aggregate constraints and changed priorities) will be influenced by existing commitments, such as counterpart financing of aid, debt service obligations, intergovernmental transfers, and pensions. Wherever possible, these should be attributed to their sector before limits are settled. Indicative sectoral spending limits are then set based on government priorities, existing programs, and preliminary discussions with sector ministries. The indicative limits, along with proposed policy changes from line ministers and the Minister of Finance, are submitted to the cabinet (or a designated subcommittee of the cabinet) for consideration, usually several months before the beginning of the annual budget cycle.

Step 3. Prepare sector plans. The sector ministries prepare medium-term strategic plans that set out the sector's key objectives, together with their associated outcomes, outputs, and expenditure forecasts, within the limits agreed on by the cabinet. These plans should consider the costs of both ongoing and new programs. Ideally, spending should be presented by program and spending category with clearly distinguished financing needs for salaries, operations and maintenance, and investment.

Step 4. Review the sector plans. The Ministry of Finance reviews sector programs to verify their consistency with overall government priorities and spending limits. It focuses on the broad strategic issues rather than the detailed structure of proposed spending. When the sector forecasts exceed the limits, the Ministry of Finance may assist the sector agency in trimming spending or may request more information to revise the limits.

Step 5. Submit revised limits to the cabinet. Based on this review, the Ministry of Finance will propose revised multiyear limits on sector spending for cabinet consideration. These limits provide the basis for preparing more detailed budget proposals in the first year of the MTEF.

Step 6. Prepare the annual budget and present it to Parliament. The annual budget (based on the MTEF proposal) can then be prepared by the line agencies, submitted to the Ministry of Finance for aggregation, and presented for final consideration to the cabinet and the Parliament. The indicative allocations or limits for the later years should accompany the annual budget eventually presented to Parliament.

Step 7. Review and rollover. The existing spending estimates (budget year plus MTEF period) are maintained during the year and updated as necessary for any policy or parameter, such as inflation or growth, changes. The next budget cycle starts with the joint consideration of updated spending estimates for the MTEF period, the forecast of the following year's resource envelope, and changes in the government's strategic priorities.

Source: Muggeridge (1997).

care should be taken to assess the synergies between different programs. Examples include the large interactions between health and education programs. For instance, children's health may affect their learning capabilities, and maternal educational attainment may positively influence their children's health. This requires analysts to focus on the intended effect of public policy (such as reducing mortality rates) rather than on individual program outputs (such as the number of children vaccinated). The existence of synergies also suggests that government agencies need to collaborate at the operational level.

- 3 *Ensuring an adequate timeframe for analysis.* Poverty reduction programs may take several years to launch. An expansion in the number of teaching staff, for instance, will take three or more years, because teachers have to be recruited and trained. Although an MTEF is a significant improvement over an annual budget because of its medium-term perspective, an extension of the temporal perspective of significant programs beyond the timeframe of the MTEF may be needed to evaluate their full cost.
- 3 *Broadening the scope of policy analysis.* Initially, MTEF forward estimates will tend to present aggregate forecasts of sector and program spending levels broken down by economic classification. As institutional capacity develops, more detailed forecasts can be prepared, including, for example, the regional allocation of resources. In the long term, more sophisticated analyses of intrasectoral allocations can be used to ensure that the composition of spending is pro-poor, drawing on the types of tools mentioned in section 6.3, as well as the results of tracking and user surveys.
- 3 *Opening the policy debate.* The forward estimates provided by the MTEF are at least as useful as a basis for national policy debate as for the budget. This is because expanding poverty reduction programs will entail long-term commitments that are not evident in annual appropriations. Although governments may be reluctant to open the MTEF to public scrutiny during its formative stages, the publication of the MTEF should be a high priority.
- 3 *Using the MTEF to set budget limits.* Clear procedures are needed to ensure that the MTEF, which presents indicative resource allocations, is used in preparing the budget. When MTEF estimates are not used as the starting point for annual budget formulation (step 6 in box 6.5), the exercise will quickly lose validity. Thus it is critical that the MTEF be mainstreamed into the budget process as soon as practicable.
- 3 *Linking spending forecasts to performance targets.* A link between resources and performance targets should be built into the MTEF exercise at an early stage to ensure that the MTEF does not allocate resources according to agency demands regardless of performance. The presentation of performance targets for programs and sectors, along with the corresponding spending limits, allows decisionmakers to appraise the expected benefits of alternative spending options. The relationship between spending volume and performance measures will be initially difficult to model and can best be presented as indicative at the start. In the long term, however, these relationships can be refined and used as the basis for appraising future performance.

Although many countries have used macroeconomic forecasts for some time to set a hard aggregate budget constraint, the MTEF represents a significant innovation over these methods in its emphasis on the sectoral allocation of spending and the link between spending and performance. Ultimately, however, the MTEF will only be as effective as the weakest link in the public expenditure management system. For example, the effort in preparing medium-term forecasts of spending and their value for increasing resource planning in the sectors is likely to be lost if funds are not released to spending agencies as programmed. Thus it is essential that MTEF development be accompanied by broader public financial management reforms and improvements in budget execution procedures. Guidance on these issues is offered in The World Bank's *Public Expenditure Management Handbook* (World Bank 1998, Web version) and in the various other documents listed in the references.

6.4.2 Improving transparency and strengthening accounting and auditing

Strengthening accounting, auditing, and procurement practices, and improving transparency in public financial management, will help ensure that scarce financial resources are used to achieve policy goals.

Among other things, this process requires improvements in accounting systems, adoption of clear reporting rules and procedures, and skills development among government ministries.

A minimum expectations benchmark can be developed to measure performance in public financial management over the medium term. This benchmark would highlight institutional practices that underpin effective and poverty-oriented public financial management. The main indicators of compliance with minimum standards of performance can include those described below.

- ⤿ The legislature's timely approval of the annual budget and its public release in accordance with national laws.
- ⤿ Regular, timely, and accurate reporting by the Ministry of Finance to the legislature of actual government revenues and expenditures during and at the end of the budget year. These reports would compare actual revenues and expenditure to planned budget estimates and would be made available to the public in a timely manner.
- ⤿ Submission of timely reports to the legislature by the country's supreme audit institution on the accuracy of government accounts and on government's compliance with financial laws and regulations. These reports would enable follow-up action on violations and should be made available to the public. The audit office should have adequate independence from the executive.

Over the medium term, public financial audits would increasingly disclose information on revenue and expenditure items that are not included in regular budgets. They would also cover financial reports provided to the legislature or the public on government operations that may divert scarce financial resources away from poverty reduction goals, such as quasi-fiscal operations of parastatals or executive spending.

Complying with a minimum performance benchmark in public financial management could take several years to achieve, as improvements entail training staff in accounting procedures. They will also require attitudinal changes about the release of potentially sensitive information on budget execution.

6.4.3 Focusing on performance

Public financial management systems have traditionally emphasized control of resources over achievement of outcome-oriented objectives. Resources have often been allocated to government agencies on a historical basis and without consideration of their goals or performance. At the same time, highly centralized decisionmaking and control systems have made it difficult for public servants to take initiatives that improve the efficiency and effectiveness of government programs. As a result, organizations become inflexible and unresponsive, resources are diverted from the delivery of essential services to administrative overheads, and the public service system settles into a low-level equilibrium in which the lack of appropriate incentives and low expectations generate poor performance.

These concerns can be addressed by giving local line agencies, departments, and service delivery units more autonomy in managing their resources. While developing a performance culture and supporting management systems may require wide institutional reforms (see chapter 8, "Governance"), a number of additional measures may be considered within the budget system to improve the link between resources and performance, without sacrificing the controls needed to ensure compliance.

Developing appropriate measures of performance is a necessary first step in this process. Ideally, these should be conceived as a hierarchy of criteria and indicators that reflect the goals identified in the PRSP and can be related to resource use (see box 6.6).

Pragmatic considerations—such as the availability, reliability, and cost of data—should play a part in selecting appropriate performance indicators. It will often prove more cost-effective to monitor indicators for which data are already collected on a routine basis—assuming they are relevant—than to develop new systems for collecting new indicators. For example, one could collect key socioeconomic data as part of the routine Health Management Information System (see chapter 3, "Monitoring and Evaluation").

One of the challenges of performance management is linking the responsibilities of various levels of an organization, and levels of personnel, to appropriate performance indicators. The director of a village

Box 6.6. Performance Measures and Indicators

The following performance measures can be distinguished, as shown by the examples presented below (see also chapter 3, “Monitoring and Evaluation,” and chapter 4, “Development Targets and Costs”).

- Input indicators measure the quantity and sometimes the quality of resources provided for project activities. The performance criteria corresponding to inputs are compliance, defined as adherence to budgetary limits, and economy, or minimizing the monetary cost of a given volume and quality of inputs.
- Output indicators measure the quantity and sometimes the quality of the goods and services created or provided through the use of inputs. The performance criterion corresponding to outputs is efficiency, that is, minimizing the total inputs per unit of output.
- Outcome indicators measure the quantity and sometimes the quality of the results achieved through the use of the project output. The performance criterion is effectiveness, that is, maximizing the outcomes in relation to the outputs produced.
- Impact indicators measure the ultimate change in the living conditions of beneficiaries resulting (wholly or partly) from a project or program.

Sector	Type of indicator			
	Intermediate Input/output	Outcome	Final	Impact
Education	Number of teachers; teacher absenteeism	Number of primary school graduates; retention rates in poor regions		Higher literacy rates among the poor
Health	Number of primary health staff; availability of drugs	Vaccination rates among children of poor households		Lower morbidity and mortality rates in poor families
Police	Police officers			Decline in crime rate

Source: Schiavo-Campo and Tommasi (1999, chapter 15), Web version.

clinic may be held responsible for the number of vaccinations administered, for example, but he cannot be held responsible for the overall health status of the population. In general, measures of output and outcome are more suitable for service delivery units, and measures of impact are more suitable for the policy level. Care should also be taken to ensure that linking responsibilities to performance indicators does not have unintended results such as organizations and individuals seeking to achieve performance targets regardless of their effect on poverty outcomes. A focus on exam pass rates, for instance, may encourage schools to exclude less able students. Given these risks, it is preferable to measure program performance against a range of indicators—ideally, with direct linkages to poverty reduction goals—and to monitor the impact of linking levels of personnel to performance indicators (the performance management system) as programs are introduced.

Performance indicators can be linked to budgeting by requiring government agencies to present targets for key performance indicators as justification for their budget and medium-term expenditure-proposals. This can provide useful guidance to budget analysts, even where the relationship between spending and performance is still poorly understood—by comparing, for example, the growth rates of spending and key outcomes. More in-depth analysis can be undertaken as experience accumulates, allowing budget analysts to set targets for efficiency gains. Box 6.7 highlights some key issues related to performance monitoring.

For performance targets to be effective, they must be attainable with the resources at the organization's disposal. Ideally, they should be set after consulting with the appropriate managers rather than imposed from above. Feedback from users, through surveys or other instruments, can also provide critical information. Benchmarking can offer a useful starting point when setting targets for comparable service delivery units (see below). It is also important to set output and outcome targets after assessing the availability of inputs. For example, an increase in the number of children attending school in a district by 500 pupils may require 50 new classrooms, 50 more teachers, 250 desks, and 250 sets of textbooks. Attention should then turn to the feasibility of providing the necessary inputs within a given time period; if only 25 new teachers can be recruited and trained, the corresponding outcome targets can be scaled down accordingly. Only then should the manager consider costing the inputs required to achieve the revised targets.

Outcome and impact targets should have clear poverty reduction objectives by, for example, explicitly referring to utilization rates of certain socioeconomic groups or of regions that poverty diagnostics have identified as disadvantaged. In some cases, proxy indicators might be used to show the socioeconomic status of the beneficiaries of government services. For example, data on education of the mother may be collected during health clinic consultations, if that is a good proxy for household poverty status in a particular country. Existing information systems can be evaluated to see whether amendments could be introduced to provide better data on service distribution and, in particular, service access and use by the poor.

If target setting is to be taken seriously, processes for formal performance appraisal must be set up along with guidelines for corrective measures where targets have not been reached. Historical performance cannot be used as a basis for determining funding levels because this would effectively penalize potential service users for the poor performance of government agencies. However, organizations should require managers to explain their poor performance and identify corrective actions they intend to take. If consistently poor performance is ignored, the performance appraisal system will quickly lose credibility. Which manager needs to be held accountable for poor performance will depend on how decisionmaking responsibilities are allocated and the extent of autonomy at, say, the facility level.

It may be helpful to develop a program budget that explicitly links the structure of public spending to the main goals and activities of the PRS. Care should be taken, however, to ensure that programs have an institutional framework in which certain players will be held responsible for managing resources and achieving performance targets. Alternatively, the program classification can be used to complement the existing administrative and line item and economic classifications.

Adequate incentives will encourage improved performance, although this does not necessarily imply monetary reward. Performance appraisals can stimulate improved performance when they allow peer comparisons and benchmarking. This system can work quite well at the service delivery level, enabling managers to compare and contrast their performance with other units and helping to build a spirit of emulation and healthy competition. Closer analysis of the characteristics of better-performing units will help identify how poor performers can improve. Where monetary rewards are anticipated for personnel, care should be taken to build in systems for independently verifying performance indicators. Purchaser-provider arrangements can be made with payments based on output, such as clinics and number of vaccinations (see chapter 18, “Health, Nutrition, and Population”).

Government agencies and managers can only be expected to improve performance when decision-making about resource use is decentralized. When budgets are prepared by line agency finance

Box 6.7. Monitoring Service Delivery Performance

Monitoring systems should provide feedback on the efficiency and adequacy of service delivery. In this context, efficiency measures the relation between inputs and outputs; adequacy relates inputs, outputs, and the process of service delivery to predetermined standards. Monitoring both requires information on key outputs and inputs.

When possible, output data should be derived from the routine reporting requirements of government agencies, although the most appropriate indicators may not be available with the desired frequency or level of disaggregation, or may not coincide with the financial year. Output performance can be assessed with reference to quality, quantity, and timeliness of service delivery. Input information is generally limited to the budgetary or accounting data. Information on the physical inputs used to provide services other than personnel is rarely collected. Since reporting systems are expensive and difficult to introduce in the short term, it is generally advisable to make do with or adapt what already exists. Where adequate information is not available, surrogate measures can be applied—for example, declining attendance rates at government facilities are a fairly clear sign that the services provided have deteriorated. Developing specific new reporting systems can be justified only when the information is used routinely to support managerial or policy decisions. In Uganda, for example, introducing quarterly monitoring of the availability of supplies in clinics at the district level has helped ensure that supplies reach their intended beneficiaries because managers follow up on these reports.

Independent controls on performance, through surveys of service users, provide a valuable safeguard. These mechanisms will be particularly effective when users are informed about the service standards and the inputs provided to service delivery units, allowing them to assess compliance and adequacy. Uganda has improved transparency in delivering educational services by posting standards and budget information in all schools. Routine monitoring can be supplemented by periodic surveys of service delivery units to assess the adequacy of O&M funding, provision of inputs, and staffing levels. Periodic expenditure tracking surveys, described in technical note F.3, can be a useful way to get accurate cost estimates to pinpoint inefficiencies in public and private institutions and to get a better idea of weakness in the budget execution system. Detailed analysis of the design of monitoring systems can be found in chapter 3, “Monitoring and Evaluation,” and its case studies.

departments, operational departments and service delivery units may not be adequately consulted. This can lead to a mismatch between performance targets and budgeted resources. The situation is further aggravated when appropriations are made at the broad agency level and managed centrally. These problems can be overcome by improved internal consultation in budget preparation or devolution of budget preparation and management within the line agencies. Ideally, responsibilities for managing activities and managing resources should coincide. Devolution of responsibility for budget management to the service delivery point, in which the beneficiaries may participate in decisions about delivery, can be particularly effective (see chapter 9, “Community-Driven Development”).

Performance may also be improved by giving managers at all levels greater flexibility in resource use. Traditional budgeting systems consider compliance a higher virtue than efficiency and effectiveness: spending on individual line items is minutely controlled, and the reassignment of appropriations to different expenditure categories is discouraged. Where line item appropriations and classifications are excessively detailed, it may hinder appropriate flexibility in using resources by, for instance, preventing a manager from contracting transport services rather than incurring direct transport costs, without any corresponding gain in control. If reducing the number of line items is impractical, the scope for the discretionary reassignment of funds may be broadened.

Other incentives in the budget system also need to be examined. As noted above, when finance ministries and line agency finance departments consider budget execution rates in setting future years’ budget limits, the agency has an incentive to spend its entire budget regardless of whether resources are actually needed. In these circumstances, performance can be improved by allowing agencies to carry over some unspent funds between budget years, where they can show that activities will also be carried over, and retain a part of efficiency savings at the end of the year. While these incentives can only be awarded selectively, and have to be carefully monitored to avoid abuse, they will tend to have a positive impact throughout the budget system.

6.4.4 Creating awareness of costs

Public sector accounting has tended to focus on compiling appropriation accounts to control and justify public spending. Costs may be estimated for new programs and projects, but once the budget has been approved, the appropriation is considered the point of reference for monitoring and control. If budgets are prepared incrementally, no further cost analysis may be undertaken. As a result, costs in public institutions are poorly understood. This can result in the inefficient and ineffective use of scarce resources. The focus here is on actual budget costs in an accounting sense; creating an awareness of macroeconomic costs (inflation and taxes) of alternative fiscal options is obviously also important (see chapter 12, “Macroeconomic Issues”).

Periodic public expenditure reviews offer an opportunity for the Ministry of Finance and line agencies to take a closer look at the cost structure of service provision. One of the approaches that can be applied in this context—analyzing expenditures by spending item or economic composition—was discussed earlier (see section 6.3).

There are four complementary approaches to enhance awareness about costs: full costing, analysis by institutional structure, unit cost analysis, and activity costing. These are considered separately for two reasons: (a) the focus here is on the internal management of institutions rather than expenditure analysis and (b) the information required is usually derived from internal agency management information systems rather than the state budget and government accounts.¹ Since internal systems are often rudimentary, the techniques have to be applied creatively and lack the precision of financial accounting. They can still provide insight into the structure and behavior of costs at any level of an organization and can support managerial and policy decisions.

Full costing

Budget appropriations and accounts do not necessarily reflect the full costs of operating government agencies. Typically, the following items will be omitted: (a) goods and services consumed by the agency but procured by and charged to a different budget holder, such as centrally purchased vehicles,

medicines, textbooks, or maintenance services provided by a public works department; (b) goods and services financed from off-budget sources, such as external assistance and extrabudgetary funds; and (c) the cost of equipment and infrastructure consumed by the agency during the budget year, since the purchase costs are registered and then written off.

Omitting significant cost items from agency budgets and accounts is problematic. It underestimates total agency costs and, by implication, the cost of the services that the agency provides, leading to higher levels of service provision than is affordable. It also means that managers are not accountable for the resources they consume, leading to inefficient, supply-driven consumption. This is a problem familiar to donors. The high building standards frequently applied to schools provide a good example. These standards might be less exacting if the costs of construction could be directly attributed to the school budget, allowing tradeoffs with other facilities and supplies.

Costs can be better understood by requiring agencies to fully cost the services they provide during periodic public spending reviews. Comprehensive coverage of these reviews will rarely be possible because the agency may lack information on the cost of inputs procured by others. However, where cost information cannot be provided, the items omitted in routine budgets should at least be identified.

Efficiency is best improved by changing the underlying incentives within institutions. Managers can be held accountable for the inputs provided by other government agencies through introducing internal charging. For instance, funds for tertiary road maintenance could be attributed to districts rather than the public works department. This would require that the districts contract the public works department for the road maintenance services they consume. This will encourage managers to control consumption and reduce unit costs, opening the way to competitive tendering with alternative service providers. Similarly, the incentive regime for capital inputs can be improved by introducing capital charges. In the United Kingdom, recent budget reforms require agencies to prepare an operating cost statement that includes a depreciation charge to cover the cost of replacement of an asset and a charge for the capital used. These approaches are not without problems and are not immediately applicable to most developing countries. Still, they suggest that there are mechanisms that can help governments end the perverse incentives created by underpricing.

Analysis by institutional structure

In order to gauge the likely poverty focus of agency spending, it is helpful to know how much spending is dedicated to service delivery. A breakdown of costs by department will show the direct cost of frontline service delivery functions compared with administrative and noncore support functions. Care should be taken when interpreting these results—it will be necessary to refer at all times to the functions each department fulfills. For example, head offices may fulfill costly regulatory and supervisory functions that justify a substantial share of agency resources. In other words, this type of cost breakdown does not show the full cost of frontline service delivery functions because it ignores the cost of support services provided by other departments.

A more accurate picture of the agency cost structure can be gained by apportioning part of the costs of head office and other support departments to the service delivery departments that use these services based on fixed overhead recovery rates. The cost of agricultural extension services, for example, would include the cost of supporting research programs. This provides a better basis for appraising service delivery costs than the direct costs alone and gives some indication of the level of residual administrative overheads that the agency bears.

Unit cost analysis

Unit cost analysis seeks to set up the cost per performance unit in a particular period. Performance is usually measured by agency output, which provides an indication of the level of activity. In a health clinic, for instance, unit costs might be calculated based on the number of consultations. Outcome measures can be used where agency output is the sole or determining factor in the level of the outcome measure. Unit costs can be computed for the agency as a whole and for each department. In each case,

unit costs can be broken down by cost item, for example, personnel and capital costs per unit of output. Where departmental unit costs are prepared, the overhead costs of agency support services and facilities should be apportioned to set up the full cost of outputs. For instance, the unit costs for departments within a hospital should include the costs of overall hospital management, maintenance, and other general services.

Unit costs can be used for internal analysis or for comparison with other agencies, such as private or nongovernmental, providing a similar—ideally, identical—range of services. When used as the basis for comparison, either between agencies or over time, unit costs provide a good indicator of efficiency. They can also be used as the basis for cost reduction targets, performance monitoring, and the appraisal of different methods for delivering a particular service. However, unit costs have to be interpreted with care because they may not take into account the quality of service provided, which will generally have to be controlled for independently. It is also important to consistently treat the costs of capital, which may be spread across a number of years, so as to avoid excessive “lumpiness” in unit cost profiles.

Activity costing

Whereas unit cost analysis is based on the principle that outputs “consume” inputs, activity costing follows the principle that outputs involve activities that consume inputs. This allows overheads to be allotted more accurately and to better reflect the relationship between support services and facilities and the final output of the agency. It also allows managers to identify how organizational procedures affect costs. The approach usually involves a detailed analysis of the activities undertaken, including measurement of such inputs as the time required by personnel to undertake each activity, and the definition of a cost driver for each activity or group of activities. The cost driver is a quantitative variable that determines the level of cost for the activity. In a maternity clinic, for instance, the cost driver might be the number of consultations, the number of births, the number of births assisted by a doctor, or the length of postnatal internment. The costs of individual activities are assigned to each unit of the output they generate.

Activity costing is likely to be most effective as a tool for analysis in agencies that provide a wide range of services involving many different activities. For this reason, it has generally been applied in the health sector and, to a lesser extent, in agricultural services and policing. It is particularly useful in designing new programs because the cost of different implementation mechanisms can be appraised. It also supports management by providing the basis for departmental and personnel performance targets. However, activity costing is analytically intensive and is better used in situations in which unit cost analysis has failed to provide an adequate understanding of cost behavior within an agency. For example, it could be effective when attempts to drive down costs have not been successful, possibly because cuts have been poorly targeted.

6.4.5 Appropriate balance of capital, salary and operations, and maintenance

Inappropriate composition of spending on different types of inputs may seriously compromise the effectiveness and impact of spending on the poor. If no trained nurses are available in clinics, the poor are effectively denied access; if classrooms fall into disrepair, the quality of learning may suffer; and so on. The appropriate economic composition of spending will be determined by institutional or program goals. The analysis of the economic composition of spending will usually distinguish between capital investment and recurrent expenditure, and the latter may be broken down into payroll costs, other goods and services, and subsidies and transfers. Capital investment and O&M are likely to be the main components of spending for public works programs, while in the social sectors, payroll costs will tend to dominate. Despite these intersectoral differences in the structure of spending, it is possible to identify patterns of underspending or overspending for certain expenditure categories. These patterns can best be analyzed at the sectoral level by focusing on spending by institution and—where information is available—by program on (a) capital and recurrent expenditures and within the recurrent budget and (b) payroll versus nonpayroll costs.

Capital versus recurrent spending

In many countries, there is a significant bias toward capital expenditures, driven by governments that perceive the inadequacy of current coverage of services and infrastructure and the priority of the expansion of service networks. This bias is reinforced by donor preferences for projects as well as domestic construction lobbies. One of the results of this capital bias is to reduce the funds available for O&M, leading to inadequate funding of service provision and the gradual degradation of capital investments and the quality of public services.

Examining the general flow of goods and services from all spending categories can help to identify biases toward capital expenditures. This broad perspective can be supported by rigorous screening of programs and projects to ensure that future O&M costs have been considered and are reflected in budget proposals and forward estimates of the MTEF. Where O&M costs are underfunded, existing allocations are not a suitable basis for appraisal. Ideally, detailed costing of O&M requirements should be prepared (see below). Where this has not yet been carried out, international benchmarks may provide some guidance (see technical note F.2). A good measurement for equipment and small buildings, such as schools and health posts, is that 5 percent of the total construction costs should be allocated annually to maintenance.

Is payroll spending appropriate?

Since wages and salaries are large spending items in most sectors, line agencies and the Ministry of Finance can undertake detailed analysis of the staffing and payroll composition to identify potential savings or cost reduction. Three key issues should be addressed: (a) the appropriate level and composition of staffing, (b) the appropriate balance between personnel and nonpersonnel costs, and (c) the structure of civil service pay and its effect on institutional performance. Experience shows that there is no single answer, and pay and personnel reforms have to be part of a broader public sector reform effort.

Although the appropriate level and composition of staffing depend on the type of services being provided, some key indicators help to guide the analysis:

- the proportion of staff and staff costs in frontline service delivery agencies, which is an indicator of the influence of the bureaucracy in the system;
- the structure of personnel by level of training; and
- the composition of staff by type of contract, distinguishing between short-term or daily contracted staff and permanent employees.

Similarly, the degree to which payroll expenses crowd out O&M spending can be assessed by using a few simple measures:

- trends in payroll growth over time and the ratio of payroll to O&M spending;
- O&M spending per employee; and
- O&M spending per frontline staff member.

The adequacy of pay scales can be gauged by comparing public sector pay against equivalent private sector salaries. In the analysis, care should be taken to use the take-home pay of civil servants, including base pay and a wide range of fringe benefits. Relevant incomes in the informal sector can also be considered.

Transforming this analysis into a policy response is more complicated. Many public services are caught in a vicious circle of poor pay, poor performance, and overstaffing. Solely reducing staffing levels to increase pay rates has rarely been successful. Significant savings may be generated by updating personnel records, centralizing the payroll system, and ensuring adequate monitoring of staff, all of which help to end fraudulent payments to nonexistent workers. Comprehensive hiring freezes, or a freeze on hiring poorly qualified personnel, can also help reduce the fiscal costs of overstaffing in the medium term. Public sector retrenchment may also be considered, although, once again, the payoff for such programs is generally negative in the early years. Donors can and have provided financial support to government programs aimed at cutting staffing levels and raising pay rates, particularly for highly qualified personnel.

Is enough being spent on O&M?

Spending on nonpayroll O&M directly affects program efficiency and effectiveness. Underfunding of O&M results in inadequate provision for the materials and services needed to sustain service delivery and maintain capital infrastructure—signs of underfunding include a lack of basic teaching materials in schools, a lack of drugs and supplies in clinics, and impassable roads. Underfunding of O&M can impose large direct costs on governments when the deteriorating capital stock requires extensive repairs, and large indirect—or opportunity—costs when personnel and capital investments are used inefficiently.

The appropriate level of O&M expenditure is best determined by service delivery standards, which often will have to be developed for specific programs, sectors, and services. These standards will determine the volume of inputs required to provide a certain service and should not be based on current levels of O&M spending and inventories of existing equipment and infrastructure if O&M is currently underfunded. Developing these standards is a time-consuming task, requiring a full costing of inputs for service provision. It is also inherently political because the desired level of inputs may not be possible given current funding constraints, requiring adjustments to expenditure ceilings or iterative revisions of the service delivery standards. Once established, the standard represents a commitment to fixed spending levels per service delivery unit. Great care should be taken, then, to ensure that the standards are set at a sustainable level.

How much should agencies spend on nonwage O&M?

How much government agencies should spend on nonwage O&M depends on the cost of the package of services that the agency provides, or intends to provide. This in turn depends on the means by which these services are delivered and the prevailing cost of inputs—and the return on the resulting expenditures compared with alternative uses of public funds.

Intercountry comparisons highlight the most egregious discrepancies in expenditure on nonwage O&M, but they can be misleading because of differences in country conditions and the nature of services provided. Comparisons over time are more revealing, particularly where these are related to changes in population, staffing levels, and numbers of service delivery units. Historical trends are, however, an unsatisfactory basis for expenditure policy, particularly where—as is often the case—expenditure on nonwage O&M has long been insufficient to sustain the desired level and quality of services.

Ideally, nonwage O&M allocations should be based on a costed package of services, taking into account the physical inputs required to provide services, related to the target population or service delivery units—such as materials and textbooks for primary school students, medicines, and material and maintenance charges for health facilities. On this basis, expenditure norms can be defined. This should be an iterative process in which the aggregate cost of services at the desired level of coverage is related to the resources available and, if necessary, revised downward by adjusting the content of the package or levels of coverage. This ensures that the expenditure norms are realistic and sustainable given resource constraints. Hard choices may be necessary: many countries, for example, are able to afford global coverage of the minimum public health package costing US\$12.00 per capita identified in the *World Development Report 1993*. Failure to confront these resource constraints will undermine the norms, because the required levels of funding will not be available.

Obviously, the process of costing a standard package is easiest at the lower service delivery units because the range of inputs needed to provide services is limited, although even at this level expenditure norms are unlikely to be fully costed or take into account regional variations in cost or service provision. Consequently, operational managers tend not to apply norms rigorously. Nevertheless, they provide a sound basis for resource allocations and give managers guidance on indication of expenditure priorities. Monitoring of expenditure in relation to performance indicators is needed to ensure that adequate levels of nonwage O&M are applied. Community participation in management and supervision of service delivery units provides a further guarantee because communities will be the first to suffer if adequate funding of nonwage O&M is not assured.

Although there is widespread evidence that expenditure on nonwage O&M generates substantial returns across a range of sectors, valuation of the returns relative to other expenditure categories is

problematic. The World Bank's Highway Design and Maintenance Standards Model does permit policy analysts to appraise tradeoffs between maintenance and capital expenditures for transport systems, taking into account a wide range of country-specific conditions (see http://www.worldbank.org/html/fpd/transport/roads/rd_tools/hdm3.html). Unfortunately, such tools have yet to be developed for other key poverty reduction sectors.

6.4.6 Integrating external assistance

Increasing the poverty reduction effect of public spending will often require more effective delivery and coordination of external assistance, particularly in aid-dependent countries. This can best be achieved by integrating the management of external and internal resources in the budget process, allowing the government to allocate all available resources according to its policy priorities. While full integration may be a long-term—and perhaps unattainable—goal, donors and governments can greatly improve the effectiveness of external assistance in the short run by negotiating an external assistance strategy in the context of the PRSP process that explicitly identifies the priority sectors and programs for donor financing. Although most donors will broadly agree with the poverty reduction goals identified under the PRS, differences in priorities and approaches will need to be reconciled between donors and government. More detailed external assistance strategies can then be developed for key areas through sectoral working groups in which representatives of important donors and line agencies participate. This has already been done in a number of countries in the context of sector-wide approaches (SWAPs). An extension of that approach is envisioned here.

Donors and governments can also improve the effectiveness of external assistance by agreeing on financing priorities for individual donors within the framework of a global external assistance strategy, rather than through bilateral agreements, will allow the government to (a) lock donors into long-term financing agreements and (b) exert peer pressure on donors who may want to renege on agreements at a later stage or on those who prefer to develop their programs outside the broad framework outlined by the government. Developing a comprehensive external assistance strategy will also reduce the risk of financing nonpriority spending, which often occurs when external assistance agreements are negotiated on a project-by-project and donor-by-donor basis. Donor codes of conduct also can play a useful role. These have been negotiated and adopted in specific sectors in a number of countries.

Donors and governments can also adopt more flexible and long-term financing instruments. Consensus is growing that projects are often an ineffective way to channel development assistance in aid-dependent countries. In response to these criticisms, there has been a gradual move in recent years toward support for sector programs. In this approach, government and donors support the development of a sector under government leadership. A single policy and spending program is used along with common management and reporting procedures. The sector program approach offers several advantages:

- It allows government to direct resources to priority spending within the sector and may enable a better balance between financing for technical assistance, investment, and O&M.
- It generally entails a long-term commitment to the sector, thereby improving the predictability of resource flows to the sector.
- It reduces transaction costs by consolidating the reporting and management systems and, where possible, by using the government's internal financial management procedures to disburse and account for funds.

In many countries, sector programs will be the most effective instruments for managing external assistance in support of the PRSP. When the development of sector programs is impractical, attention should focus on screening individual projects to ensure their consistency with the goals of the national PRS.

Strengthening the national capacity for managing external assistance within a core government agency, with responsibility for negotiating and approving financing agreements, can improve the effectiveness of external assistance in the short term. Other related approaches include tracking donor financing pledges, commitments, and disbursements, and facilitating donor support to priority institutions and programs. These functions are best fulfilled by a single institution, ideally based in the Ministry of Finance, to allow links with the budget and the MTEF. While developing capacity is

ultimately the government's responsibility, donors can play an important role by ensuring compliance with the government's aid management systems. This can be done by providing timely reports on commitments and disbursements that are structured for easy use by the government's financial management agencies. Unfortunately, most donors have a poor track record in providing these reports.

Finally, governments and donors can improve effectiveness by ensuring that resource allocation decisions consider all the resources at the government's disposal, including those provided through external assistance. An existing or planned MTEF is the most appropriate instrument for programming development assistance. If an MTEF has yet to be developed, this function may be fulfilled by the public investment program, which will generally list the majority of projects and programs financed by external assistance. The more comprehensive is the financial information provided by donors, the more coherent the resource allocations.

6.4.7 Encouraging participation in the budget process

The poverty impact of public spending can be improved by involving those who are supposed to benefit from government services in budget preparation and monitoring (see chapter 7, "Participation," and chapter 8, "Governance"). Stakeholders can be involved at many levels, from consultations of users for their views on priorities and performance, to user participation in managing government agencies and services.

The choice of the appropriate consultation technique will depend on the purpose of consultation and the resources available. Box 6.8 provides a menu of possibilities. Most of the techniques that generate qualitative data can assist in appraising performance as it relates to the process of service delivery.

The greatest challenge lies not in collecting information but in devising ways by which the information gathered can be used to support policy and managerial decisions. This is particularly true of qualitative information, which may have to be transformed into quantitative data to suggest orders of magnitude for preferences and to scale the problems identified in the process of service delivery. While managers will generally have discretion in how they use and respond to comments by the general public and service users, policymakers will prefer to base decisions on a sound quantitative base. Where the results of consultation exercises are intended for subnational levels of government, clear guidance should be provided on how this information can be integrated in routine planning and budgeting procedures.

While consultation provides decisionmakers with information, participation requires that citizens and the beneficiaries of services take an active role in resource management decisions. Traditionally, the budget process has been closed—carried out within government under a veil of secrecy and revealed to the public only after parliamentary approval. Greater transparency in the budget process, as evidenced by the timely publication of public financial management information—budgets, accounts, and forward-planning documents such as the MTEF—in a form that permits meaningful analysis, is a necessary precondition to greater participation. Another precondition is allowing citizens to voice their concerns and priorities through the press, lobby groups, and their representatives. Guidelines on improving transparency are provided in the IMF's "Code of Good Practice on Fiscal Transparency" (see <http://www.imf.org/external/np/fad/trans/summary/summary.htm> and supporting manual).

To foster participatory budget planning, it will be necessary to provide information to stakeholders so that they understand the budget process and how they can influence key decisions. For example, the government can (a) publish citizen's guides to the budget process and the tax system; (b) use newsletters, associations, meetings, and so forth to disseminate information about the budget process and to receive feedback from stakeholders; (c) publish fact sheets on how the local budget process works and provide details on the source of a given district's money and the use of local tax payments; (d) open a government publications office where members of the public can review official budget documents; and (e) publicize achievements and obstacles related to sound financial management and expected budgetary outcomes by sector.

It will be necessary to provide stakeholders with information on budget decisions after the passage of the budget. For example, the government could publicize information about tax rates. The government should open avenues for stakeholders to monitor actual expenditures to ensure correspondence between

Box 6.8. Choice of Consultation Method for Allocation Decisions and Performance Appraisal

Consultation method	Implementation constraints	Allocation decision supported	Performance measure supported
Household surveys	Expensive and require specialist analysts	Intersectoral, sectoral	Process, outcome
Service delivery and integrity surveys	Expensive and require specialist analysts	Sectoral	Input, output, process
Participatory poverty assessments	Expensive and require specialist analysts	Intersectoral, sectoral	Process, outcome
Rapid rural appraisals	Expensive and difficult to generalize results	Local (village) possibly regional/sectoral	Process, outcome
Public meetings	Generally tied to specific issue	Local	Process
Focus groups	Generally tied to specific issue	Local, sectoral	Process
User or citizens panels	Generally tied to specific area or sector	Local, sectoral	Process
Report cards and user surveys	Generally tied to specific area or sector	Local, sectoral	Process
Representative bodies (nongovernmental organizations, associations)	Generally reflect special interests	Local, sectoral	Process

For further information, consult <http://www.servicefirst.gov.uk/1998/guidance/users/index.htm>.

budget plans and actual budget execution. For instance, the government could make available through the radio or in newsletters information on the amounts and timing of budget disbursements.

The key to building a participatory budget planning system is facilitating a culture of open communication at various levels of government and among public officials, local political leaders, and citizens' groups. Because stakeholders will have diverse education and linguistic backgrounds, effective communication and information dissemination strategies about the budget process will often require radio broadcasts and printed materials in local languages.

The benefits of participatory budget planning to the government are both political and economic. By more directly involving stakeholder groups, participatory budget planning can help boost public support for the local and national budget process, which in turn increases people's willingness to voice their concerns about fiscal management and their budget priorities and improve communication among government officials, political leaders, and civic groups.

Publication of budget releases at the local and sector levels can also increase fiscal transparency and accountability in local financial management and assist effective planning and service delivery at local clinics and schools. For example, such publications can reduce uncertainty about financing for salary and program expenditures. Strategies to open communication about the budget process at the local level can also help to increase tax compliance and local tax revenues. Citizens are more likely to pay taxes once they understand the budget process and how their contributions are used to finance beneficial public services. They must have confidence that minimal corruption exists in the local financial management system. Hence, participatory budget planning can help to increase the local revenue base for public service provision.

Note

1. This chapter can only briefly cover cost analysis techniques. For further detail, see the resource materials posted by the U.K. Treasury at http://www.hm-treasury.gov.uk/Documents/Public_Spending_and_Services.

Guide to Web Resources

For guidance on sector programs, see Mick Foster and Adrian Fozzard (2000a), DFID [Department for International Development] “Economists’ Manual: Aid and Public Expenditure.” For the meeting of the Like-Minded Donor Working Group on SWAPs for Irish Aid, see Mick Foster, Andy Norton, Adrienne Brown, and Felix Naschold (2000). “The Status of Sector Wide Approaches: A Framework Paper.” Both publications available at <http://www.odi.org.uk/pppg/cape/capepapers.html>.

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Part 2

Cross-Cutting Issues

Chapter 7

Participation

*Seema Tikare, Deborah Youssef, Paula Donnelly-Roark
and Parmesh Shah*

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7.1 Introduction

Participation is a process, not an event.

—Alan Whaites, World Vision

African countries can succeed only if they embark on homegrown visions, development strategies and programs with which the majority of their peoples can identify.

—President Isais Afweki, Eritrea, quoted in
“Who Shapes Your Country’s Future”

There is immense pressure to move quickly: the world is impatient. But we should recognize that there will often be a tradeoff between moving fast and the genuinely participatory approach that is central to the new approach. If we fail to allow the time to genuinely open the process to different development actors and to the poor themselves, in the design, implementation and monitoring of poverty reduction strategies, we might win some immediate battles, but we’d lose the long-run war to develop the accountable institutions that are essential to poverty reduction. Drafting strategy papers in Washington that are subsequently signed off by governments in the name of the people should be a thing of the past.

—James D. Wolfensohn,
President, World Bank¹

7.1.1 What is participation and what role can it play in the PRSP?

Participation is the process by which stakeholders influence and share control over priority setting, policymaking, resource allocations, and/or program implementation. There is no blueprint for participation because it plays a role in many different contexts and for different purposes.

To date, participatory processes in developing countries have tended to take place at the microeconomic or project level and have become increasingly innovative as methods become more established and sophisticated. However, to achieve participatory outcomes at the macroeconomic level, it is necessary to use participatory approaches at both the microeconomic and macroeconomic levels in a complementary manner for maximum effect. These approaches entail several elements, namely,

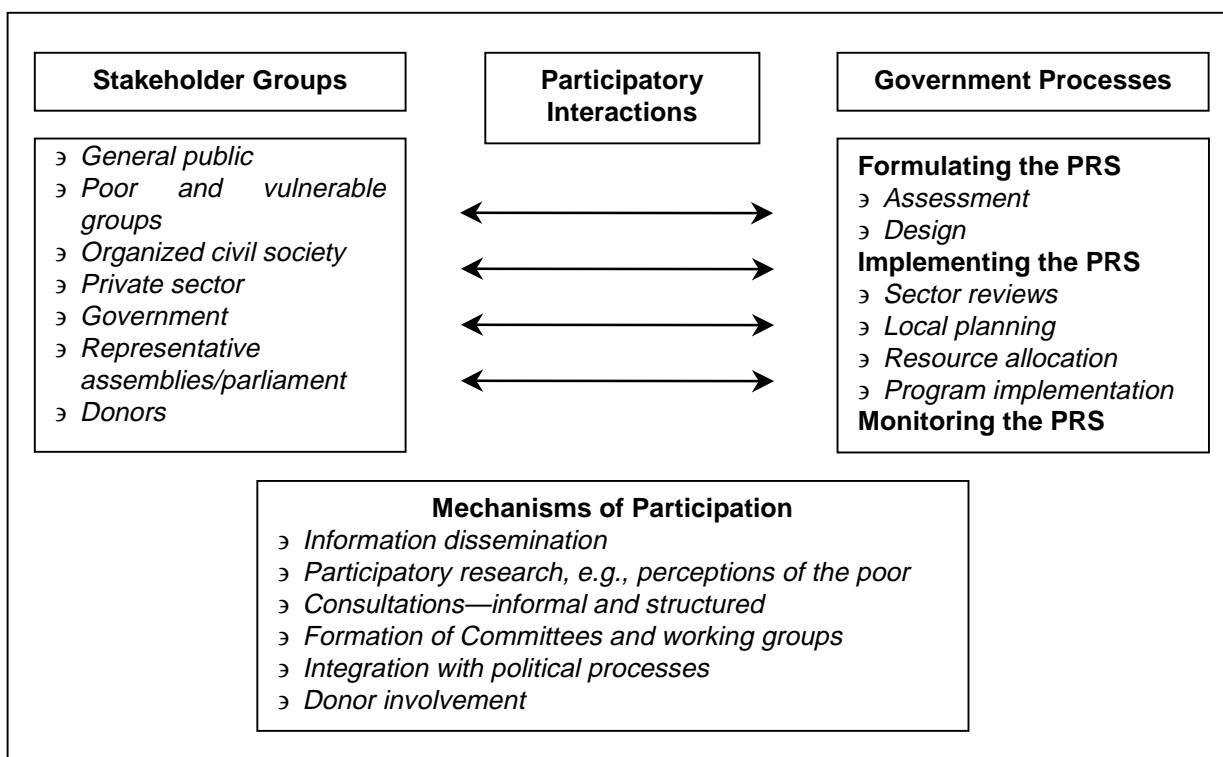
- an outcome-oriented participation action plan,
- a public information strategy, and
- multistakeholder institutional arrangements for governance, as described below.

Figure 7.1 shows how the various stakeholders can interact with governments to affect processes at the macroeconomic level.

7.1.2 An outcome-based approach to participatory processes

Participatory processes in Poverty Reduction Strategy Papers (PRSPs), including information dissemination, dialogue, collaboration in implementing programs, and participatory monitoring and evaluation, are most effective when they are designed to be outcome oriented. The ultimate outcome of a PRSP is not the paper but public and community actions to reduce poverty. Therefore, in planning a participatory process, it is important to keep in mind that the outcome-based approaches that are initiated and the institutional arrangements that support them can have an enduring influence over policymaking and implementation.

Outcome-based approaches to participation at the macroeconomic level should provide policymakers with concrete inputs into their decisionmaking and policy implementation. Open-ended participatory processes risk resulting in generalities and vague recommendations and may not lead to direct influence over antipoverty policies. In contrast, outcome-based approaches allow participation to be planned in

Figure 7.1. Participation in Government Processes

such a way that all stakeholders feel included, gain ownership, and can influence the process. Furthermore, they allow participation to be based on the content of the PRSP and on specific issues that immediately affect each group of stakeholders.

Table 7.1 shows a schematic for visualizing the process of designing a participatory process, moving from inputs to outputs to outcomes to impact. It suggests a range of options, given the objectives of increased transparency and accountability, and the ultimate impact of effective development and poverty reduction policies and programs.

Outcome-based approaches to poverty reduction look beyond the PRSP itself to actually implementing poverty reduction policies and monitoring their poverty-reducing impact. They promote a long-term view of the PRSP process, but can also be used to monitor short-term outputs.

This chapter offers a range of options for how participatory processes can be designed to yield specific poverty-reducing outcomes. There is no blueprint for participation, especially at the macroeconomic level. On the contrary, there are a variety of choices given a country's particular context, its starting point, what is considered feasible in that country and what outcomes it hopes to achieve. This chapter is a learning tool for participatory processes in PRSPs, offering good practice examples from diverse contexts.

7.1.3 Some guiding principles

There are several guiding principles for participation that lead to more inclusive and equitable processes for formulating, implementing, and monitoring poverty reduction strategies. Over time it has been found that processes that have the following characteristics can lead to effective participation.

- **Country ownership.** Government commitment and leadership and broad country ownership are critical for effective formulation and implementation of poverty reduction strategies.
- **Outcome orientation.** Participatory processes for the PRS can be designed and conducted with specific outcomes in mind, such as to fill critical information gaps or to engage specific groups that have previously not been in a position to contribute. This will yield more concrete information for planning and implementing poverty reduction strategies.

- 3 **Inclusion.** The PRS process is more likely to be effective if the knowledge and experience of a range of stakeholders, including the poor and vulnerable groups, especially women, are tapped and their perspectives systematically incorporated into the design and implementation of the country's poverty reduction strategy.
- 3 **Transparency.** Transparency of participation and its outcomes at the national and local government levels build trust, ownership, and support among all stakeholders.
- 3 **Sustainability.** Participatory processes should build as much as possible on existing governance and political systems. Participatory processes that build on existing mechanisms are more likely to be institutionalized and sustained over time. Similarly, policy reforms are more likely to be adopted if they are informed by a widely shared understanding of poverty and its causes.
- 3 **Continuous improvement.** The poverty reduction strategy (PRS) process is an iterative process of participation, planning, implementation, assessment of set targets and indicators, and feedback. Regular participation will play a key role in continuously improving poverty reduction strategies.

Table 7.1. Designing a Participatory Process

Final impact	3 Effective development and poverty reduction strategies and actions
Key outcomes	<ul style="list-style-type: none"> 3 Accountable, transparent, and efficient processes for economic decisionmaking, resource allocation, expenditures and service delivery 3 Increased equity in development policies, goals, and outcomes 3 Shared long-term vision among all stakeholders for development
Key outputs	<ul style="list-style-type: none"> 3 Ongoing institutional arrangements for participation and consensus building in government decisionmaking processes for macroeconomic policy formulation and implementation 3 Institutional capacity to demystify macroeconomic policies and budgets, analyze data, and promote information exchange and public debates in Parliaments, the media, and civil society 3 Development of mechanisms for negotiation and rules of engagement between key stakeholder groups 3 Citizen report cards that monitor, for example, the Medium-Term Expenditure Framework (MTEF) and the PRSP 3 Development of feedback mechanisms and participatory monitoring systems that enable citizens and key stakeholders within the government to monitor key poverty reduction initiatives, public actions, and outcomes as a part of Poverty Reduction Strategy (PRS) formulation and implementation 3 Choice of poverty reduction actions based on a better understanding of the multidimensional aspects of poverty and its causes, including vulnerability, insecurity, and governance
Inputs: mechanisms and methods	<ul style="list-style-type: none"> 3 Public information strategy (written and broadcast media, Web sites, and so on) 3 Participatory poverty assessments, integrating qualitative and quantitative indicators 3 Stakeholder analysis 3 Participatory choice of antipoverty actions to address vulnerability, insecurity, and governance 3 National workshops 3 Regional or local workshops 3 Focus groups and interviews 3 Building networks or coalitions of nongovernmental organizations (NGOs) 3 Participatory budget formulation and expenditure tracking 3 Setting up a poverty monitoring or coordination unit 3 Citizen surveys and report cards 3 Preparation of alternative PRSPs or policy proposals 3 Demystification of budgets through simple summaries and presentations 3 Sector working groups with multistakeholder representation

7.1.4 Stages in PRSP process: role of participation

Figure 7.2 depicts an iterative PRSP process and suggests various entry points for participatory processes. It shows how participation at various stages of the overall process can help build ownership over the strategy, make it more equitable to and representative of various stakeholder interests, increase the transparency of the policy formulation process, and, ultimately, make the strategy more sustainable (see technical note G.2 for an example from Uganda).

7.1.5 Structure of this chapter

This chapter provides operational guidance for planning and carrying out a participatory process in the PRSP. It offers a range of options available to designers and participants in planning and conducting macroeconomic-level participation.

The next section addresses formulation of the initial framework for participation. The first step entails negotiation among the government, civil society, and World Bank and International Monetary Fund (IMF) staff to clarify and define participation and the role it can play in the poverty reduction strategy. The second step involves the creation of an enabling environment through sharing information and promoting dialogue. The third step promotes participatory processes in all principal sectors of society, at all levels within the government, and establishes mechanisms that link the national and local levels and in civil society at both the national and local levels, paying particular attention to excluded and vulnerable groups such as the elderly and disabled, women, and youth.

Section 7.3 provides an overview of the building blocks of a participatory process at the macroeconomic level to guide practitioners in breaking down participatory processes into manageable components linked to the PRSP. These building blocks entail poverty diagnostics, macroeconomic policymaking and reform, budgeting, public expenditure management and public service delivery monitoring, and monitoring and evaluation of the effect of policies on poverty outcomes. This section also summarizes some limitations and constraints on participatory processes.

Section 7.4, dealing with interim PRSPs, explains the role and nature of the participation action plan and describes some key steps in its design. Because the interim PRSPs deal with a shorter timeframe than full PRSPs, and because many more countries have experience in developing them, we are able to provide more examples and lessons learned for this part of the process. Based on this learning, this section offers a range of options to practitioners formulating both the PRSP and the participatory process for developing an inclusive, realistic, representative, and equitable strategy for poverty reduction.

Section 7.5 provides detailed examples and guidelines for incorporating participatory processes into the above four building blocks of the PRSP over the longer timeframe of the full PRSP.

Finally, the technical notes provide case studies that show emerging good practice for participatory processes and contain some tools for carrying out the participation action plan.

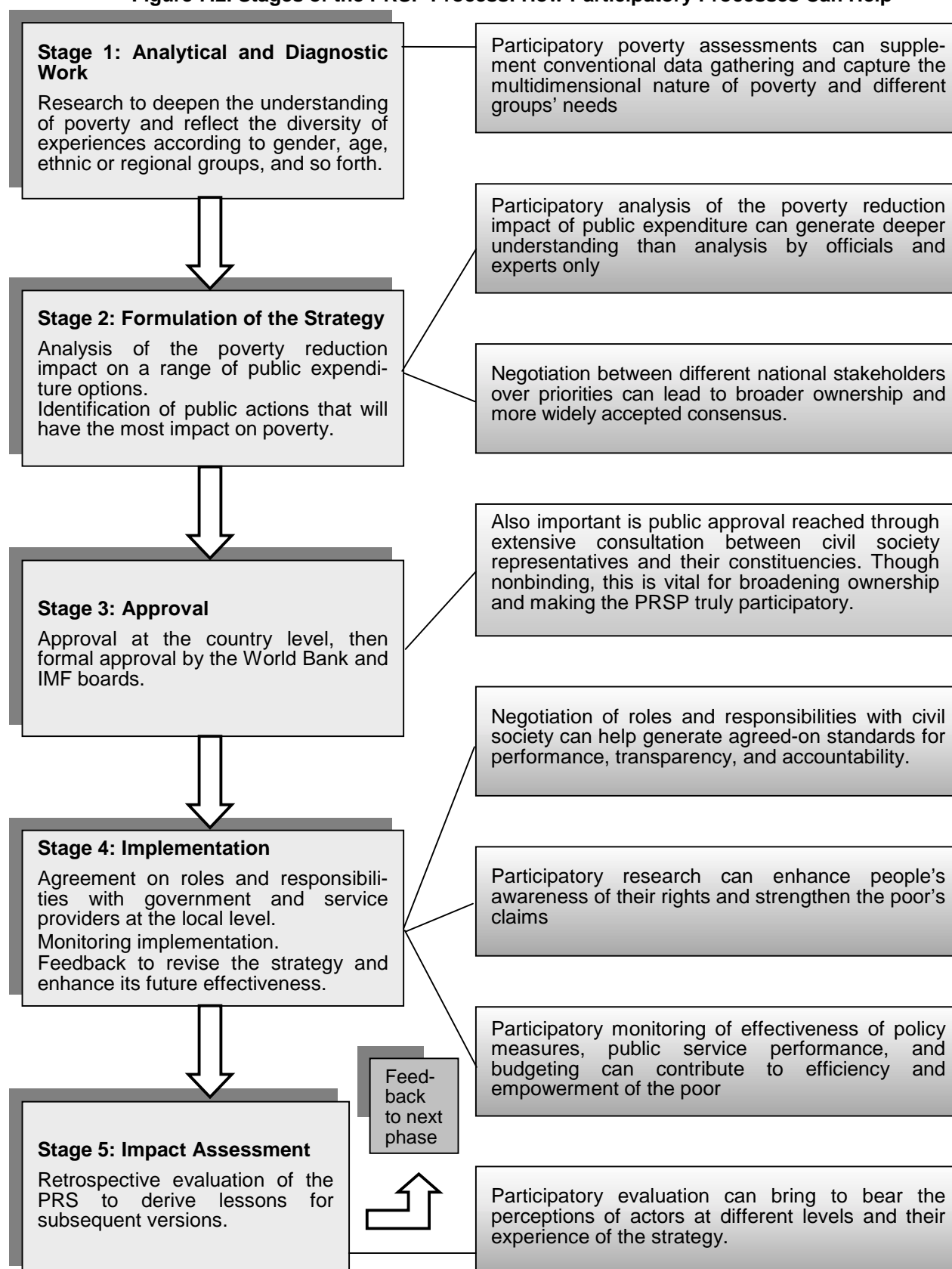
7.2 Frameworks for Participation: An Overview of the Process

7.2.1 Broad steps

There are many different ways to plan a participatory process for poverty reduction strategy formulation. However, existing experiences in countries suggest some broad, common elements among PRSPs. There are four broad steps that each country takes: poverty diagnostic, negotiation, interim PRSP formulation, and the full PRSP process, but there are many permutations and differences among countries within these steps.

The majority of PRSP countries have created interim PRSPs (IPRSPs) meant to provide a roadmap for formulating the full PRSP. They were envisioned to be a preliminary step in the PRSP process that would allow countries to outline their goals and objectives and describe the actions they would take to address them. Although many countries have kept to the original intentions of the IPRSP, many have gone beyond a simple roadmap to conduct participatory processes for the IPRSP itself and to start the

Figure 7.2. Stages of the PRSP Process: How Participatory Processes Can Help



Source: Institute of Development Studies Policy Briefing No. 13, April 2000.

process of actually developing poverty reduction strategies. Again, this depends on the country's starting point and the level of participation possible for the PRSP. Some general characteristics in the formulation of a participation action plan (PAP) are summarized below:

- 3 Finding the starting point for a country
- 3 Stakeholder analysis to map stakeholders with specific concerns and capacities for the PAP
- 3 Determining the feasible level for participation
- 3 Developing institutional arrangements for coordinating the process
- 3 Selecting from a range of participatory process options
- 3 Costing the participatory process PRSP
- 3 Setting a timeline

The final fourth broad step in the process involves the actual formulation and implementation of the full PRSP. During this stage, participatory processes are carried out, goals are set, the strategy is formulated, programs are implemented, and the poverty reduction impact of the PRSP process is evaluated.

It is critical to the PRSP process to identify both short- and long-term goals for the strategy (see chapter 3, "Monitoring and Evaluation"). Long-term goals provide a framework for poverty reduction, while short-term outcomes provide milestones for measuring progress and allowing course corrections during the PRSP cycle. Once participatory processes for implementation and monitoring are institutionalized, they become less costly in time and resources and can provide effective channels for information exchange, dialogue, and collaboration. It is essential to set up feedback mechanisms, which allow participatory inputs to be incorporated into the next round of policymaking and make the PRSP an iterative process.

Stakeholders generally hold some form of negotiation, either formal or informal, to reach a common understanding of the scope, extent, and content of the participatory process. It is generally recognized that different stakeholders have differing perceptions of participation, ranging from a one-way flow of information from civil society to governments in the form of beneficiary assessments, to two-way flows of information with increased government dissemination of information, to more cooperative and collaborative arrangements for making decisions and implementing programs. Countries choose their participatory process based on their starting point and their goals for the PRSP.

Embarking on the PRSP process involves an initial negotiation phase that is a key process in establishing commitment by all the stakeholders. It allows all parties to discuss what they believe a participatory process entails, how they define poverty, and how they believe participation can influence poverty reduction. Perceptions of the meaning of poverty are critical to the establishment of an effective roadmap that leads to a viable process.

Initial negotiations allow the stakeholders of the PRSP to define the scope of participation and their goals for using participatory methods. If this goal setting is used as a basis for an outcome-oriented approach to the PRSP, it increases the effectiveness of the participatory process, especially if both short- and long-term goals are set. Given that previous participatory processes have focused on projects rather than policy, it is necessary that stakeholders come to a common understanding of participation at the macroeconomic level, in decisionmaking and policy implementation, during preliminary PRSP meetings. It is also necessary for creating national ownership of the strategy.

NGOs and civil society groups tend to approach government-led participatory processes with interest tempered by deep skepticism. The initial negotiation can provide a forum for frank discussion about expectations, roles, responsibilities, and desired outcomes and can lend an initial credibility to the process (see Donnelly-Roark 2001).

In order to develop an effective poverty reduction strategy, policymakers and civil society must understand the multidimensional nature of poverty in their country. Therefore, many countries use various methods to carry out initial poverty diagnoses, including both quantitative and qualitative

approaches. A combined qualitative and quantitative approach allows policymakers and stakeholders to reach beyond the statistical data that are generally available in order to understand the causes and consequences of the nonincome dimensions of poverty.

Once negotiations have taken place, an enabling environment can be fostered in most contexts by disseminating information about poverty and policies and fostering a dialogue. Information sharing is a key component of the participatory process, which can be used throughout the planning, implementation, and monitoring stages of national and local poverty reduction strategies. Sharing information allows transparency in governance, accountability in public actions and expenditure, and meaningful consultations for policy development.

Governments that inform a wide range of stakeholders as early as possible about the process and content of their policymaking and implementation tend to have greater credibility with their constituencies. They are able to implement their programs more effectively by building trust between various stakeholders, both within and outside the government. The translation of documents into local languages and the production of simplified documents with key messages may be central to information dissemination, particularly at local levels. For example, in Uganda, a simplified version of the Poverty Eradication Action Plan, which contained many visuals, was translated into five languages and distributed through regional workshops, and key messages were delivered through the media.

Civil society sometimes has legal recourse to enable access to information. The case example of the Philippines in box 7.1 below demonstrates how citizens' movements can use these laws to improve transparency.

In one example of how information can be a powerful tool for broadly owned policies, box 7.2 shows how the government of Andhra Pradesh, a state in India, was able to successfully implement unpopular reforms by building broad ownership for the overall agenda. It was able to do this by informing the public of the rationale and effects of these policies, asking for regular feedback, and mobilizing public support for the outcomes, such as improved educational systems.

7.2.2 Key stakeholder groups

Intragovernmental participation

Intragovernmental participation, or participation within government at both local and national levels, particularly the involvement of representative assemblies, is a key component of participatory processes

Box 7.1. Dissemination Strategy for the Philippines Citizen's Report Card

Considerable effort has been made to develop the Philippine Citizen's Report Card as an instrument for ensuring improved governance and accountability. Attention could also be paid to the form and modalities of the dissemination process. There is a need for "different versions of the Report Card . . . depending on the target audience." For example, busy policymakers may require a short note summarizing the key findings. On the other hand, sector specialists may require more in-depth analysis. Ordinary citizens may value yet another form, perhaps a "folksy version" that demystifies service provision and provides them with simple information based on which they could advocate for better performance from service providers.

A clear and well-articulated dissemination strategy is an integral part of Report Card-type initiatives. For example, while dissemination of the information represents a continual, ongoing process, it may be worthwhile considering more focused dissemination efforts at certain points of time, such as prior to elections, prior to budget formulation, and so forth, for maximum impact on these processes.

Appropriate media vehicles would need to be considered for effective dissemination, targeting both literate and illiterate audiences in both the urban and rural settings, using local languages. A host of complementary, mutually reinforcing vehicles could be considered, such as the following:

- Newspaper articles
- Posters and leaflets with graphics and cartoons
- Folk drama and songs and puppet shows
- Radio (interviews and so forth)
- Television and videos
- Web sites (where telecenters are present)
- Quarterly newsletters in local languages
- More formal reports

Source: Adapted from personal communication with Prasad C. Mohan, communications specialist, World Bank.

Box 7.2. Case Example: Andhra Pradesh, India

Since 1997, the state's political leadership has taken many steps toward developing a vision for the state's development in the year 2020 and has launched many participatory processes to consult and discuss priorities with citizens and disseminate information. These processes are an integral part of the political process and involve local government, people's elected representatives, and community groups and organizations such as women's groups, promoted through various governmental and nongovernmental programs.

The chief minister of Andhra Pradesh, along with many of his political colleagues, presented Vision 2020 to a whole range of stakeholders, including state assembly legislators, local body representatives, national government officials, private sector participants, and a consortium of donors. This has ensured that within the state many citizens and political groups are aware of the issues being raised in Vision 2020.

The resources needed to achieve the outcomes envisaged in Vision 2020 are large, however, requiring tough economic choices and seemingly unpopular public actions. At the same time, state government launched major reforms in many sectors, including power. The chief minister has toured the state extensively and explained the economic reforms to the people, warning about increased cuts to subsidies and expenditure reallocations to education, health, and infrastructure.

After elections in 1999, targets were set for the first time, including the requirement that every school-age child attend a school by 2005, and plans were drafted to achieve these targets. Several intermediate goals have been drawn up, and district officials have been instructed to monitor progress on a monthly basis.

The government has asked for regular feedback to monitor the quality of public service delivery from local government and community organizations, and adapted development programs accordingly. An autonomous society, the Andhra Pradesh Society for Poverty Alleviation, has been established that will help implement community-based, poverty alleviation programs through community groups and organizations.

Through the information-sharing strategy and by encouraging dialogue, Andhra Pradesh has been able to achieve strong public support for the state's development vision, make poverty-oriented public action choices, and reallocate resources for social sectors. It has also been able to mobilize significant resources from bilateral and multilateral donors, managing to persuade large information technology companies like Microsoft and Oracle to invest in Andhra Pradesh.

for poverty reduction. In many low-income countries, most policy-level decisions, including budget allocation, are made by a core group of ministries, which excludes Parliament, district and local governments, and sometimes even the line ministries.

Most countries have existing governance and political structures that extend from the local government structures to national Parliaments. However, the extent of discussion and debate about development strategies and development plans within existing governance structures varies considerably across countries. It depends largely on the transparency of the governance process. Strategies developed through a broader process involving different branches and levels of government tend to become institutionalized and lead to more sustainable poverty reduction.

The large role of regional and local governments in implementing national policies and ongoing processes of decentralization indicate the need to include regional and local governments in policymaking and monitoring. This helps ensure that regional and local governments are committed to overall national goals of poverty reduction. It is especially important because local political leaders often have much experience working with civil society and more regular contact with the community.

Mechanisms for linking national and local levels include the following:

- Involving parliamentarians and members of state legislatures in linking the national government to the regional and local levels. Their position allows them to talk to their constituents and bring local inputs into the national formulation process.
- Coordinating regional and local government participation in regional workshops organized by the central government to provide local inputs to set priorities, determine public action choices, and make the necessary tradeoff decisions for the poverty reduction strategy.
- Distributing documents to local authorities and soliciting feedback in writing, as in the case of the revision of Uganda's Poverty Eradication Action Plan.
- Providing local governments representation at a national forum through representative umbrella organizations or networks.

Box 7.3 provides a good-practice example from Vietnam in which the national government actively sought inputs from governments at the provincial, district, and commune levels.

Box 7.3. Case Example of Vietnam

In 2000 and 2001, the Vietnam poverty reduction strategy was being developed through active participation of governments at the provincial, district, and commune level. Their inputs have been incorporated into the national government strategy document by the Poverty Working Group (PWG), and an active campaign of information dissemination built on the existing political process. This process demonstrated the value of opening up direct lines of communication with poor households in planning for poverty alleviation. It also meant that research findings gained a link to government policymaking and programming for poverty reduction and to policymaking.

At a national level the task of coordinating the Participatory Poverty Assessments (PPAs) fell to the World Bank on behalf of the PWG, a coalition of seven government ministries and eight donor organizations and NGOs. While the Bank generally prefers an assistance role in such instances, an exception was made in this case by mutual consent among several stakeholders. There were two upshots of this process. First, the PWG was actively involved and interested in the PPAs—for example, government members of the PWG attended local PPA feedback sessions where findings were discussed and debated. At these workshops it was clear to national government officials that local leaders who had lived in these areas their whole lives were endorsing the PPAs as fully reflecting the lives of the poor. Secondly, because the PWG was responsible for producing a report entitled *Attacking Poverty* for the Consultative Group meeting, the PPA findings were fully incorporated into the discussions tabled at the Consultative Group. This attracted attention from policymakers at the highest level, and government requested donors at the Consultative Group to assist them in mainstreaming such techniques.

At the local level, the PPA work was carried out in partnership with local authorities. In some cases, local officials were trained in participatory techniques and took part in the training. Elsewhere, commune, district, and provincial officials became closely involved in the planning and analysis stages but not in conducting the actual fieldwork. In all areas, however, local authorities have been keenly interested in the PPA findings and requested support to explore ways of dealing with problems raised. As a result, the PPA studies have a real chance of influencing decisions relevant to poor households. For example, local officials in one of the provinces subsequently lobbied for improved and more sustainable financial sector interventions that could provide services adapted to the needs of the poor on a sustainable basis.

Source: Turk (1999).

Civic engagement at the national level

In the design of the national PRS, governments generally engage with organized civil society groups in the capital or main urban areas. However, national-level civic engagement also allow government to reach a wider range of stakeholders and initiate a dialogue with smaller civil society organizations such as farmers' associations, cooperatives, unions, chambers of commerce, women's groups, and groups that represent the poor and vulnerable through umbrella organizations or networks of NGOs. These membership organizations can act as conduits for reaching local-level stakeholders. They can also provide a mechanism for increasing information exchange and building consensus on poverty reduction efforts.

In the Kenya PRSP, a network of NGOs was able to conduct a separate participatory PRSP process and formulate an alternative PRSP, as was a network in Honduras. Such actions show a well-developed capacity to engage in national-level policymaking among civil society.

Building on existing political processes and institutional arrangements is a key factor in successful national consultations. This includes building on activities sponsored by partners such as the United Nations Development Assistance Framework (UNDAF), Vision 2020, and the Comprehensive Development Framework (CDF). By building on these processes, learning becomes cumulative, and participatory processes can become more sustained and institutionalized. Earlier analysis, in the form of poverty diagnostics, policy implementation reviews, social assessments, impact analysis, and so forth, can be brought into the current process to make it more robust.

An additional benefit of building on previous processes is the formation of more cooperative relationships with other donors. If they already own a portion of the process, they will be much more willing to work with the government on other national processes and might be willing to share the costs.

The example of the Bolivia PRSP process in box 7.4 shows that the national process was able to bring in local processes. It built on municipal and departmental (regional) roundtables and developed a consensus on important economic, political, and social issues in the PRSP. This also achieved key results, including agreements on criteria for Highly Indebted Poor Country (HIPC) resource allocations and the administration of these funds.

Box 7.4. Bolivia's PRSP Process

Outcomes of first national dialogue:

- Country Assistance Strategy/Comprehensive Development Framework strengthens government-donor relations; civil society feels excluded.
- Participation for the PRSP is negotiated.
- Government alters the strategy for participatory process
 - from sectoral to regional and local focus;
 - national civil society (CS) organizations are suspicious; and
 - a number of CS processes precede government dialogue.

Second national dialogue begins in July 2000:

- Social agenda (municipal and departmental tables)
- Economic agenda (sectoral and productive chains)
- Political agenda (seminars in major cities)
- National table: results of individual agendas discussed and agreed on

Key results:

- Allocation of HIPC according to poverty indicators
- Establishment of mechanisms to oversee funds at all levels
- Institutionalization of dialogue (every three years)
- Plan to translate dialogue into PRSP

Source: Participatory Process at Macro Level—Case of Bolivia. Prepared as part of the Action Learning Program. Participation thematic group. World Bank, Washington, D.C. (2000).

Civic engagement at the local level, particularly excluded groups

Civic engagement at the local level improves the quality of data, especially from the poor and vulnerable. Because this can bring in the stakeholders who are most difficult to reach, it is vital that local participatory processes be publicized, with clear information on what will be the topic of discussion, when and where meetings will be held, and who is welcome. If organized well, local processes offer several advantages because they provide the following:

- Forum for those with community stakeholders to voice their concerns, needs, and demands, which will feed into poverty diagnostics.
- Opportunity for specific local issues to be addressed by allowing local stakeholders to identify their priorities, analyze the causes of poverty, and propose locally viable solutions.
- Less expensive alternative to large workshops, since they can be organized with less lead time and can provide more concrete inputs in setting priorities, selecting public actions, and designing a monitoring and evaluation strategy.
- Local process with diverse and representative views from informal grassroots groups, community organizations, those without the means to travel to larger venues to attend workshops, and those who are normally excluded from more formal discussions.
- Information to local stakeholders about the process, the government's intentions, and the content of proposed policies, allowing them to fully participate. It may also motivate local stakeholders to organize and mobilize to represent their interests.
- Creating the space to build partnerships between policymakers, service providers, and local peoples, so that the poor can increase their influence over decisionmaking, which has an immediate impact on them.

Gaining the participation of the poor offers an excellent opportunity to get firsthand analyses of their quality of life, priorities, constraints, and opportunities. It also provides concrete information on risk and vulnerability that is absent from much of the data on which policymaking is based.

Local-level civic engagement, especially with the poor, can be carried out in groups or individually, provided the process is broadly representative of the community. Local processes should therefore generally include women, youth, the aged, the disabled, and socially excluded groups (see chapter 10, "Gender," for specific information on women's issues). It is also crucial to have trusted facilitators not only leading the discussions, but also organizing meetings and personally inviting participants. Box 7.5

provides an example of how civic engagement at the local level increases understanding of the multidimensional nature of poverty and improves the richness of poverty data.

7.3 Building Blocks for Participation at the Macroeconomic Level

7.3.1 Poverty diagnostics

The first building block in the PRSP process is poverty diagnostics, which provides an understanding of the multidimensional nature of poverty and its causes, which, in turn, allows countries to formulate more effective poverty reduction strategies. Participation in poverty diagnostics permits the collection and analysis of qualitative and quantitative data. Quantitative data provide both aggregated and disaggregated data on poverty that can help guide broad policy decisions. However, without qualitative data to explain certain issues and to fill in gaps that quantitative measures miss, governments and civil society will not be able to address specific issues for reducing poverty.

Vulnerability, for example, is a key dimension of poverty that is difficult to measure in quantitative terms. Box 7.5 shows how a participatory assessment was able to investigate these types of issues.

7.3.2 Policy formulation and reform

Once the poverty diagnosis is completed, policies can be developed to address the identified priorities. Macroeconomic policies can be broadly divided into two categories: (1) monetary policy, which deals with interest rates, inflation rates, foreign exchange rates, and so forth, and (2) fiscal policy, which deals with taxation and fiscal discipline, rather than actual budgeting and spending. There is a third policy area that can have a direct effect on the macroeconomic framework, namely, sectoral policies, particularly those that address the financial system. Sectoral policies demonstrate the effects of monetary and fiscal decisionmaking, such as revenue collection and transfers, on specific areas of concern to the PRSP.

Macroeconomic policies are generally viewed by governments, donors, and even some civil society organizations (CSOs) and NGOs as being too technical for them to contribute. However, recent experience shows that participation in macroeconomic policy is possible, and that it helps to offset some of the harsher side effects of these policies, which can include cutting subsidies or imposing value added taxes, for example. There are typically some representative groups in society who can actively engage in

Box 7.5. Key Causes of Vulnerability and Insecurity in Mongolia Brought to Light through Participatory Approaches

In Mongolia the participatory living standards measurement survey (PLSA) found that the livelihoods of many families became vulnerable in the face of multiple, interlocking forms of insecurity: economic, social, environmental, and physical. Economic insecurity stemmed particularly from unemployment and remoteness from markets. Social safety nets persisted, and for many households pensions and allowances became the only source of regular cash income; but crisis in the banking sector meant that pensions, allowances, and salaries were frequently late, forcing people to dispose of household assets and creating a cycle of indebtedness. Public action and investment to reduce risk in livestock production and agriculture declined, and environmental insecurity—while never new in Mongolia—acquired new significance, particularly for those new to livestock production. The effects of natural hazards, such as drought, harsh winter weather (*dzud*), steppe fires, and rodent infestations, were exacerbated by a growing overconcentration of grazing pressure, as the numbers of herders and livestock increased while pastoral mobility declined. Conflict over pasture became endemic in many areas, particularly in central aimags and the Khangai region.

Social insecurity derived from changes in kinship and other social networks. Support from relatives and friends was a vital, even primary source of livelihood for many households, and it took diverse forms in urban and rural areas. But the 1990s saw a weakening of kinship networks and a rise in semicommercial forms of intrahousehold transfers. The most vulnerable of all were those excluded from kinship and other social networks. Many households were also prone to physical insecurities, particularly among poorer groups. Unemployment and economic insecurity led to widespread social malaise, alcohol abuse, rising crime (particularly theft), domestic violence, and marital breakdown, which compounded problems of economic and social insecurity.

These insecurities shape the context within which households could be afflicted by various shocks (loss of employment, loss of livestock owing to natural hazards, death or illness of a family member, theft of assets, costs of contingencies such as weddings and Tsagaan Sar) and stresses (indebtedness, shortage of cash, cost of schooling and health care, high ratio of dependents to economically active household members) likely to trigger a process of impoverishment. In time, as household assets are liquidated to meet consumption needs and contingencies, vulnerable households become prone to impoverishment through minor yet progressive shocks and stresses.

Source: National Statistical Office of Mongolia and World Bank (2000).

substantive dialogue with donors and government on policy alternatives, and there are other groups that can speak to issues such as sequencing of policy reforms and adopting measures to increase accountability and transparency.

7.3.3 Budgeting and public expenditure management

Public actions to reduce poverty need to be put into the budget and reflected in the public expenditure system. Participation in decisions regarding budget allocations, spending patterns, and public service delivery is thus a key entry point for civil society engagement in choosing public actions. However, because of their highly technical nature, many civil society groups shy away from budgeting, spending, and public service delivery processes.

Enhanced participation in budgeting can mean improved public transparency, strengthened external checks on government, and, ultimately, greater efficiency and efficacy (see chapter 6, “Public Spending”). It can influence the three different stages of public expenditure management (PEM):

- *Budget formulation and analysis.* Citizens participate in allocating budgets according to priorities they have identified in the participatory poverty diagnostics, formulate alternative budgets, or assess proposed allocations in relation to the government’s policy commitments and stated equity concerns.
- *Expenditure monitoring and tracking.* Citizens track whether public spending is consistent with allocations made in the budget and track the flow of funds to the agencies responsible for the delivery of basic goods and social services.
- *Monitoring of public service delivery.* Citizens monitor the quality of goods and services that are meant to have an effect on their lives, especially the poor. This can be measured in relation to the amount of funds spent on such programs.

7.3.4 Monitoring and evaluation

The final building block is participatory monitoring and evaluation (PM&E) to help ensure that public actions, budgets, spending, and public service delivery are actually implemented and have the desired effect. Participation in the process of monitoring and evaluation promotes transparency and accountability and increases ownership and acceptance of progress toward poverty reduction goals. Participation in monitoring and evaluating the progress toward the poverty reduction goals can also add transparency and enhance country ownership of the PRS. Chapter 3, “Monitoring and Evaluation,” provides guidance.

7.4 The Interim PRSP and Participation Action Plan

7.4.1 What is a participation action plan?

A participation action plan (PAP) allows countries to set out a roadmap for the participatory processes to be undertaken over the course of PRS formulation. Participation in national-level planning and policymaking involves three main elements: (a) stakeholder groups, (b) government processes, and (c) participatory approaches or methods. The PAP shows how these three elements will be linked in the PRS process (see technical note G.3 for examples of PAPs from diverse contexts). The main objectives of the PAP are the following:

- Build on existing processes of participation, including ongoing political processes, in order to institutionalize processes that are inclusive, representative, and equitable.
- Involve key stakeholders in the decisionmaking process to the extent possible in that country.
- Plan how poverty diagnostic data and stakeholder analyses will shape the participatory process.
- Design a structured, results-oriented plan for participation, so that participatory inputs are not open-ended and difficult to manage.
- Address how potential conflicts can be handled and tradeoffs made.

7.4.2 Key aspects of designing a PAP

PAPs have taken many different shapes in the diverse contexts of low-income countries preparing PRSPs. However, most PAPs have some common traits, such as a timeline and cost estimates. Key aspects of designing a participation action plan can include the four steps highlighted below.

First step. Finding the starting point: review of past participatory processes

The nature and extent of participation in each country will depend on the existing governance and political structures, the status of the national development strategies, the organization and participation of civil society and government, previous participatory approaches employed in government processes, and the capacity to organize such processes at both the national and local levels. (Technical note G.4 provides guidance in assessing the current status of participation).

To find a country's starting point, it has been useful to assess: (1) previously articulated national development processes, (2) extent of civil society organization, (3) government's experience with participation, and (4) overall national capacity to conduct participatory processes. The table below provides a typology with three categories into which many countries will fit. Category A describes a starting point for a country that has well-developed processes and substantial experience with participation. Category B describes a country with some experience with participatory approaches but still requires some capacity building. Category C describes a country that has limited experience with participation and has only scant knowledge of the processes in-country. This type of country requires more capacity building and guidance, especially to build country ownership.

While these categories might not provide a perfect fit for the circumstances in each particular country, they will provide a general guide for helping countries determine their starting point and the level of participation feasible.

Second step. Stakeholder analysis

Stakeholder analysis will not only identify key stakeholders that will be affected by the poverty reduction policies, but will also match stakeholders to the processes in which they can participate for more targeted

Table 7.2. Assessing the Current Status of Participation: A Typology

	Country Type A	Country Type B	Country Type C
National development processes	Country ownership of poverty reduction/national development strategies (PRS, National Vision for Development, CDF) for at least several years)	Limited country ownership or limited development or implementation of national poverty-focused development strategy over the past 1–2 years	Limited development of a national, country-owned poverty or development strategy. Donor-driven processes may predominate
Civil society	Organized civil society and local government structures exist and participate in government processes and implementation	Some organized civil society groups exist, and participation in government processes is limited	Limited civil society organization
Prior experience	<ul style="list-style-type: none"> ▫ Broad range of stakeholder participation at national level ▫ Participation in national processes, e.g., strategy development, priority setting, budgeting, and resource allocation ▫ Possibly participation in poverty diagnostics and monitoring system 	<ul style="list-style-type: none"> ▫ Limited stakeholder groups participate in national dialogue ▫ National participation occurs in focused areas, e.g., some sectors or around national reconstruction ▫ Limited participation in poverty diagnostics and monitoring system with probable use of qualitative data 	<ul style="list-style-type: none"> ▫ Little experience with participation between government and civil society ▫ Limited participation in poverty diagnostics and monitoring; little qualitative data available or used
Capacity for organizing participatory processes	<ul style="list-style-type: none"> ▫ National capacity exists ▫ Some capacity at local levels but underused 	<ul style="list-style-type: none"> ▫ Capacity at national level exists but is not utilized ▫ Limited local capacity 	<ul style="list-style-type: none"> ▫ Limited national capacity

participatory processes. Box 7.6 sets out an example. Broadly speaking, a stakeholder analysis consists of four steps:

- identifying various stakeholders, including those who are normally excluded or underrepresented (see box 7.6);
- determining which issues affect them the most (water, joblessness, violence, and so forth);
- recommending which topics different stakeholders could address and in what format (workshops, focus groups, interviews); and
- selecting a representative group of stakeholders for the participation action plan (see technical note G.5 for guidance on conducting a stakeholder analysis).

Key issues to ensure an effective stakeholder participation process at the national level include the need to ensure legitimacy and representativeness, as well as capacity. For legitimacy, the stakeholder group would typically be registered, recognized by the public, and function according to its stated objectives effectively. A representative group reflects the interests and needs of its constituency. The group should also have the organizational and analytical capabilities necessary to carry out its objectives; it is able to articulate the group's demands and interests and represent its members at multistakeholder dialogues. Box 7.7 sets out an example.

Third step. Determining the feasible level of participation for the PRS

Once a country's starting point has been determined, the quality and depth of participatory processes that are likely to be feasible can be assessed by answering the following questions. (See technical note G.6 for answers to the following questions, depending on a country's level of development.)

- **Information flows.** To what extent and by what means are members of government and society informed of the government's poverty reduction strategies, related participatory process, and proposed programs?
- **Participation experience.** What was the extent, scope, level, and quality of participatory processes involved in the formulation of previous poverty reduction or related development strategies?
- **Poverty diagnostics.** How have poverty data been collected and analyzed? Do the poor participate by giving their perceptions, and is this information used in updating the poverty profile and in decisionmaking for poverty reduction strategies and efforts?
- **Budget-making processes.** What is the extent of participation in priority setting, resource allocation, and monitoring, both within government (national and local) and outside government (civil society, private sector, donors, the public)?
- **Poverty monitoring.** Are participatory approaches used in poverty monitoring or in assessing the impact of poverty reduction strategies or related policies and programs?
- **Mainstreaming participation.** Are there mechanisms to institutionalize participation in policy development, program design and implementation, and resource allocation, at either national or local levels?

Box 7.6. Stakeholder Groups

Examples of key stakeholder groups include the following:

- **The general public,** particularly the poor and vulnerable groups, such as youth, women's groups, and the disabled (see chapter 10, "Gender")
- **The government:** civil servants and elected representative in central ministries, line ministries, local government bodies, Parliament, cabinet, and general assemblies
- **Civil society organizations (CSOs):** networks, NGOs, community-based organizations, trade unions and guilds, academic institutions, and research groups
- **Private sector:** umbrella groups representing groups within the private sector, professional associations
- **Donors:** donor participation in the PRS process to coordinate efforts, share costs, gain joint ownership over the PRS, and create synergies between differing donor perspectives and skills

Box 7.7. Summary of a Stakeholder Analysis in Albania

The national government. All ministry employees are political appointees, as are employees at the local level. As a result, when the government changes, so do most of its staff. Given this structure, it is very important to obtain wide support in the government to allow continuity in the PRS process. If a change occurs in one ministry, other government bodies can provide the stability for the process.

Local governments. Some differences of opinion exist among Albanians about whether local governments are trusted by communities. Local governments currently do not have much autonomy but are at the forefront of dealing with the problems of the people and, therefore, face the most direct criticism from the communities. The two key cross-local government groups are the Association of Mayors and the Association of the Chiefs of Communes.

Partners. In Albania significant stakeholders include international actors, like bilateral and multilateral donors, charitable foundations such as the Soros Foundation, international aid agencies such as the United Nations, and international NGOs such as Oxfam and Care International.

Civil society. While there are many reputable NGOs that do good work, there is reason for caution with others. NGOs are often viewed by the public in Albania as a way for influential or connected people to make a living, often at levels of income that are much higher than average levels. In support of this view, many former ministers and deputy ministers are now directors of various NGOs. Also, most NGOs are centered in Tirana, with a handful scattered in the secondary cities. Currently, there appear to be few if any rural or village-based NGOs or known civil society organizations.

The poor and vulnerable. The four most vulnerable groups in Albania are women, youth, the elderly, and urban informal settlers.

The private sector. Although small businesses can thrive in Albania, larger enterprises and foreign firms seem not to have achieved a significant foothold in the economy. Much self-employment is through low-productivity agriculture. Since the collapse of pyramid schemes, many potential entrepreneurs may have become risk averse. There is a chamber of commerce in Tirana with branch offices in the secondary cities. These are good sources of information on local businesses.

The intellectual community. There are several reputable think tanks in Tirana. Many people suggested using students to conduct fieldwork and research for the participatory process.

The media. There are mixed views of the media. While there has been some good coverage of events in Albania, many of the media firms (television stations, newspapers) seem to be owned either by the government or by foreign firms. As a result, many feel that while the media will be a good avenue for distributing information, they do not feel it represents the people of Albania.

Source: Tikare (2000).

The case example in box 7.8 shows how Ghana was able to determine its starting point and feasible level of participation for the PRSP by drawing on previous lessons learned in participation at the national level and by building on its existing processes.

Fourth step. Institutional arrangements for managing PRSP participation

Participation at the macroeconomic level can be a large process which is difficult to coordinate, so it is essential to develop the institutional arrangements for conducting and overseeing the process in the initial stages of PRSP planning. Most countries have opted for an interministerial steering committee at the center and several sector and technical working groups with multistakeholder representation. In these countries all these activities have been coordinated in the capital by officials of the national government.

There are several alternative institutional arrangements that are potentially effective. For instance, a Ministry of Local Governments, which interacts regularly with local government officials, can coordinate a participatory process that is largely centered in districts or regions. This will ensure that concerns of different regions and various stakeholder groups who are not well represented in the capital city will be represented. For similar reasons, the Association of Mayors can be the coordinating body, acting in concert with national ministers.

In another type of arrangement, one government (Ghana) contracted a nationally known and reputable NGO coalition to lead the participatory process. This arrangement had several advantages. Because the government had agreed to an NGO-led process, the credibility of the process increased. People were willing to trust that this was a genuine process.

Fifth step. Determining key elements of a participation action plan

Some key elements that are likely to be relevant in establishing a PAP are set out below.

- *An indication of the preliminary consultation involved in formulating the PAP.* Ideally, some consultation regarding the contents of the PAP would have been performed, or an indication should be given of recent participatory and consensus-building processes on which the PAP is based.
- *A description of the current status of participation in the country.* This description, giving specific examples, should indicate the status of, or the potential for, broad participation in formulating national development strategies. A set of six key questions that some country teams have found useful is presented in annex G.
- *A roadmap for preparation of the full PRSP.* This outline plan of the participatory process for the development of the full PRSP should be based on knowledge of the current status of participation in the country. It should include the following key elements: (a) the proposed direction of the participatory process, (b) stakeholders to be included in the process, (c) indication of methodologies, and (d) costing and timeline of the participation process.

The total cost of the participatory process will obviously vary across countries, depending on its starting point for participation, the coordinating mechanisms that are set up, the nature of stakeholder analysis and poverty diagnostics undertaken, the types of activities planned (workshops tend to be more expensive), and the amount of local civic engagement envisioned. There are several ways to minimize costs. First, by using local capacity to organize participatory processes, as they will most likely not demand international rates or incur high travel expenses. Second, by working with existing government and civil society networks and academic institutions. Third, by organizing low-key but well-publicized focus groups, interviews, and meetings of a town hall nature rather than large workshops. Fourth, by bringing external donors into discussions to share expertise and costs. For example, in the Albania PRSP the United Nations Children's Fund (UNICEF) is providing funds and technical assistance to the government for its public information strategy and the United Nations Development Programme (UNDP) assumed the expense for the launch workshop (see technical note G.7 for guidance on costing a PAP).

Media and information

A public information strategy can include translating and posting the results of the ongoing processes and discussions on Web sites, in newspapers, on television and radio, and through brochures made

Box 7.8. Case Example: Ghana Brings Together National Development Processes: Comprehensive Development Framework, Vision 2020, Structural Adjustment Participatory Review Initiative, and PRSP

Ghana developed a vision for economic development, Vision 2020, that reflects a participatory approach to and ownership of development policies and programs through national consensus building on strategic development issues. Sector strategies were subsequently elaborated as the government has developed its MTEF. Each ministry, in detailing its current budget and proposing its indicative budget for the following two years, outlines its sector policy and targets to be achieved. This box briefly describes how this came about.

In 1997 a civil society organization took the lead under SAPRI in convening dialogue processes with NGOs from all over the country. Delegates from these NGOs attended a national workshop in April 1997 in Accra. The objective was to improve the understanding of the effects of adjustment policies on the people and of how the participation of civil society can improve economic policymaking. This launched an outreach process that popularized SAPRI with the help of the media. Ten regional workshops, which identified priority issues, led to a national conference. A civil society steering committee, representing a broad spectrum of civil society associations, was established. A Tripartite Steering Committee, which includes government representatives, civil society, and the World Bank, met on a regular basis.

These earlier processes served as an entry point for formulating the Comprehensive Development Framework. Two-day civil society workshops were organized in six regions. The participants identified priorities and discussed issues relevant to development. World Bank representatives attended these workshops only to clarify policies. Following the workshops, an in-country Consultative Group meeting was held, and civil society observers were permitted to attend for the first time.

The PRSP process has been able to build on all of these preceding processes and further develop the mechanisms to institutionalize participation at the macroeconomic-policy level (National Development Planning Committee).

Sources: World Bank Web sites on SAPRI in Ghana and CDF in Ghana; "The Ghana CDF Pilot: The First Steps: A Progress Report to the World Bank's Executive Directors"; "A First Draft Comprehensive Development Framework Toward Ghana Vision 2020." 10th Consultative Group Meeting, November 23–24, 1999, Accra, Ghana; and Yumi Sera's personal interview with country director Peter Harrold and social development specialist Kofi Marrah.

publicly available through key government offices as well as the resident mission. Deliberations of the steering committee on poverty objectives can be covered by the local media and validated through national and provincial workshops and informal town hall meetings. In addition, the government can be encouraged to undertake a social impact assessment of the proposed reform measures and obtain feedback on potential tradeoffs through a process of systematic public dialogue.

Determining relationships with existing processes

Many governments argue that because they are democratically elected, they do not need to institute participatory processes for PRSP formulation. By encouraging government to share information about national-level policymaking before the policies are finalized, before budgets are formulated and before public action choices have been made, its decisionmaking processes become more transparent. Traditional democratic processes usually only allow citizens to make one input in four or five years. Participatory processes allow citizens to actively participate in the governance of their country and their resources between election cycles, on a more regular basis. This not only empowers the public but also increases the overall ownership for development policies, thereby increasing their sustainability.

Options to institutionalize participatory processes in the country

These actions can include setting up a permanent poverty reduction unit in a core ministry to track (using participatory methods) the poverty impact of the PRS, setting up local- or district-level feedback mechanisms such as those listed above, which could provide ongoing information to the statistics office or the poverty reduction unit, continuing the public information strategy to increase overall accountability and transparency in the country, and making participatory approaches standard practice in policy-making and implementation. This last action can be done by linking participatory poverty reduction processes to internal cycles, such as the budget or medium-term expenditure cycle. This has been done in several countries, including Albania and Uganda, with great success. The poverty reduction policies thus become directly linked to budget allocation and spending so that such actions are immediate.

Carrying out an effective participatory process that actually achieves the principles of increasing information sharing, transparency, and accountability requires adequate planning and sufficient time to implement the processes. PRSPs have been time constrained due to the urgency countries face for debt relief; therefore, they have to be very carefully planned to maximize participation in the 12 to 18 months that are usually available. However, it is also important to think beyond the production of the paper and to plan for participation in both implementation and in monitoring poverty reduction outcomes.

Technical note G.9 provides further guidance on preparing a PAP.

7.4.3 Risks and limitations of participation

Until recently, most participatory work was conducted at the project level and had a limited scope. As a result, there is knowledge of and experience with participation at the local level but less at the national level. In fact, it can seem overwhelming to conduct participation on such a large scale. This chapter has suggested how this can be made more manageable by breaking the process down into its constituent blocks. However, it is also helpful to recognize from the outset some of the constraints that may arise so that these obstacles can be minimized. Risks to the process include the following:

- creation of parallel participatory processes that are not integrated with existing social and political structures;
- limited trust, conflicting interests, and differing bargaining powers between stakeholder groups that result in disorganization of the process and abuse of confidences;
- diverse perceptions by different stakeholders concerning the participation process and the importance of efforts to reduce poverty;
- exaggerated expectations by some stakeholders of the outcomes of the participation process;
- insufficient sharing of information between participants in the process;

- poorly planned participation processes that are open ended and not realistically budgeted or that are a token effort by the organizers;
- lack of political will among government agents to allow wide participation because they fear loss of power or influence;
- limited time, capacity, and finances; and
- consultation fatigue.

See technical note G.10 for guidance on how to measure progress in participation and technical note G.11 for how to overcome constraints.

The example in box 7.9 illustrates a situation in which the major stakeholders in the complex natural resource management project, *Planafloro*, in the Amazon Basin of Brazil were able to move from a conflict situation to a constructive dialogue, which ultimately led to institutionalized participation and project success.

7.4.4 The role of Bank and IMF staff in the PRSP

Because the PRSP is a nationally owned document, the Bank's role is neither to undertake participation nor to coordinate it, but rather it is to facilitate the process. In this capacity, Bank staff have played various roles. In some cases, they have played a negotiation role between different stakeholders to come to a common understanding of the goals and mode of participatory processes. More generally, they can provide stakeholders with good practice examples from other contexts and ideas on a range of options for how several components of the participatory process can be undertaken. Various partners, including UNDP, have provided the foregoing types of advice, as well as technical support for various types of analyses that support participation, such as social impact analysis, stakeholder analysis, and participatory poverty analysis.

7.5 Participation in Formulating the Full Poverty Reduction Strategy

7.5.1 Participatory processes in poverty diagnostics

As described in section 7.3, which provided an overview of the building blocks, participatory poverty diagnostics identify the priorities of the poor, bring to light the multidimensional nature of poverty, and can be used to determine the causes of poverty (see technical note G.8 for ensuring the participation of women in processes). Poverty diagnostics can stimulate public debate about the multidimensional nature

Box 7.9. Case Example: From Confrontation with Civil Society to Collaboration: Brazil

A local body established to monitor the *Planafloro* project—the NGO and Social Movement Forum²—noted that after four years few of the project goals had been met, stakeholder participation mechanisms had ceased to work, and only 50 percent of the funds had been spent. This forum, with the support of international NGOs,³ mounted an international campaign against the government and the World Bank to disrupt implementation, urging that the project be investigated by the World Bank's Inspection Panel. Subsequently, several changes were made for restructuring and monitoring the project, including:

Project reorganization: Project supervision was decentralized, a midterm review was performed in an impartial and participatory manner, and, since the project lacked local ownership and support, the principal stakeholders were given full responsibility for its restructuring. The number of government executing agencies was cut back and bureaucratic procedures were streamlined.

Creation of demand-driven community projects fund [Programa de Iniciativas Comunitárias (PAIC)]: This fund is co-managed by the government and a coalition of CSOs coordinated by the NGO and Social Movement Forum. Proposals for community-based projects in the region covered by the *Planafloro* project are submitted for funding. The coalition of CSOs sits with government on the PAIC Deliberative Council to analyze and approve the projects submitted by the communities.

Open dialogue created: Once a policy of more open and frank dialogue began, relations among CSOs, the state government, and the Bank were improved. Based on this positive momentum, a comprehensive strategic planning exercise called *Umidas*, geared to defining a sustainable development plan (1998–2020) for the state of Rondônia was formulated in a participatory manner, based on the positive relationships created in the *Planafloro*.

Source: Garrison (2000).

of poverty and its causes, assist NGOs to better understand the nature and causes of poverty, and assist poor communities to make claims on public service provision. Poverty diagnostics thus serve to both:

- enrich the knowledge base for designing poverty reduction policies; and
- help build an enabling environment for empowerment, negotiation, and influence.

Box 7.10 below sets out for some examples of participatory methods in poverty diagnostics.

In order to do this, participatory methods must be combined with quantitative methods, such as the Living Standards Measurement Survey (LSMS) (see chapter 1, “Poverty Measurement and Analysis,” for more details).

The added benefits of participatory elements in poverty diagnosis can include being able to use expressed priorities as a proxy for demand. It can bring new actors into the policy process and create new relationships in the policy process. Most successful participatory poverty diagnostics create networks and relationships that carry on after the PPA. Another advantage lies in stimulating a change in the behavior and attitudes of officials and policymakers.

The case study in box 7.11 below describes the Social Weather Stations (SWS) program, which allows the poor to rate their own poverty on a quarterly basis. The SWS not only allows the collection of real-time data on poverty, but it also allows the participants to affect policy through the dissemination of these data to a wide range of stakeholders, including government representatives. Among the many topics covered by the SWS are poverty, poverty thresholds, and hunger. These conditions are as subjectively expressed by the survey respondents themselves, that is, as seen from the bottom up, and not as defined by an institution outside the household. These data have been collected since 1986.

Table 7.3 summarizes how the provincial PPAs carried out in Vietnam can contribute to the national PRSP by linking poverty-related finding with potential policy changes.

High-quality PPAs can increase the depth of dialogue and negotiation on poverty at the policy level; increase ownership and commitment to policy delivery on the part of different civil society groups; and strengthen links between communities and policymakers. They can also map out institutional and policy-specific linkages to poverty trends and dynamics in a country.

In order to do this, donors could provide technical assistance for the training of local people, particularly the poor, in participatory processes for poverty analysis and in policymaking processes so that

Box 7.10. Conducting a Participatory Poverty Assessment

- 1) **Well-being ranking:** Grouping or ranking households, including those considered the poorest or worst off, according to well-being. One challenge is to understand people's definition of well-being, what kinds of factors they include in their definitions of well-being, and some discussion around predetermined categories of critical importance to the study. Three broad questions need to be explored:
 - (a) How do people define well-being or a good quality of life and ill-being or a bad quality of life?
 - (b) How do people perceive security, risk, vulnerability, opportunities, social exclusion, and crime and conflict? How have these conditions changed over time?
 - (c) How do households and individuals cope with decline in well-being and how do these coping strategies in turn affect their lives?
- 2) **Cause-impact analysis or flow diagrams:** This approach allows researchers to understand people's perception of the causes and impact of poverty or ill-being and also illustrates the perceived impacts of specific events or unpredictable factors, such as violence, conflict, and economic shocks.
- 3) **Focus group discussions:** These can be organized to be more structured and focused, or to be more general and free form. There are also choices to be made in designing the size of the group, its composition, its location and time, and so forth. Focus group discussion can be powerful and efficient for drawing people into a discussion of specific issues and their causes and proposed solutions.
- 4) **Individual interviews:** Individual case studies are generated by having and documenting one-to-one discussions. This can be in the form of an open-ended discussion or a semi-structured interview. These interviews can be more in-depth than focus groups discussions and can be used to highlight specific results obtained from more general analysis.
- 5) **Visual approaches such as poverty and social maps, cyclical change charts, seasonal calendars, Venn diagrams of institutions and drawings:** Visual aids can help to clarify where and why poverty occurs, when it occurs, what institutions in their communities play a role and how, and what are the various conditions of poverty, and allows people to participate in the discussion regardless of their ability to read and write. They can provide spatial representations of the distribution and location of resources and facilities and can form health and demographic maps. They can represent which institutions are important to the community, their function, and their accessibility.

Box 7.11. Ongoing Community Monitoring of Poverty Alleviation Efforts in the Philippines

The Social Weather Stations Survey obtains a nationally representative snapshot of poor people's priorities, their awareness of existing services, the constraints and barriers they face in accessing available services, and their satisfaction with the services they have used. The SWS reports are circulated widely through the media and to government representatives who have used the findings extensively to realign service delivery.

The advantages of SWS include the speed with which a survey can be implemented, the minimal costs of using an existing and well-tested mechanism, and the experience and expertise of SWS staff. There are limitations, however, on what and how questions can be asked. These obstacles are mostly related to the relatively small sample size of the SWS omnibus survey (n = 1,200). This sample size constrains disaggregation to four large areas (National Capital Region, rest of Luzon, Mindanao, and Visayas). Furthermore, the regular sample size does not allow for analysis of specific sub-populations, such as fisherfolk, single mothers, orphans, and indigenous people, who have high poverty rates and have been targeted for specific programs. The discussion below assumes use of the SWS quarterly survey and takes these constraints into the questionnaire design. Expanding the SWS sample is briefly discussed in the last section.

Source: Bhuvan Bhatnagar, "SWS Survey: Perceptions and Use of Pro-Poor Services in the Philippines," Dec. 1999, p. 1. See also www.sws.org.ph.

the two can be linked. Donors could also provide technical support in designing a public information strategy to disseminate poverty data, so that stakeholders are made aware of the types of issues emerging and their extent.

7.5.2 Participation in macroeconomic policymaking and reform

Macroeconomic policies can be divided into two broad areas: monetary and fiscal (see chapter 12, "Macroeconomic Issues").

Monetary policy involves actions taken by a country's public and private institutions to influence the money supply or interest rates. These policies affect everyone's livelihood, including that of the poor, through their influence on the rate of inflation, the pace of overall economic growth, the level of

Table 7.3. How PPA Findings Might Translate into Policy Changes

<i>PPA findings</i>	<i>Policy relevance</i>
Demand for a greater range of opportunities to develop sustainable livelihoods, particularly those that reduce the dependence on landholdings of reducing size (all PPAs)	Study of constraints to the development of the off-farm sector in Tra Vinh (funded by World Bank and the UNDP)
Marginalization of ethnic minorities in upland areas (Lao Cai and Tra Vinh PPAs)	Study planned and funded by UNDP. To be fed into an ethnic minority development plan
A strong sense of vulnerability to both household-level and community-level shocks, with ill health being the single most significant shock poor households endure	<ul style="list-style-type: none"> ➤ High costs of curative health care reviewed as part of the health sector review and the Public Expenditure Review ➤ Government request to donors to work intensively to help develop a more integrated approach to dealing with community-wide shocks and disasters
Concern about lack of information about initiatives, plans, and programs that affect their livelihoods, and a sense of alienation from decisionmaking processes	Lack of access by poor households to information on legal rights and "knowledge of the poor" included by government as an issue to be addressed in the PRS
Links between poverty and mechanisms for commune-level financing (Ha Tinh PPA)	Study on fees and voluntary contributions included in the Public Expenditure Review and discussed with the Ministry of Finance
High direct costs of education for the poor	Further reviewed as part of the Public Expenditure Review
Intrahousehold inequities that highlight the vulnerability of children and women, and a range of gender-related dimensions of ill-being	Work by the government-donor-NGO Gender Strategy Working Group strongly informed by PPAs—process followed in producing "Vietnam: Attacking Poverty" seen as a model for work this year in producing a gender strategy
The plight of unregistered urban migrants	In Ho Chi Minh City, some districts changed the criteria for including long-settled unregistered migrants in its credit program for the poor
Various issues in Ha Tinh	Directly addressed in provincial policies and Hunger Eradication and Poverty Reduction (including policies on commune-level fees and contributions and public investment priorities)

Source: Turk (1999).

Box 7.12. Case Study: Ireland's Social Partnership Agreements

Ireland has taken a very innovative approach to disciplining its economy. Since 1987 Ireland has developed five *social partnership agreements*, with the latest launched in February 2000 called the "Program for Prosperity and Fairness."⁴ This program outlines a comprehensive set of economic and social objectives finalized over extensive consultations among the government and a range of civil society organizations from November 1999 to February 2000. The idea of social partnerships evolved in the late 1980s when Ireland was going through a tough recession (1980–87), aggravated by high inflation, heavy public borrowing and deficit, and loss of manufacturing base. The National Economic and Social Council (NESC), formed in 1973 to play an advisory role to the government on "the development of the national economy and the achievement of social justice," has since 1986 been facilitating consultations among a range of social partners to go through a process of shared learning for an inclusive overview of socioeconomic "options, challenges and tradeoffs." In 1990 NESC identified essential elements for a consistent policy framework within a national strategy as follows: (a) macroeconomic policy securing low inflation and steady growth, (b) evolution of incomes that underpins competitiveness while handling conflict over distribution, and (c) promotion of structural change to adapt to the changing external environment.

While one of the key motivations for introducing partnership agreements was dictated by the inevitable need to discipline the economy in order to meet the entry conditions of the European Monetary Union (EMU), NESC did not see this as a matter of technical economic management alone, arguing that these strategies *succeeded only with the active consent and participation of those affected by these policies*. In this spirit, the National Economic and Social Forum (NESF), established in 1993, was brought in to address social policy issues such as exclusion and unemployment. The narrow economic mandates of the earlier agreements were thus substantially broadened for the fourth (1997–2000) and the fifth (2000–2002) agreements.

Social partnership has been identified as the driving force of Ireland's economic success over the past 10 years. By establishing an institutional framework and process in which the government, the private sector, and civil society representatives make major socioeconomic decisions with broad-based popular support, a virtuous circle of benefits has been created for all participants by restoring competitiveness, maintaining industrial peace, and providing a conducive environment for investment and growth.

Although claims of direct causality between the partnership agreements and Ireland's dramatic turnaround in economic are controversial, the *stability* offered by these multi-annual policy and wage commitments has been instrumental in positioning Ireland as one of Europe's fastest-growing economies—the so-called Celtic or Emerald Tiger, making it one of the most attractive places for foreign investors globally in the 1990s. Although Ireland is traditionally known as one of Europe's weaker economies, the partnership programs have especially been credited for facilitating the country's successful participation in the European Union by allowing it to pursue sound macroeconomics through prudent public finance management, maintenance of low inflation, low interest rates, credible exchange rates, and improved competitiveness.

By 2000 the agreement had grown to become more than a macroeconomic strategy by embracing broader policy initiatives on the social side. There are many allied aspects of "social capital" that this process of civic engagement is said to be fostering. It has also been argued that "shadow of the future"—the fact that the parties know they will meet again—has generated an environment of patience and trust, which can nurture reciprocity, facilitate communication, and improve the flow of trustworthy information.

The fact that what initially began as a short-term approach to defusing a public finance crisis has now been institutionalized as a three-year process and been broadened to represent a wide section of Irish society to "deliberate, negotiate, bargain and attain consensus" on economic and social issues, is an indication that the model has been deemed highly successful by the Irish themselves. To outsiders, this exercise presents a case in which remarkable economic returns have been reaped through a model of negotiated governance. Although a process driven by the government (issuing invitations, providing fora and logistics, setting broad parameters to lead informed discussions, aggregating inputs, developing and implementing strategy, and so forth), consultation among participating groups is the essence of a process that involves a tremendous degree of learning from and understanding of each other's positions.

Source: Participation in Macroeconomic Policymaking and Reform—Case of Ireland. Prepared as part of the Action Learning Program. Participation thematic group. World Bank, Washington, D.C. (2000).

unemployment, and exchange rates. Institutional factors, and the quality of democratic and accountable governance affect the potential for participation in monetary policy by civil society. Given the technical nature of these policies, two options for participatory approaches are: (1) information sharing and (2) dissemination consultation on monetary policy.

Fiscal policy determines the way governments manage revenues, expenditures, and debt. Civic engagement on the revenue side principally concerns the level and structure of taxes—who pays and how much. On the expenditure side, civic engagement focuses on priorities for public spending: who gets what services and how generously those services are funded. The relationship between revenue and expenditure is critical, for it determines the fiscal surplus or deficit, which in turn affects overall macroeconomic stability.

Participation is inherently political, and understanding the dynamics of participation, particularly in macroeconomic policymaking, requires thinking in terms of interest groups and incentives. The key

factors listed below and the politics of participation influence to what degree, and how easily, participation can in practice yield its prospective benefits.

Participation in macroeconomic policy is shaped by contextual factors. These include the following:

- A basic understanding of economic issues, along with structures and mechanisms for citizens to enter the policy process, is needed.
- Demystification of what the policy is, the rationale behind it, and its impacts will be critical to giving various societal groups incentives to support the policy and to build positive coalitions of stakeholders.
- Negotiating tradeoffs among various groups of stakeholders affected by the policymaking process.
- The PRSP process implies a more state-centered mode of participation, motivated by the donor community and led by government officials desiring debt relief.
- Countries where one or more progressive parties exist to speak for the interests of lower-income groups will provide more opportunities for participation compared with countries that lack such political formulations. In Gujarat, India, the founder of Development Initiatives for Social and Human Action (DISHA), an NGO that has specialized in pro-poor budget analysis and lobbying, has links with political parties.
- The design of different countries' parliamentary bodies obviously affects the extent to which interest groups and citizens can engage meaningfully in macroeconomic policymaking through legislative hearings and testimony.

Six key lessons of participation in macroeconomic policies have major implications for the design, conduct, and effectiveness of the PRSP process.

1. Experience demonstrates that there are positive links between participation and sound macroeconomic policies.
2. Countries vary significantly in terms of the conditions that facilitate or constrain policy participation.
3. Government leadership for macroeconomic policy participation is central.
4. Sustainable macroeconomic policies blend the right technical answers with political feasibility.
5. Civil society groups can influence the policy process by building successful coalitions around macroeconomic issues.
6. Successful participation in macroeconomic policy needs continuous investments of time and resources.

7.5.3 Participation in budgeting and public expenditure management

The desire for greater effort to exact accountability and transparency from governments means that citizens and civil society organizations are increasingly focusing on the budget and its effects on the distribution of resources. Civic engagement initiatives have addressed budget formulation and analysis, expenditure monitoring and tracking, and evaluation of public service delivery. Public expenditure reviews (PERs) can address these three areas; therefore, a description of PERs provides a context within which country processes and Bank processes intersect.

Budget formulation and analysis

Although no ready formula exists for how to mobilize collective action to influence budget formulation, there are a range of options from which stakeholder groups can draw.

Understanding the budget requires a technical expertise that often discourages civil society groups from becoming involved in budget formulation. However, in recent years some groups have developed skills for demystifying the technical nature of the budget. They were able to do it by following standard guidelines set out by the auditor general on budget coding, which made it much easier to compute alternative figures and contest official statistics. See box 7.13 for an example from India.

Building ownership of budget analysis and advocacy will necessarily involve “democratizing” the capability to understand the budget. This means developing the skills to express in layperson’s terms the budget and any proposed alternate budgets. This also serves to open up a dialogue that has been in the exclusive control of a small number of technocrats.

Organizing social coalitions to support this type of action involves harnessing the energies of various groups to support budget formulation and analysis. These groups can include NGOs, civil society organizations and community groups, and donors that are involved in poverty diagnostics and priority setting. The media have proven to be an effective partner by displaying a keen interest in budgets and have been a strong ally in eliciting a response from the government and the general public.

Create the space to actively engage in budget formulation through lobbying and direct dialogue. In particular, effective budget or public finance committees of the parliament can play a key role (see technical note G.15 for a description of a participatory budget process in Uganda).

The following example illustrates how members of civil society can provide citizens with accessible information on budgets. The focus was not only on informing civil society about the budgeting process, but also on keeping policymakers and parliamentarians aware of citizen demands, and the effect of their budget decisions on their constituents.

Box 7.14 describes a case in which a governing party at the municipal level, through the mayor’s office, initiated a participatory budget-making process that incorporated the concerns of a number of

Box 7.13. Case Example: Participatory Budget Analysis in Gujarat, India

Almost 8 million tribal people live in Gujarat. Despite official rhetoric of significant investment in tribal development projects, results on the ground were questionable. In the early 1990s, this prompted Development Initiatives for Social and Human Action (DISHA) to embark on budget analysis to check what actually was happening to funds allotted in the name of the tribals. DISHA has since broadened to cover most aspects of budget analysis. DISHA obtains budget documents, reviews and disaggregates departmental allocations for different beneficiaries, researches the discrepancy between proposed and actual spending, and prepares briefs on synthesized findings to inform public debates. DISHA is one of the five largest membership-based NGOs in India with most of its 80,000 members drawn from tribal and forest workers. DISHA also runs a separate lobbying and advocacy movement in favor of its huge tribal constituency.

Lack of access to the annual budget documents can be a real barrier to timely analytical work. Because of bureaucratic traditions and citizen indifference, this sort of demand had seldom been previously made, which meant that DISHA initially gained access to information via personal contacts among the Members of Legislative Assembly (MLAs). These are now made available by the government. DISHA followed the auditor general’s standard guidelines on budget coding to compute alternative figures and dispute and contest official statistics. Basic knowledge of accounting systems gave DISHA significant confidence to go on to the next phase of doing the actual analysis of the contents. After obtaining the documents on the day the budget is presented to the Bidhan Sabha (assembly), researchers at DISHA analyze the data on revenue and expenditures, and interpret what the proposed allocations, if spent, mean for the poor. Three questions are asked: Does the budget mention specific pro-poor policies? Are these matched by adequate funding commitments? Do they relate to the socioeconomic reality of the Gujarati poor—the tribals, dalits, women, and agricultural laborers? The day after the budget speech, DISHA briefs the press, and when discussions commence in the assembly, it starts to feed MLAs with information briefs on the sectors on a daily basis.

These four- to five-page briefs contain budget information and analysis in an accessible form. More popular than academic in nature, these briefs are designed to create demand for explanations from the ruling government. The first set was produced in June 1994 and distributed to all MLAs, cabinet members, key civil servants, the press, and leading individuals and civic groups interested in public finance, approximately 2000 in total. Each brief dealt either with a department or a subject, such as education, home affairs (police), energy, finance, or the Narmada project details. Typically, the briefs cover (a) general information about the department and the amount it received for spending; (b) the percentage change in budget allocation to an item or subitem as well as excess amounts, if any, committed relative to previous years; (c) examples of fiscal indiscipline and mathematical errors; and (d) items or expenditure proposals introduced for the first time.

Since 1996 DISHA has prepared approximately 30 briefs on such topics as forests, women, social welfare, and so on. The budget information has also been disseminated in local languages through newspapers and fact sheets to tribal villages and schools. As part of its monitoring of budget implementation, DISHA asks village authorities in tribal areas about the state of various construction works pledged in the past and publicizes them to expedite progress. Budget data have also been used to write reports advocating policy change in areas such as forestry. By analyzing public expenditures, comparing what was promised versus what was delivered, especially to disadvantaged groups, DISHA is creating a strong system of information exchange that is assisting communities to articulate demands and create pressure to establish accountability within the public expenditure system.

Source: Participatory Approaches in Budgeting and Public Expenditure Management—Case of Gujarat, India. Prepared as part of the Action Learning Program. Participation thematic group. World Bank, Washington, D.C. (2000).

Box 7.14. Case Example: Participation in Budget Making in Porto Alegre, Brazil

A country of 156 million, Brazil has deep inequalities and substantial poverty, despite being a middle-income country. Brazil has experienced periods of dictatorship, for example, 1964–85.

At the municipal level, the power structure is such that the mayor's office serves as the executive, and the Chamber of Deputies as the legislature. Municipalities have considerable autonomy over their revenues, raised through local taxes, tariffs and federal transfers, and expenditures. The executive prepares the budget, which is then ratified by the chamber. Two institutions at the mayoralty—the planning office (GAPLAN) and the Coordination of Relations with the Communities (CRC)—manage budgetary debates with city residents. While CRC works through its regional coordinators with community leaders to set up discussion assemblies and to aggregate community claims, the responsibility of squaring citizen demands with technical and economic viability lies with GAPLAN.

The city of Porto Alegre is divided into 16 regions, and topics for community discussion comprise five themes: (1) transportation; (2) education, leisure, and culture; (3) health and social welfare; (4) economic development and taxation; and (5) city organization and urban development. There are two rounds of plenary sessions in each region and on each theme held each year. The citizens meet, usually in March, just before the first round of formal assemblies to gather demands of individual citizens⁵ and mobilize the community to select regional delegates. The municipality is not involved in these intracommunity discussions. The first round of meetings between the citizens and the executive follows in April, in the presence of the mayor, to review investment plans of the previous year, discuss proposals for the new year, and to elect people to the Fora of Delegates for subsequent deliberations.⁶

Between the first and the second rounds (March to June), informal preparatory meetings are held to discuss demands for investment in sectors as presented by the various community associations (unions, cooperatives, mothers' clubs, and so on). These demands are ranked on an ascending scale of 1 to 5 by the participants.⁷ These are then aggregated by the executive⁸ together with points earned through two other criteria: (1) need, measured by how much access a region has had to a particular service, and (2) population size. The maximum points that can be attained is 15: 5 points if a region has had less than 20 percent access to a service, 5 if it has more than 120,000 inhabitants, and 5 if people rank it top on their list of demands.

The second round takes place in July when two councilors (and two substitutes) are elected from all 16 regions (32 delegates), from all the 5 themes (10 delegates), in addition to a member each from the civil servants' trade union and an umbrella organization of neighborhood communities (2 delegates) to constitute a 44-member COP, which is the main participatory institution. These councilors then familiarize themselves with the state of municipal financing, debate criteria for resource allocation, elaborate their constituents' demands, and revise the budget proposal prepared by GAPLAN and the mayor's cabinet. For these tasks, the COP convenes for two-hour meetings once a week until September 30, when a final budget proposal is submitted to the legislature. Between September and December, the COP follows the debates in the chamber and lobbies intensely while working on a detailed investment plan that lays down all specific public works and corresponding amounts to be allocated to each region. The executive drives the COP process by coordinating the meetings, setting the agenda, and having its departments present information, before allowing interventions from the councilors to seek clarifications. In the end, resources are divided through a weighting system that combines the preferences of citizens with the quantitative criteria.

Source: Participatory Approaches in Budgeting and Public Expenditure Management—Case of Porto Alegre, Brazil. Prepared as part of the Action Learning Program. Participation thematic group. World Bank, Washington, D.C. (2000).

groups in the city. The Porto Alegre case was nominated by the 1996 U.N. Summit on Human Settlements as an exemplary "urban innovation." The largest industrial city in Rio Grande do Sul, Porto Alegre, with 1.3 million inhabitants, has a reputation for hosting a progressive civil society led by intellectuals and labor unions experienced in mobilizing people to partake in public life, including opposing authoritarianism.

Budgets can also be analyzed through a "gender lens," with the objective of examining whether public expenditures are allocated in ways that promote or hinder gender-equitable patterns of revenue and resource use. Box 7.15 describes the process used to conduct the Women's Budget Initiative in South Africa.

Expenditure Monitoring and Tracking

Expenditure monitoring and tracking have two distinct components: (1) ensuring that the government spends public monies according to budget allocations and (2) tracking how the monies spent are being used and whether they reach their intended destination (see technical note G.16 for an example of expenditure tracking in Indonesia). Based on past experience, several steps are recommended for participatory expenditure monitoring and tracking:

1. Conduct independent audits and generate reports that are widely disseminated among stakeholders, especially those CSOs and NGOs that have an interest in working with the

Box 7.15. Case Example: South Africa's Women's Budget Initiative

In 1995 the Women's Budget Initiative (WBI) began to analyze South Africa's budget for its impact on different groups by gender. This CSO analyzes whether the budget addresses women's needs and makes adequate provision (financial and otherwise) for implementing gender-sensitive policy. It seeks to identify indicators to measure whether resources are used effectively in reaching intended targets and goals (output/outcome indicators). It looks at both revenue and expenditure, taking into account the limited nature of financial resources available, and where it highlights a need for greater budgetary allocation in a particular area, this is balanced by identifying potential savings from expenditure that it sees as subverting gender equity. The initiative started with analysis in six key sectors, identified for their close relationship to women's issues and for being policy areas to which women could easily relate.

Within a year, a parallel initiative for a gender analysis of the budget within government was launched. The Select Committee on Finance has a special hearing on women, at which the Women's Budget Initiative and other organizations make presentations. The research is launched three days before budget day and presented to key stakeholders, parliamentarians, media, NGOs, and others through plenary presentations and group discussions of sectoral findings.

Who is involved?

The WBI began as an alliance of new parliamentarians (in the post-apartheid context after 1994) and two NGOs with backgrounds in policy analysis. The roles and relationships of those involved are critical to its success:

- NGOs provide the expertise and time necessary to collect information, undertake research, and produce analysis.
- Parliamentarians provide access to information, focus in terms of salient political issues, and a strong advocacy voice, without which the analysis might have gathered dust or circulated only among a closed circle of gender activists.
- Government: the strong policy link implies that such initiatives are most successful when they are collaborative ventures between staff policy, budget, information management systems, and gender units (though even in the WBI's case, such extensive intragovernmental collaboration seldom occurs). Government is expected to provide information, report honestly on what it is doing, what it hopes to do, and what difficulties it is experiencing in achieving aims.

Process

- Analysis is undertaken by researchers from a range of NGOs, academic institutions, and elsewhere. They are chosen for their knowledge of particular sectors and gender issues.
- Researchers are supported by a reference group. These are parliamentarians, government officials, NGO members, and others chosen for their knowledge of a sector but often too busy to do analysis themselves. They provide information and insights while learning to combine sectoral, gender, and budget analysis.
- Researchers and reference groups change every year in order to draw in the widest possible range of experience and reach out to a wider range of people. This has inspired initiatives concerning disaggregation by other interest groups (children and rural people, the disabled and the poor). There is a conscious effort to extend the network involved, using a snowballing technique for identifying reference group members.
- A gender budget manual was produced for government officials.
- Since 1998 the analysis has been disseminated through materials written in accessible, popular language, including simplified translations of key sections (for maximum accessibility, these were aimed at readers with just 10 years of education who speak English as a second language). Materials have been developed for workshops and training events.

The result has been to promote gender equality and gender mainstreaming in all national as well as local budgets. Such initiatives can also promote overall human development, effective use of resources, and help reduce poverty.

Source: Adapted from Budlender (1996, 1998).

government on budgeting and expenditure issues and who have the capacity to engage in such activities.

2. Administer in-depth surveys to make use of insider information from people in the government who are willing to discuss this matter, and to get a citizen's perception of where side payments are necessary, what services are most expensive, and which services are least well provided, given government spending on those programs.
3. Mobilize the public through widespread dissemination of information through print and broadcast media and through the Internet. In several cases, citizens are thus able to catalyze public pressure on the government for reform or organize public actions.
4. Stakeholders generate concrete proposals for policy and administrative reform. This allows the government to focus on specific issues and grievances, and it increases the credibility of stakeholder groups to enter a serious and constructive dialogue on reforms.

Box 7.16 shows how surveys were used to establish how allocated sums were spent in Uganda.

Box 7.16. Case Example: Participation in Budget Tracking in Uganda

The Public Expenditure Tracking Surveys (PETS), as quantitative exercises separate from but complementary to qualitative surveys on the perception of consumers on service delivery, have been found to be very influential in highlighting the use and abuse of public money. In the absence of a strong institutional infrastructure to manage information flow, surveys such as the one done in Uganda not only provide a realistic portrayal of demand and supply of services, but also prompt creation of cost-effective mechanisms of public accountability through, for example, information dissemination on resource allocation and use.

In collaboration with the Ugandan government and two domestic firms, 250 primary schools were identified in 19 of 39 Ugandan districts for the survey. The 19 districts were selected so as to geographically represent the country. The objective was to find out how much of the money that left the exchequer actually reached the schools between 1991 and 1995. Data on income, expenditure, and enrollment in schools were collected, largely by former teachers. Forms used were standardized, and there was also a provision for collection of qualitative information.

The government did not maintain disaggregated data on wage bill to teachers by type of school (primary or secondary), which made it impossible to compare allocations with actual spending on salaries. Since the only systematic data available were on capitation grants⁹ for nonwage spending, this was what was eventually chosen for tracking. Furthermore, because the quality of data at the district level was poor, this tier was excluded from the exercise, which meant that the survey was essentially reduced to comparing amounts of nonwage grants allocated at the center with how much of that reached the primary schools. Primary schools maintained a good record of enrollment and financial flows. Partially because so much of their money was coming from parents, accountability was taken seriously.

Despite quadrupling of budget allocations in real terms between 1991 and 1995, official statistics had shown that enrollment rates in primary schools remained stagnant. The survey found this was not true. Enrollment rates had actually increased by around 60 percent during the period, but had not been reported because of perverse incentives in the system.

The average amount of capitation grants received by the schools in 1991 was just 2 percent of the total allocation, which had improved to 26 percent by 1995, but was still far below full execution. While some schools received up to 25 percent of the allocation in a good year, the median was zero. The survey found that blockage in the system was occurring at the local government level that retained much of the grant, arguing that the children might have enrolled at schools but had not paid their fees, a substantial part of which was supposed to be remitted to the districts. They argued that the grants were thus withheld to cover these expenses. But the schools continued to send, on average, between 94 percent and 64 percent of collected fees to the district offices in the four-year period. Hence, while the districts received money from both the center and the ground, the schools continued to be underfunded, which would probably have hurt poor families most because they were the ones typically defaulting on tuition fee payment.

Once the results were revealed, in 1995, the government acted immediately to improve the flow of information, and make budget transfers transparent by publishing amounts transferred to the districts in newspapers and radio broadcasts; requiring schools to maintain public notice boards to post monthly transfer of funds; legally provisioning for accountability and information dissemination in the 1997 Local Governance Act; and requiring districts to deposit all grants to schools in their own accounts and delegating authority for procurement from the center to the schools. By 1999 per capita grants received by the schools had almost reached 100 percent, although delay in transfers persisted.

Source: Participatory Approaches in Budgeting and Public Expenditure Management—Case of Uganda. Prepared as part of the Action Learning Program. Participation Thematic Group. World Bank, Washington, D.C. (2000).

Monitoring delivery of public services

Monitoring public services allows citizens' groups to give concrete feedback to the government on which it can act. It allows community organizations to express their demands in a constructive way. Typically, selected services are targeted for monitoring—for example, teacher attendance at schools, water quality, and so forth. Fully developed participatory monitoring of public service delivery would be based on the following sets of actions:

1. **Select indicators** to monitor the performance of delivery mechanisms based on civil society inputs. The indicators can serve as both standards for delivery of the relevant services and as public records of citizens' opinions and perceptions.
2. **Collect credible data.** Government agencies may not have established mechanisms to collect this sort of data, or they may lack credibility.
3. **Analyze results.** Stakeholders in the community can collectively decide whether public service delivery has met their expectations.
4. **Provide feedback** to government agencies, and publicize the findings in order to effect change. This mechanism offers the community an opportunity to come together, with clear evidence of government performance, and go directly to persons in positions of authority to seek responses.

Box 7.17. Case Example: Bangalore Public Service Report Cards

Inspired by private sector client satisfaction surveys, in 1993 a small group of people in Bangalore, concerned about deteriorating public services, initiated an exercise to collect feedback from users. User perceptions of the quality, efficiency, and adequacy of the various services were used for a report card that rated the performance of all major service providers in the city. The findings presented a quantitative measure of satisfaction and perceived levels of corruption, which, following coverage in the media, not only mobilized citizen and government support for reform, but also prompted the rated agencies themselves to respond positively to civic calls for improvement in services. This exercise was repeated in 1999, and has been replicated in at least five other Indian cities as well as the State of Karnataka. By systematically gathering and disseminating public feedback, report cards may serve as a “surrogate for competition” for monopolies—usually government owned—that lack the incentive to be as responsive to their clients’ needs as competitive enterprises. They are a useful medium through which citizens can credibly and collectively send a signal to agencies about their performance and pressure them to change.

This informal exercise has since been institutionalized as one of the core functions of the Public Affairs Center (PAC), a nonprofit society established in Bangalore in 1994 with a goal of “improving governance in India by strengthening civil society institutions in their interactions with the state.” (See www.pacindia.org.) In 1993, the initiative began by seeking answers to three main questions: How satisfactory are the public services? What aspects of the service are satisfactory and what are not? What are the direct and indirect costs of acquiring these services?

The methodology used in 1993 was as follows. Small case studies of some key urban problems were followed by focus group discussions with two different sets of households: middle-income (called general) and lower-income (largely slum dwellers) to draft and finalize respective questionnaires. These were then pretested. The city was divided into six regions, and from each region a random sample of households that had interacted with at least one of the service providers in the past six months was chosen. Around 480 households were drawn from a pool of middle- and upper-income groups, and around 330 households representing the slum dwellers were chosen. Selected interviewees (the male-female ratio was 7:3) were then asked by trained investigators to rate their level of satisfaction with a particular service provider’s overall performance as well as allied dimensions such as staff behavior, number of visits required to complete a task, and frequency of problem resolution. People were asked to assign a rank from a scale of 1 to 7 (very dissatisfied to very satisfied). These were then aggregated to compute averages for overall perception of the quality of service. The list of the agencies had not been predetermined, that is, people were not asked what they thought of agency A, but were rather questioned about whichever services they had availed themselves of in the past six months.

The methodology represents a combination of statistically valid techniques with qualitative participant observation. When the exercise was repeated in 1999, there was some attempt to use the 1994 results as a benchmark by using similar scales for some questions, although this time sample size was increased using a multi-stage stratified sampling plan. Respondents were selected using random sampling from polling booth lists. Ninety booths were randomly selected to serve as starting points for investigators to go to and ask between 5 and 10 people about the services that they have encountered. Similarly for the urban poor, 80 starting points were identified from four different categories of slums.

In 1994 all key findings were flashed through the media, whereas in 1999 the PAC decided to first present mini-report cards to four of the key service providers (telephone, water, electricity, and the municipality) to solicit their initial reaction. The agencies did not dispute the findings but became defensive and pointed to their constraints. After these meetings, the 1999 report was circulated to all public agencies and senior state government officials. This was followed by a press launch, then a two-part workshop involving senior officials from the agencies and the public. The first part allowed the agency officials to interact and learn what some of the more responsive agencies¹⁰ were doing to address the criticisms. The second part involved the head of the agencies answering citizens’ questions on what steps were being proposed to improve services.

Source: Participatory Approaches in Budgeting and Public Expenditure Management—Case of Bangalore, India. Prepared as part of the Action Learning Program. Participation Thematic Group. World Bank, Washington, D.C. (2000).

This type of information gathering and feedback loops can be built into the proposed monitoring and evaluation activities to accompany PRSP implementation. Box 7.17 presents a relevant case example from India.

7.5.4 Participation in monitoring and evaluating poverty reduction

Participatory approaches to monitoring enhance traditional approaches that use quantitative indicators measured by either experts or bureaus of statistics by increasing the scope of what is monitored, focusing results from the perspectives of the poor, and including qualitative information that explains quantitative results. Participatory approaches enable the public to hold governments accountable for their actions, or lack thereof; they offer a tool for learning and continuous improvement in policymaking and program implementation, and they can stimulate dialogue among various stakeholders across society. Chapter 3, “Monitoring and Evaluation,” sets out the challenges and options more fully, while this section highlights participatory aspects.

A well-designed participatory monitoring and evaluation (PM&E) system builds on stakeholder analyses to determine who can be involved in the PM&E process and what role they can play. Through a well-designed PM&E process, it is possible to build skills in society that will allow independent monitoring of indicators, promote collaboration among civil society groups to improve their negotiating power, build trust among different stakeholder groups, increase the space for civic engagement in policymaking, and institutionalize feedback mechanisms that allow poverty reduction efforts to become iterative.

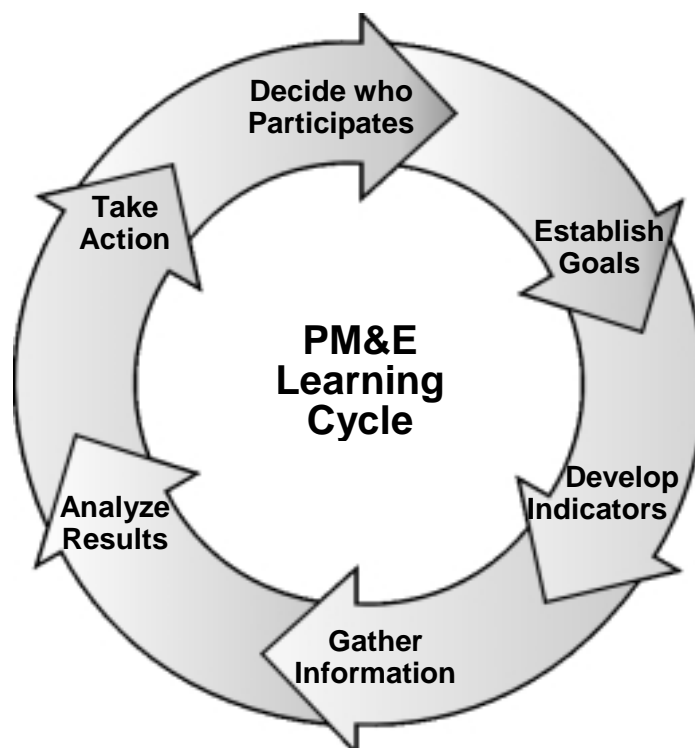
The iterative nature of the PM&E process is essential for its success and sustainability. If the feedback and information that is generated from a PM&E process is not incorporated into future rounds of decisionmaking and program implementation, it is virtually useless. Therefore, it is important to emphasize that participatory approaches in this phase of the PRSP are critical because they build ownership, increase transparency, and improve accountability.

However, in order to be incorporated into future decisionmaking and be iterative, the PM&E outputs must be relevant to policy. A good poverty monitoring system should produce information on the status and ongoing changes in living standards that is reliable and timely to policymakers. Policy relevance has implications for the structure of the information, which can be both qualitative and quantitative. The combination of these two types of data allows more effective action to be taken to reduce poverty because it not only reveals where and when poverty is greatest, but also why.

The choice of monitoring indicators and information-gathering methods is guided by country circumstances and is based on poverty diagnostics and technical analysis. The following is a range of options where the monitoring system can incorporate participatory elements:

- Agree on monitoring indicators, the ways in which they will be used and their frequency, who is going to collect and analyze how the indicators will feed back into policy.

Figure 7.3. The Cyclical Nature of the PRSP Is Reinforced by PM&E



Source: Rosemary McGee and John Gaventa. "PM&E for PRSPs: Challenges and Lessons." Paper presentation at the Voices & Choices at the Macro Level Workshop, April 2001.

- 3 Establish a baseline for both qualitative and quantitative measures, so that changes can be tracked over time.
- 3 Develop and set poverty reduction medium- and long-term indicator targets with an explicit link to resource constraints (see chapter 4, “Development Targets and Costs”).
- 3 Establish an integrated poverty monitoring information system and tap into local governments; local governments collect from civil society and the local NGO. Who is doing the charging?
- 3 Organize a schedule, responsibilities, and resources for monitoring.
- 3 Build institutional capacity for participatory monitoring and evaluation through various mechanisms that donors might support, such as training the facilitators, setting up a government monitoring coordination unit, and establishing workshops for local-level stakeholders, including government, NGOs, community organizations, and so forth.

Once the indicators and data-gathering methods are chosen, the issue becomes how to analyze these data and then incorporate them into policymaking and program implementation. Participatory analysis of PM&E data provides a useful mechanism for negotiating among stakeholders over differences in interpretation and conclusions, and it offers another way of building ownership over the process. It also ensures that conclusions reflect the views of diverse stakeholders (see chapter 3, “Monitoring and Evaluation,” for more information).

The following case study describes the PM&E process in Uganda.

Box 7.18. Case Example: Uganda

Monitoring and evaluation (M&E) can be a vehicle for building partnerships within and between government, civil society, and external cooperation partners. M&E can improve stakeholder communication and help in building agreement on desirable poverty reduction outcomes and strategies.

Uganda has taken steps to increase transparency and consultation in the budget process. The sector working groups that prepare budget framework papers bring together central and line ministries, civil society, and donors. Decisions about funding allocations are widely disseminated, including use of the media and public notice boards. However, in 2000 transparency in terms of feedback from public service users was still somewhat limited. Ministerial management information systems could not provide systematic service delivery records. In the context of the Poverty Eradication Action Plan (PEAP) the government recognized the importance of developing a unified, national M&E system. Making headway will necessarily be an ongoing and long-term process of awareness building, institutional liaison, systems adjustment, and skills formation. It will require policy consultations and operational action on several fronts. The most critical short-term actions that can help in developing M&E include the following:

- 3 **Refinement of PEAP goals and targets:** Sectoral planning and management efforts need to be guided by a clear and consistent set of medium-term goals and targets. PEAP’s long-term (year 2017) goal would be broken down to measures of success in, for instance, 2002, 2005, and 2010.
- 3 **Continuous monitoring of service delivery:** National service delivery surveys should not be approached as primarily for academics. Rather, the survey findings must be used to establish a baseline, goals, and targets for service reach and client satisfaction that are, in turn, used to inform work planning, budgeting, and managerial performance assessment.
- 3 **Expand scope of reporting harmonization:** This can be extended beyond a uniform format for project progress reporting, to encompass harmonization of reporting on broader sector and poverty programs. Harmonization of donor M&E reporting arrangements is equally important as articulated.
- 3 **Finalization of poverty monitoring strategy:** Ongoing efforts to draft a national poverty monitoring strategy represent an important opportunity for bringing closure to existing uncertainties regarding the objectives, roles, and responsibilities for M&E. Ministry of Finance, Planning & Economic Development has been the champion of the necessary task of bringing alignment, coherence, and synergy to Uganda’s approach to results management and M&E initiatives and activities.

Source: Based on Arild Hauge. “Strengthening Capacity for Monitoring and Evaluation In Uganda: A Results Based Management Perspective.” ECD Working Paper Series No. 8, January 2001, p. 19.

Notes

1. Briefing notes from “Remarks to the Joint Interim Development Committee on the Enhanced Poverty Reduction Strategy.”
2. The NGO and Social Movement Forum has 35 member organizations: agricultural workers, indigenous and rubber tappers associations, environmental NGOs, and urban educational groups
3. International NGOs (World Wildlife Fund/Sweden and Oxfam, United Kingdom).

4. Available at www.irlgov.ie/taoiseach/publication/prosperityandfairness.
5. The number of participants rose from under 1,000 in 1990 to more than 14,000 in 1996 in the two rounds of assemblies. Including informal consultations, almost 8 percent of the city's population—100,000—might have been engaged in some way in these participatory processes, reflecting the effectiveness and credibility of the process.
6. One delegate is chosen for every 10 people if up to 100 people attend; 1 for 20 if 101–250 people attend, 1 for every 30 if 251–400 people attend, and so on, with 1 delegate chosen for every 80 people if more than 1,000 people attend.
7. Five sectors are ranked in order of preference from a list of 12 consisting of sewage, housing, pavement, education, social assistance, health, transportation, city organization, sports, leisure areas, economic development, and culture. A sector can be subdivided, such as housing into land legalization, relocation, urbanization, and so on.
8. In 1999, under the need criteria, 80 percent previous access to a service earned 1 point with under 20 percent access earning the full 5; similarly, grades earned increases with population and with increased preference of the community.
9. Payment made by the government to the schools at the rate of 2,500 Ugandan shillings per student enrolled in classes P1–P4, and 4,000 US\$ for students in P5–P7. These were supposed to be matched by the mandated tuition fees paid by parents.
10. The utilities were better, having introduced a system to register breakdowns, streamlined bill collection, and so forth.

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Chapter 8

Governance

*Navin Girishankar, Linn Hamnergren, Malcolm Holmes,
Stephen Knack, Brian Levy, Jennie Litvack, Nicholas Manning,
Richard Messick, Jeffrey Rinne, and Helen Sutch*

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8.1 Introduction

This chapter is intended to stimulate a broad-based dialogue on governance and its links to poverty. It assumes that an initial poverty analysis has been undertaken (along the lines suggested in chapter 1, “Poverty Measurement and Analysis”) and aims to develop a subsequent operational strategy for good governance in support of poverty reduction.

Diagnosing the quality of governance arrangements is crucial to determining practical and sustainable strategies for tackling poverty. The chapter is intended to be used as a diagnostic aid by a working team comprising government and civil society representatives. It focuses on some core governance areas, raising issues and providing diagnostic questions. More detailed diagnostics can be applied as time and resources allow.¹

8.1.1 Definitions

Governance refers broadly to the exercise of power through a country’s economic, social, and political institutions² in which institutions represent the organizational rules and routines, formal laws, and informal norms that together shape the incentives of public policymakers, overseers, and providers of public services. This is often referred to as “the rules of the game.” Three key dimensions are (a) the process by which governments are selected, held accountable, monitored, and replaced; (b) the capacity of governments to manage resources efficiently and to formulate, implement, and enforce sound policies and regulations; and (c) respect for institutions that govern economic and social interactions. Boxes 8.1 and 8.2 summarize global definitions and regional perspectives on governance.

Problems of poverty and governance are inextricably linked. If power is abused, or exercised in weak or improper ways, those with the least power—the poor—are most likely to suffer. Weak governance compromises the delivery of services and benefits to those who need them most; the influence of powerful interest groups biases policies, programs, and spending away from the poor; and lack of property rights, police protection, and legal services disadvantage the poor and inhibit them from securing their homes and other assets and operating businesses. Thus, poor governance generates and reinforces poverty and subverts efforts to reduce it. Strengthening governance is an essential precondition to improving the lives of the poor.

Box 8.1. Global Perspectives on Governance

United Nations Development Programme (UNDP)

Governance is the exercise of economic, political, and administrative authority to manage a country’s affairs at all levels. It comprises mechanisms, processes, and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their legal obligations, and mediate their differences.

(<http://magnet.undp.org/policy/default.htm>)

Organisation for Economic Co-operation and Development (OECD)

Governance denotes the use of political authority and exercise of control in a society in relation to the management of its resources for social and economic development. This broad definition encompasses the role of public authorities in establishing the environment in which economic operators function and in determining the distribution of benefits as well as the relationship between the ruler and the ruled.

(<http://www.oecd.org/dac/>)

Commission on Global Governance

Governance is the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action may be taken. It includes formal instructions and regimes empowered to enforce compliance as well as informal arrangements that people and institutions either have agreed on or perceive to be in their interest.

(<http://www.cgg.ch/welcome.html>)

World Bank

“Good governance is epitomized by predictable, open and enlightened policy making (that is, transparent processes); a bureaucracy imbued with a professional ethos; an executive arm of government accountable for its actions; and a strong civil society participating in public affairs; and all behaving under the rule of law.”

(<http://www.worldbank.org/publicsector/overview.htm>)

Box 8.2. Regional Donor Perspectives on Governance

Asian Development Bank (ADB)

Governance has to do with the institutional environment in which citizens interact among themselves and with government agencies and officials. The capacity of this institutional environment is important for development because it helps determine the impact achieved by the economic policies the government adopts. This capacity, then, and the governance quality it reflects, is a vital concern for all governments.

(<http://www.adb.org/Work/Policies/governance/gov-policies.pdf>)

European Bank for Reconstruction and Development

Governance should be based on support for markets and private enterprise rather than plans and commands. A key to explaining different assessments of governance across the region lies in the extent to which the state is subject to "capture"—or undue influence—by vested interests.

(http://www.ebrd.com/english/PUBLIC/transition/Exesum_281099.html).

Inter-American Development Bank

The IDB has sought to reinforce the connection between good governance and political stability, which in turn depends on domestic socioeconomic conditions, the strength of democratic institutions, and citizen input in the public decisionmaking process. Stability also requires an effective, reliable legal system; efficient management of public funds; government accountability; and social equity.

(<http://www.iadb.org/exr/IDB/stories/1998/eng/e9981.htm>).

European Union

In the context of a political and institutional environment that upholds human rights, democratic principles, and the rule of law, good governance is the transparent and accountable management of human, natural, economic, and financial resources for equitable and sustainable development. It entails clear decisionmaking procedures at the level of public authorities, transparent and accountable institutions, the primacy of law in managing and distributing resources, and capacity building for elaborating and implementing measures that aim to prevent and combat corruption.

(<http://www.europa.eu.int/>).

8.1.2 Diagnosing problems

Good governance can be undermined by a range of factors, including lack of transparency, weak accountability, poor organization and lack of technical capacity, lack of responsiveness, inefficiency, and poor motivation. It is important to be clear about the sources of poor governance, as possible remedies will vary accordingly. And it is important to assess the extent of demand for reform, which requires an understanding of the incentives of the main actors involved. Corruption is often both a cause and an effect of weak governance. An understanding of the specific mechanisms and nature of the specific costs imposed on the poor by weak governance is needed in order to design realistic action plans for dealing with it.

If demand for reform is strong, but organizational and technical capacity is weak, technocratic reforms can be helpful. These could include support to links between policy and budgeting, civil service development and training, development of legislative and judicial functions, and organizational and functional reforms. But a diagnosis of the underlying drivers of poor governance may reveal that many of the actors involved have an interest in its continuation and, correspondingly, little incentive to make reforms work. If demand for reform is compromised by vested interests, the ownership and effectiveness of technical remedies are likely to be weak. As a result, both domestic funds and external assistance may largely be wasted on technocratic reforms.

These incentive issues can be tackled once the nature of dysfunction is understood and set within the broader environment, including the degree to which the society as a whole operates according to formal rules or through informal networks. The extent to which information is available and people can be held accountable for their actions is critical to any chance of improving governance. An understanding of what has gone before, and of the current set of institutional arrangements, will both constrain and help to define viable next steps.

It is critical to answer the question of who gains from poor governance if the diagnosis is to translate into effective action. In many if not most cases, dysfunctional behavior and institutions serve private interests. If public servants at any level are bending the formal rules in order to secure private gains, this points to corruption.³

Impact on the poor

Poor governance and corruption can hurt the poor through a multiplicity of routes. In a corrupt government, social interests and economic priorities play little role in the allocation of public resources. As capital-intensive defense and infrastructure projects may offer more opportunities for kickbacks than, for instance, spending on primary education, government spending allocations may be biased away from pro-poor expenditure. Spending on operations and maintenance may also be squeezed in favor of new projects for similar reasons, leaving existing roads, hospitals, and other public infrastructure to decay. At the same time, expenditures allocated may never reach the intended recipients—a major source of deprivation to poor people. Corruption in pharmaceuticals and equipment procurement in the health sector, for instance, diverts funds away from patients. Corruption can mean also that the death toll and loss of assets in earthquakes and other natural disasters are far higher than necessary, because procurement and inspection procedures are subverted, and shoddy materials and building practices prevail. Through various channels, corruption can compromise basic security and life itself.

The poor will be disproportionately affected by such practices, because they cannot afford to buy alternatives to publicly provided health services and education or private substitutes (security guards, alarm systems) for police services. Bribe payments cost the poor, in comparison with the rich, a larger share of their incomes. Indeed, household surveys consistently indicate that poorer families pay a larger share of their incomes as bribes in exchange for public services.

When analyzing the sources and impact of corruption, it is helpful to distinguish between two broad types of corruption: state capture, which distorts the framework of rules, and administrative corruption, which distorts the implementation of rules.

- *State capture* refers to actions that individuals, groups, or firms in both the public and private sectors take to influence the formation of laws, regulations, decrees, and policies to their own advantage. This occurs through illicit and nontransparent transfer or concentration of private benefits to public officials. As a result, biases that serve private interests are encoded in the basic rules of the game, usually at a significant cost to society.
- *Administrative corruption* refers to the intentional imposition of distortions in the prescribed implementation of existing laws, rules, and regulations to provide advantage to either state or nonstate participants as a result of the illegal transfer or concentration of private gains to public officials.⁴

When the reach of legitimate political authority is limited, the economy can be dominated by powerful interests, and public administration is rife with patronage and bribery. Collective action of any kind, especially that which is pro-poor, becomes almost impossible. Recent development literature focuses increasingly on identifying institutional arrangements that are fairer, safer and more open to participation by the poor, and more likely to produce results that are helpful to their well-being. In this chapter, we call such arrangements “pro-poor.”

8.1.3 Using this chapter

This section has defined governance and offered some diagnostic tools that can help to ensure measures of good governance. Section 8.2 expands on the links between governance and four key themes: empowering the poor, improving capabilities of the poor by improving basic services, providing economic opportunities by increasing access to markets, and providing security from economic shocks and from corruption, crime, and violence. Table 8.1 maps governance issues onto these four themes.

Section 8.3 explores the formal governance arrangements that can constrain the exercise of state power and prevent equal opportunity for all citizens to participate. It asks whether and how the government is held accountable for its actions and its use of funds, stressing the importance of information and transparency as essential foundations of accountability.

Section 8.4 explains governance issues in intergovernmental relations, including the extent to which devolution of responsibilities, expenditure management, revenue raising, and service delivery to subnational levels can help or hinder the poorest groups.

Table 8.1. Dimensions of Poverty and Governance

Poverty dimensions	Governance issues
Empowering the poor	<p>Rules for seeking and holding public office:</p> <ul style="list-style-type: none"> › Fair, transparent national electoral processes › Power-sharing arrangements to ensure stability in heterogeneous societies <p>Oversight by political principals:</p> <ul style="list-style-type: none"> › Parliamentary oversight with independent audit institutions › Budget that is a credible signal of government policy intentions › Pro-poor policies › Sound institutions for local and national representation
Improving coverage, efficiency, and sustainability of basic services	<p>Adequate, predictable resources for sectors, local authorities:</p> <ul style="list-style-type: none"> › Pro-poor budget priorities for service provision › Stable intergovernmental transfers with hard budget constraints › Hierarchical and transparent budgeting processes <p>Demarcation of responsibilities for delivery:</p> <ul style="list-style-type: none"> › Assignment of responsibilities according to the subsidiarity principle <p>Capable and motivated civil servants:</p> <ul style="list-style-type: none"> › Merit-based recruitment and competitive pay › Hiring to fill real needs within a hard budget constraint › Public service that earns respect <p>Accountability downwards:</p> <ul style="list-style-type: none"> › Publication of accounts for local-level activities › Dissemination of basic data on performance › Mechanisms for client feedback, including report cards and client surveys <p>Flexible delivery:</p> <ul style="list-style-type: none"> › Involvement of civic and private (for profit) partners <p>Development of local capacity:</p> <ul style="list-style-type: none"> › Incentives to deploy staff to poor and remote areas › Appropriate autonomy in deploying staff
Increasing access to markets	<p>Legal and regulatory framework:</p> <ul style="list-style-type: none"> › Enforcement of antidiscrimination legislation › Incentives for deepening of credit and land markets <p>Methods for reducing exclusion:</p> <ul style="list-style-type: none"> › Enforcement of legislation against barriers to entry › Provision of information on labor and credit markets › Demarcation of responsibilities and budgeting procedures to support development and maintenance of infrastructure (e.g., rural roads) to enable physical access to markets
Providing security from economic shocks and from corruption, crime, and violence	<p>Rules for sound economic management:</p> <ul style="list-style-type: none"> › Hard budget constraint for subnational governments and aggregate fiscal discipline › Efficient administration of tax and customs › Independent central bank to carry out monetary policy <p>Safeguards against economic vulnerability:</p> <ul style="list-style-type: none"> › Recognition of property rights over physical assets › Access to social insurance and other services through hub-and-spoke arrangements <p>Enforcement mechanisms:</p> <ul style="list-style-type: none"> › Independent and adequately funded court system › Access to speedy recourse and redress › Reliable and competent police › Efficient courts with competent judiciary and legal personnel › Alternative mechanisms for dispute resolution

Sections 8.5 and 8.6 focus on the core public sector areas of budget processes and the civil service, while section 8.7 sets out the crucial importance of the legal and judicial system for the poor. Section 8.8 draws together the implications for service delivery—an aspect of public sector performance that is almost always critical for the poor.

Section 8.9 raises important issues of political economy that will influence the feasibility and sustainability of pro-poor governance reforms. This discussion is intended to be helpful in designing strategies that can be effectively implemented. The aim is to generate reform options that are not only technically sound but are workable and seen as legitimate, including from the perspective of the poor, and that can be sustained over time.

8.2 Good Governance and Poverty Reduction

Governance is a broad topic that can reasonably include consideration of the way institutions work in areas ranging from human rights—through legal systems and human resource management—to details of social and military spending. In order to connect broad concerns about how power is exercised through economic, social, and political institutions with the specific steps that can be taken to reduce poverty, this chapter relates the four key elements of the poverty framework to corresponding governance reforms. The underlying question is: How can better governance help reduce poverty in its various dimensions—empowerment, capabilities, opportunities, and security? Table 8.1 summarizes the relationship between key governance issues and poverty dimensions.

8.2.1 Empowering the poor

By participating in formal political and administrative processes, the poor can debate and potentially influence broad policy directives, budget priorities, and program design. Poor people can give valuable feedback on failures in service delivery and obstacles to access. To be sustainable, participation needs to be embedded in and supported by formal structures at the national and subnational levels (see chapter 7, “Participation”).

The formal governance arrangements that can promote and sustain participatory processes include regular, competitive and fair elections, and equal protection under electoral rules. Accountability and transparency, discussed in more detail in section 8.3, are central. At the level of the executive, annual reports, regular publication of information, and established consultative and review mechanisms all contribute to transparency. Finally, access to information and freedom of the media to investigate and report are important (see section 8.3).

Often, participation by the poor is dependent on their proximity to decentralized political institutions, also subject to competitive and fair elections, and local planning bodies. While they do not guarantee empowerment, local governance arrangements may give poor people a chance to articulate and mobilize around their most immediate concerns.

8.2.2 Improving the capabilities of the poor

To improve the coverage, cost-efficiency, and quality of basic services at the local or district level, governments need to allocate and deliver adequate and predictable flows of resources to sectoral and subnational authorities and implement institutional arrangements that are responsive to the public. Functions assigned to different tiers of government should be reinforced by a legal framework for resolving interjurisdictional disputes. For most services, particularly in the social sectors, important roles need to be clearly assigned and performed by multiple levels of government. Supporting these structural arrangements should be a capable, motivated staff, recruited on the basis of merit and paid a competitive wage. If poor people are to be better served, it may be necessary to tackle discriminatory practices and, in some cases, charge reduced fees or “lifeline” tariffs.

If designed appropriately, decentralized responsibility for delivery has the potential to improve service delivery. Otherwise, decentralization can make things worse. Sustainability and efficiency can be

enhanced by actively involving beneficiaries and encouraging other producers: for example, by creating credit unions and community development associations. Processes that involve the poor, elicit their feedback, and disseminate information on resource management and performance can help to strengthen accountability mechanisms (see chapter 7, “Participation”).

8.2.3 Providing economic opportunities

The state plays a central role in defining and enforcing the rules governing access to private markets. Social exclusion and discrimination keep the poor out of markets for land, labor, and credit, as buyers or as sellers. Harassment by tax inspectors and regulatory authorities hits the poor worst. Removing these barriers requires far-reaching national and local antidiscrimination efforts to expand the freedom of poor individuals to participate in mainstream institutions. Governments may need to enact legal and regulatory reforms to deepen market access, clean up inspectorates and revenue authorities, and actively disseminate information to the poor on opportunities for employment, asset ownership, and local and international prices.

Lack of physical access to markets tends to encourage subsistence farming and greatly limits the opportunities available to the poor to engage in more profitable farm and nonfarm activities, important for reducing vulnerability to agricultural shocks and increasing rural employment. Developing and maintaining the infrastructure (telecommunications and rural roads, for instance) to enable access to markets requires an enabling environment absent in many countries. This environment requires an assignment of responsibilities (from funding to technical supervision, to construction and maintenance of different types of infrastructure) across tiers of government and communities to provide clear channels of accountability to ensure that facilities are constructed and maintained.

8.2.4 Security

Poor macroeconomic performance affects all economic actors but is especially costly to the poor (see chapter 12, “Macroeconomic Issues”). Multiple exchange rates and complicated trade restrictions often provide opportunities for corruption and siphoning of resources away from the poor. The best safeguard against poor macroeconomic performance is sound management of fiscal and monetary policy, including hard budget constraints on each level of government.

In many societies, vulnerability to crime, violence, and corruption is a major dimension of poverty and is often the concern most forcefully expressed by the poor. Governments can act to check these forms of arbitrary action by making the justice system accessible and limiting violence and exploitation by police. In some cases alternative dispute resolution bodies can be less expensive and speedier than the traditional court system, but neither will necessarily be fair. Governments can also introduce methods by which the poor can report—anononymously or publicly—on the behavior of public officials such as the police.

Reducing vulnerability to corruption, however, requires far more than legal and judicial reform. All the public sector issues mentioned in this chapter (from electoral rules to the administration of tax and customs) raise procedural rules that influence the actions of state officials and public sector employees and, ultimately, determine the integrity of institutions in a society.

8.3 Accountability, Transparency, and the Architecture of the State

Accountability and transparency provide strong incentives for good governance. They are essential characteristics of well-functioning institutions and good public sector performance. Their existence is closely linked to the architecture of the state, which defines the relationships among the executive, legislature, and judiciary, and the extent to which they are able to scrutinize each other’s behavior. Accountability and transparency also depend on other institutional arrangements for the transfer of power between governments, including voting arrangements and electoral laws.

What are the formal governance arrangements that support this architecture? The first arrangement comprises electoral rules that mandate regular and fair competition between seekers of political office. The second requires inclusive arrangements for the exercise of power that offer the protection of the law to all citizens—and that can be guaranteed by an independent judiciary. Parliamentary oversight mechanisms such as independent audit institutions are also critical for fiduciary accountability. Deficiencies in any of these arrangements undermine the fairness and effectiveness of the state and directly or indirectly penalize the poor.

The ability to call state officials and public employees to account is fundamental. Typically, people must account for their policies and actions, as well as for their use of funds (financial accountability). Employees must be accountable to their superiors within the executive; the executive as a whole must be accountable to the electorate and to the other main institutions of the state. Accountability is hard to achieve without adequate information and at least some degree of transparency. If internal accountability within the executive is to be possible, information based on reliable records and accounts must be generated and reported; for external accountability, this information must also be accessible and shared. Hence, we refer to measures that enhance information sharing and transparency as “accountability mechanisms.”

Holding government—the executive—accountable rests on two foundations. First, there must be some bodies or groups to which the executive answers; for example, the cabinet being accountable to the Parliament. Second, in situations where certain executive actions are questionable, then legislative, judicial, legal, or electoral challenges should be possible. Failing these, popular challenges (for example, the Philippines in 2000) have sometimes been successful but should only be a last resort.

Horizontal accountability concerns relationships between the executive and the other main institutions of the state—the legislature and the judiciary—while vertical accountability refers to relationships in which one actor must report to another. Depending on constitutional arrangements, subnational governments may be seen either as subordinated or as having equivalent rights to central governments. These accountability relationships are reinforced by informal checks executed by civil society and, in some circumstances, by donors. Figure 8.1 illustrates these relationships.⁵

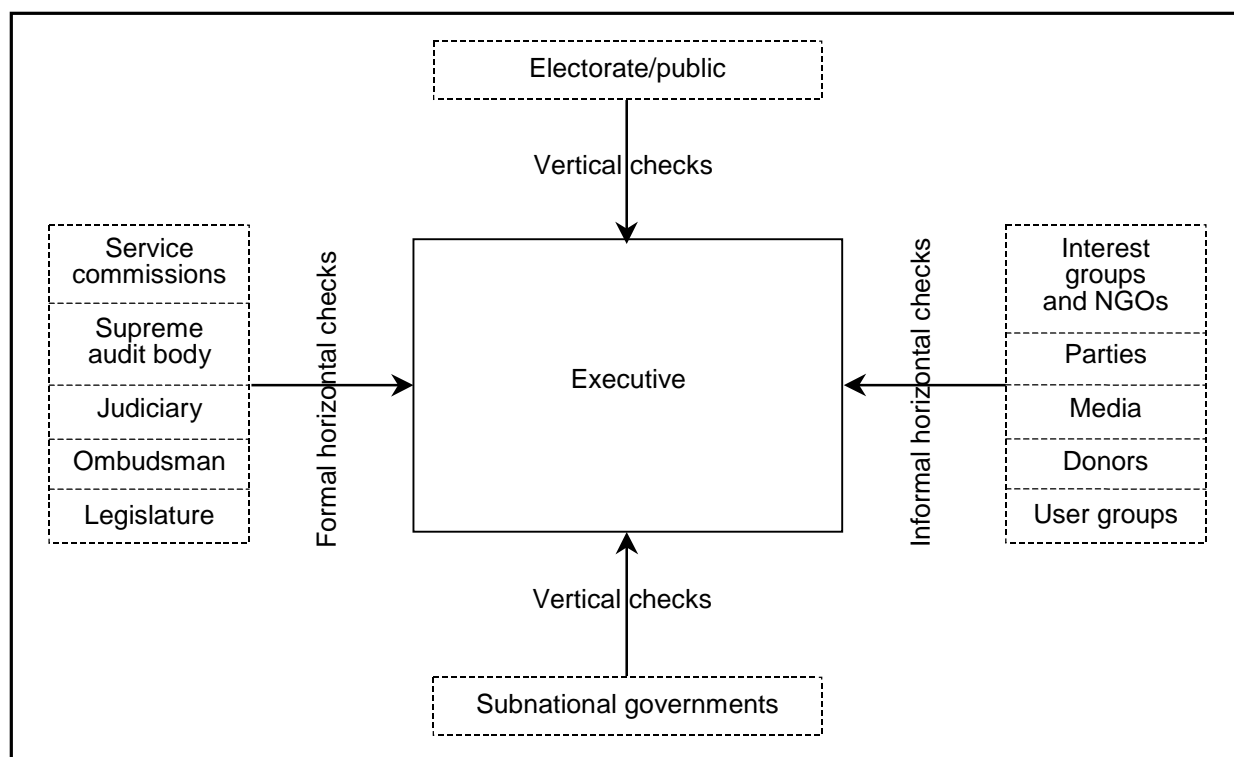
8.3.1 Contestability of government office

Regular, free, and fair elections that can result in changes of government, and the right to stand for elections, are fundamental to empowering the poor. The rules for seeking and holding public office should be fair and transparent. Elections should be competitive and electoral law should provide for an independent electoral commission and the determination of electoral boundaries by a neutral or representative body. The law should also credibly prohibit vote buying and encourage election monitoring by independent groups from civil society.

The credibility of political parties and their freedom to organize are also fundamental. Both financial and nonfinancial contributions to political parties above a defined threshold should be disclosed to the public, and the parties’ financial accounts should be audited regularly and the results made public. Key questions include:

- Do government and opposition candidates have equal access to state resources and the media during political campaigns?
- Is the voters register updated before elections and free from controversy?
- Are parties rooted in significant popular support around coherent policy platforms?
- Can parties function transparently and without undue hindrance? For example, are government *and* opposition parties free to hold public meetings and rallies, and is there a transparent framework for public support, whether financial or nonfinancial, of political parties?
- Is the governing party financed through off-budget public resources, or through funds corruptly obtained through sale of office, appointments to state-owned enterprises, or interference in public procurement?
- Can opposition parties openly obtain adequate resources to participate in competitive politics?

Figure 8.1. Holding the Executive Accountable



8.3.2 Accountability of government

Absence of state capacity for external audit, or lengthy delays in audit reports to the legislature, are warning signs that the government is not being held accountable by the legislature for its actions. Key questions in ensuring that the government is held accountable for budget execution and results achieved include the following:

- 3 Are records and accounts kept that enable accurate reports to be generated?
- 3 Does the executive reconcile and justify to the legislature deviations between forward estimates and budget estimates, and between budget estimates and actual spending?
- 3 Do ministries and agencies provide annual reports to the legislature in which performance is explained?
- 3 Are audited financial statements submitted to the legislature in a timely manner?
- 3 Are they debated in the legislature?
- 3 Does the executive take notice of audit findings and related parliamentary reports?
- 3 What percentage of the budget is earmarked, formally and informally?
- 3 Are there clear criteria for the cases in which earmarking is seen as legitimate?⁶

Legislatures should include a functioning finance committee and the equivalent of a public accounts committee.⁷ Parliamentary committees should be supported by professional staff and adequately resourced. Individual parliamentarians should have enough staff and financial resources to perform their duties.⁸ Public interest groups that analyze the budget, including from a poverty perspective, can usefully reinforce this process (see chapter 7, “Participation”).

8.3.3 Freedom of information and assembly

Formal electoral and accountability rules should be coupled with a legal framework permitting freedom of expression, assembly, and organization, including a law defining nongovernmental organizations

(NGOs) and their right to organize and publish. Freedom of the news media is critical and entails freedom from suppression of news by owners as well as by state power. An important guarantor of transparency is the implementation of legislation permitting freedom of access to information: this should clearly define information that must be held in confidence and allow access to all information not so restricted (Blanton 2001). Key questions include:

- Is freedom of expression and opinion restricted by media censorship or fear?
- What difficulties do groups face in obtaining permission to hold a demonstration or to form civic associations?

8.4 Intergovernmental Relations and Decentralization

Throughout the world, governments are in the process of decentralizing fiscal, political, and administrative authority to lower levels of government. In some countries, decentralization is driven by people's demands for a greater say in decisions affecting their lives; in others, by reactions against previously excessive concentration of power at the center (such as in the former Soviet Union); and in yet others, by government efforts to save money by devolving functions without commensurate resources.

Several different forms of decentralization can coexist within a country and even among its sectors, with different forms in different sectors:

- **Deconcentration**, the most limited (and common) form of decentralization, occurs when the central government disperses responsibilities for delivery of services to its regional branch offices.
- **Delegation** refers to a situation in which the central government transfers responsibilities for administration of public functions to local governments or semi-autonomous organizations that are not wholly controlled by the central government but are accountable.
- **Devolution** is a more extensive form of decentralization of power. The central government transfers authority for decisionmaking, finance, and management to local governments that have clear and legally recognized jurisdictions over which they exercise authority, within which they perform public functions, and to whose constituents they are accountable.

Decentralization is not necessarily good or bad. If it is designed well, it can move decisionmaking closer to people and improve governance, including the efficiency of service delivery. If decentralization is not appropriately designed or is introduced in environments in which local participation and accountability are constrained, its effect can be negative. The key challenge is to balance responsibilities with accountability and resources.

There is often a big difference between formal arrangements for decentralization and what is actually happening in the country. An essential element is the need for a clear division of responsibilities and a clear system of accountability. Two key questions are (a) who does what regarding spending, taxing, and monitoring outcomes and (b) who is accountable to whom. The answers will give the analyst a good idea if the design is well formulated and has the potential to achieve the benefits of decentralization or, conversely, if it is likely to lead to unintended consequences that can generate macroeconomic instability and hurt the poor.

8.4.1 Appropriate level of government

If intergovernmental relations are well designed (responsibilities matched with resources and capacity, decisionmakers clearly accountable to local and central authorities as appropriate for the function), service delivery should occur at the lowest possible level of government. This is often called the "subsidiarity principal." When communities are actively involved in allocative decisions, they are more likely to ensure that projects meet their needs and are completed in a timely fashion, and they are more likely to be committed to maintaining investments.

As countries decentralize, arrangements to ensure accountability of public actors become more complicated, but they also hold greater potential for effectiveness. Some services, or aspects of services, will

remain the responsibility of higher levels of government, and some, depending on the nature of the service and the extent to which benefits are exclusively local, will become local responsibilities. Thus, accountability will involve multiple levels of government.

In countries of many millions, it is virtually impossible for a central government to know (or care) about decisions that affect a few thousand people. Rather than rely on reports to the central government that may be ignored, accountability shifts downward if households can turn to locally elected leaders to demand better public services. In principle, if local leaders do not respond to the demands of the majority, they are voted out of power. The ability of decentralization to improve governance, however, rests on assumptions that require examination in every country context. Key questions to ask include the following:

- Are local leaders selected through regularly scheduled and fair elections?⁹
- Is information available to citizens to enable them to assess the performance of their elected leaders (full publication of accounts, public notices of decisions)?
- Are channels of participation available to enable citizens to express views regarding local decisions (selection of priority investment projects and other allocative decisions regarding the budget, operation of the local school, and health centers)?
- Are civic and private partners involved in service delivery?
- Are spending and revenue responsibilities clearly assigned to different levels of government, and is this assignment understood by the population? Local leaders cannot be held accountable unless they are clearly assigned the responsibility, and even if they are, they can pass accountability upward unless they have the ability to raise at least some revenues from the local population so that they contribute financially to the services they receive.
- Are spending and revenue matched to enable adequate financing of services?
- Are intergovernmental transfers predictable and transparent?
- Do local governments have the capacity to meet their responsibilities?¹⁰

8.4.2 Budget constraints between tiers of government

The measures of accountability mentioned above are undermined when soft budget constraints exist between levels of government. In these cases, subnational governments will have incentives to overspend, undertax, and overborrow, confident that the central government will ultimately assume their liabilities. Bailouts can occur, for example, through the fiscal system (discretionary transfers, assumption by central government of expenditure responsibilities of local government), the financial system, or arrears to state enterprises.

If local voice is to be an effective means of holding local leaders accountable for meeting needs and preferences, these leaders must be certain of their agency funding and responsibilities. A hard budget constraint on subnational governments is a clear signal that they will be held accountable for their decisions and the quality of services delivered. Key questions include the following:

- Is there a clear assignment of responsibilities across levels of government?
- Are revenues assigned to match expenditure responsibilities?
- Are intergovernmental transfers predictable and transparent and not amenable to political pressure?
- Does the central government have the authority to control subnational government borrowing? Is this authority exercised?
- Do subnational governments have access to capital markets? If so, is there an implicit or explicit central government guarantee?

Subnational borrowing is controversial. On one hand, lumpy local investments are most efficiently and equitably financed through borrowing. On the other hand, if a hard budget constraint does not exist between levels, local governments may borrow beyond their means to repay and rely on central

government bailouts through the banking system, leading to inflation, or through fiscal systems, leading to greater fiscal deficits. The most notable case of this occurred in Brazil, where the central bank continually rolled over the debt of subnational banks when they were unable to pay. This led to a situation of moral hazard where the states expected central bailouts and continued to borrow beyond their means to repay. The ultimate result was a fiscal crisis for the central government.

In practice, arrangements vary widely between countries. In some countries with a long tradition of federalism, local governments borrow in competitive markets and not from the central government or from locally owned public sector enterprises. The central government may need to lower moral hazard by regulating subnational borrowing and can do this in many ways. The most direct is simply to ban all autonomous subnational borrowing and to allocate all credit through a centralized process. More subtly, it may limit certain kinds of borrowing, place financial ceilings on borrowing, or require that borrowing be used only for investment.¹¹

8.4.3 Sequencing decentralization

There is no single correct enabling environment for decentralization. The key is to design a set of arrangements that are internally consistent and, together, establish an incentive framework in which benefits of decentralization can be achieved and unintended consequences minimized. The arrangements involve an appropriate combination of intergovernmental fiscal relations (expenditure and tax assignments, specified and block grants, and regulations for subnational borrowing), mechanisms for political accountability (electoral rules, information dissemination, channels of participation), and channels for administrative responsibility and oversight (civil service arrangements, monitoring capacity).

Since the impact of a set of intergovernmental (decentralization) policies depends on the interaction of the different elements, suggestions for sequencing are difficult. Moreover, decentralization is usually driven by a political agenda in which optimal sequencing is not the most pressing concern. Nevertheless, in designing a package of intergovernmental reforms, the following sequencing rules may be useful.

- 3 Do not decentralize fiscally unless channels of accountability exist. If local leaders are not credibly elected, then providing local governments with resources (through block transfers) or tax bases can have unintended and negative effects. In situations where local leaders are not fairly elected, deconcentration (giving more responsibility to centrally managed employees in local areas) may be a better way to respond to local needs.
- 3 Once political accountability is established in local governments, introduce fiscal decentralization quickly to enable newly elected leaders to respond to local needs.
- 3 “Function before finance.” Consider decentralization in an orderly fashion: assignment of expenditure responsibilities should be undertaken first, followed by assignment of revenues. Assign expenditures according to the subsidiarity principle, and then ensure adequate revenues (transfers and own revenues) to match responsibilities.
- 3 Predictable, transparent, formula-driven transfers should be in place to ensure a hard budget constraint before revenues are decentralized. If local governments can appeal for additional discretionary transfers from a higher level of government, or if transfers are cut when local revenues are raised, local governments will lack incentives to raise local revenues, weakening local accountability.
- 3 Examine the institutional environment that establishes hard budget constraints before authorizing subnational borrowing. In most countries, efforts to develop the markets for local borrowing will need to be introduced in tandem with some hierarchical controls.¹²
- 3 While decentralization usually focuses first on the primary level of subnational government (state or province), the eventual impact on the poor occurs at a much lower level. Implementing the principals of intergovernmental relations described in this section to a third or fourth tier of government is critical to ensuring that the benefits of decentralization reach the poor. This issue should not be delayed.

Enhancing poverty impact

Attention should be paid to potential poverty impacts in designing decentralization. Decentralization can be good or bad for the poor but is likely to be bad unless special effort is made at the design stage. In particular, there are four areas to which decentralization arrangements must pay special attention.

Redistribute to poor areas. Devolving responsibilities to lower levels of government will necessitate greater resources at this level to pay for them. Richer areas will be able to rely more on newly devolved local tax bases, but poorer areas will require greater intergovernmental transfers. The appropriate distribution of block transfers across subnational governments should be considered from a poverty perspective.

Fund basic services of national interest. Services that reflect national policies need to be ensured and should not be left to the discretion of local populations and governments. They should be funded through specified transfers that pass through intermediate levels of government but are directed at a particular function—for example, immunizations and primary education. Monitoring these transfers along with other incentives for performance is important for ensuring reliable delivery of services.

Target assistance to the minority groups among the poor. In areas with high concentrations of homogeneous poor people, decentralized decisionmaking can lead to a greater poverty focus in local public expenditures. But where a particularly disenfranchised group exists within a poor or nonpoor majority (ethnic minorities, special castes), decentralized decisionmaking that reflects the desires of the local majority is likely to bypass the needs of this group. In these cases, special resources and efforts may be required from a higher level of government if poor people are to benefit.

Decentralize to the lowest feasible level. Formal channels of government enable decentralization down to the lowest tier of formal government (often at a level where the population is 5,000–10,000 people). Decentralizing further, to service delivery units like schools and clinics, and encouraging active community participation is often the most promising method for improvements in service delivery.

8.5 Public Expenditure and Revenue

Requiring the government to state its policy and spending intentions is a vital precondition to holding it accountable. The government budget is a distinctive statement of its policy intentions, although not all policies have budgetary implications. Key questions include: How robust are the links among planning, policymaking, and the budget? Are policy priorities articulated and reflected in budget allocations? Does actual spending match planned allocations? (See chapter 6, “Public Spending.”)

Budget comprehensiveness matters. Governments’ ability to exercise policy choices across the full range is often limited by earmarked revenues and special funds and tied to expenditures. The greater the share of fiscal activities conducted off-budget, the more likely it is that accountability and transparency are both weak, and the smaller is the chance of audit or recovery of funds if they are diverted.

Does public money reach its intended use or target? Survey evidence indicates that money is frequently diverted to private ends.¹³ Significant deviations of actual expenditures from functional appropriations¹⁴ indicate that the legislature is unable to hold the government accountable for its behavior and point to poor quality of planning or implementation, both of which undermine the credibility of the budget. Experience in Uganda is instructive: budget tracking surveys showed that only about one-third of expenditures allocated to primary schools and hospitals were in fact delivered. After budget management reforms and continued monitoring by recipients and by civil society, this proportion was raised to approximately 90 percent (Reinikka 2001).

Expenditures are more likely to arrive where intended if they are disbursed in a simple and transparent way. There also should be accurate systems of accounting, monitoring, and reporting on disbursements. Budget reports should be easily available for both internal and external audit. Where such systems do not exist or are unreliable, budget tracking surveys can be useful. Beneficiaries and communities can also contribute to monitoring results, especially if information is available on the allocations that have been made and should, in principle, be delivered. This is often as simple as identifying whether

a road or a health clinic has actually been built or funds have been delivered to pay teachers' salaries. Publicizing this information creates incentives for reform.

Budgetary volatility is another source of inadequate delivery of services. Budgetary volatility or radical variations year to year in the budget indicate that there is no coherent set of policy priorities and that officials charged with implementation will not take policy statements seriously because they are likely to change.¹⁵

The budget timeframe is relevant here. Is the budget exclusively annual? If it has a medium-term perspective, does this mean that when policy decisions are made, the outer-year costs and impacts are included in the budget for future years? It is important to note the difference between a multiyear plan exercise—which typically involves laying out a broad vision of development but does not contain any specific program or program costings over a period of years—and a multiyear budgetary perspective, which can build in budgetary predictability.

Delivering credible and sustained, effective, and adequately financed policies and services goes to the heart of the political process:

- Are policy proposals required to specify their intended outcome, associated outputs, and costs over the medium term—on and off budget?¹⁶
- Is there any effective way of checking that money has been spent as intended? How widely is this information shared?

8.5.1 Predictability of funding and cash flows

All spending units in government should know in advance what their budget funding will be. This is a prerequisite for operational efficiency and managerial accountability. Looking at the deviation between planned allocations for nonpersonnel costs, such as operations and maintenance and other recurrent costs, and actual spending for these categories can be telling. Predictability of funding for organizations in the key sectors of health, education, roads, and agriculture is particularly important if essential services are to be provided to the poor.

Fluctuations in funding can adversely affect the poor in two ways: through unstable funding of poverty-related programs and services and through inflation (see also chapter 12, "Macroeconomic Issues," and chapter 6, "Public Spending," for further guidance on these questions.)

Unstable spending may be attributed to external shocks—that is, factors beyond domestic control—or they may be self-induced, reflecting the incentives of decisionmakers. Overly optimistic revenue estimates, for example, more often result from efforts to escape tough spending tradeoffs—or to meet deficit targets—than from any technical or policy problems. Large fiscal deficits can result when budget constraints are soft and national governments assume the fiscal or financial liabilities of subnational governments and state-owned enterprises.¹⁷

8.5.2 Tax policy and divergences between planned and actual revenue

Revenue predictability is reflected in the difference between actual central government revenues and those projected in the budget adopted by the legislature at the beginning of the fiscal year. Unplanned revenue shortfalls reflect low administrative capacity, corruption, and deliberate overestimates to avoid difficult spending reductions. Simple and easily administered tax laws, with relatively small numbers of taxes or other sources of revenue for government and minimal special categories of taxpayers and tax exemptions, can help. Dramatic variance of total revenue from one year to the next, with government unable to predict current revenue collections in advance, is a warning of possible economic shocks that may disproportionately affect the poor.¹⁸

The social cost of collection includes direct administrative outlays, taxpayer compliance costs, and economic efficiency and equity costs resulting from the tax system; any obstacles that collection places in the way of the efficient functioning of markets; and the degree to which it discriminates against foreign

direct investment flows. Tax system equity—ensuring that the revenue burden, excluding user charges and fees, falls equally on equally placed citizens—is fundamental to minimizing taxpayer resistance.

Tax and customs administrations are often among the most corrupt government agencies in developing countries. Transparency and separation between taxpayers and officials are key in reducing vulnerability to corruption. Simple tax rules and forms also help. Organizational autonomy of the revenue administration, combined with performance-linked budgets, is sometimes advocated as a way of achieving efficiency, but this approach must be credible in the country context, and accountability must still be ensured. Competitive base pay and transparent reward procedures are widely recommended. Key questions are the following: Do salaries provide realistic incentives for officials without placing an excessive burden on the budget? Do positive incentives lead to overzealous pursuit of taxpayers?

Tax simplification is perhaps the most important method of limiting opportunity for corruption. Making tax obligations transparent and trimming compliance costs can be helpful in reducing the corruption of revenue authorities. Is there presumptive taxation of small businesses that may not keep extensive records? Are forms simple and easy to fill in? This would reduce the discretionary power of tax inspectors and make tax calculations simple and clear. Are responsibilities clearly divided along functional lines, and are procedures transparent and written? Are institutional safeguards outside the revenue administration in place, including an independent and effective judiciary, independent external audits and appeal authority, and taxpayer associations that strengthen citizens' voice?¹⁹

8.5.3 Suggestions for sequencing

Reforming budget management is a medium- to long-term process, and it critically depends on a country's capacity and political readiness. Several interrelated areas, from predictability to internal controls and reporting, will need to be addressed.

Predictability and timely availability of funds are necessary for spending units to be able to execute their budget properly. The poor rely more than anyone on prompt and adequate help from the public budget. It is therefore important to ensure that the government's annual budget works on a timely basis, that spending units receive their approved allocations, that actual spending matches authorized allocations, and that budget reports are generated for policymakers and the public.

Most policy decisions have multiyear budgetary implications. Successful implementation of policies therefore requires multiyear budget planning. This normally requires a medium-term gross domestic product (GDP) forecast within which total revenue and expenditure can be projected. Within this budget scenario, specific program costs can be projected into the outer years. At first, the principal gain is likely to be better fiscal discipline overall, but as the quality of program forecasts improves, the medium-term budget becomes an effective tool for exploring the implications of new policies and rearranging expenditure allocations so that they fit more closely with the country's strategic priorities. The process takes time, and it is important to get the building blocks right. In the initial years, efforts should focus on setting the overall budget limits and estimating the future costs entailed by existing policies and projects, such as commitments to welfare benefits or the debt service and maintenance costs associated with investment projects. After nearly five years of concentrated reform, by 2000 the Ugandans had a well-functioning system of medium-term expenditure planning (see also chapter 6, "Public Spending," for the medium-term budget planning experiences of Ghana and Uganda).

Internal controls (including transparent financial management and procurement systems) of the spending units are required to ensure that funds are spent in line with approved budgets. Consistent classification and accounting systems are the foundations of a well-functioning financial management information system (FMIS) that can generate reports for the executive, the legislature, and the public. If these systems are to be computerized, a detailed assessment, particularly of initial capacity, is needed together with careful tailoring country by country. Piloting a new FMIS in a few ministries or agencies is a good way to experiment with the suitability of the instrument. External monitoring by recipient groups can also provide useful checks on the match between disbursements and allocations.

Budget accountability requires regular and timely reports to the legislature on actual expenditure in comparison to budgeted amounts, with a firm commitment that requisite actions will be taken on the

basis of audit findings. Creating an independent audit body that is external to the executive branch, such as an Office of the Auditor General, with adequate resources and authority to carry out spending audits and present the findings in a timely manner to the legislature, is a critical step to ensure accountability of the spending units.

A complex tax system is generally associated with high compliance costs (borne by the taxpayer) as well as high enforcement costs. The preliminary challenge is to simplify tax laws and procedures so that the system is easily understood by all parties and the associated costs are reduced.

8.6 The Civil Service

Low public respect for the civil service is more than a response of disappointed consumers to an inadequate level of service. Low confidence and widespread cynicism about the performance of government can have pernicious consequences, undermining democratic institutions and reducing the attractiveness of public service as a career for those with talent. Overall, the civil service needs competence and honesty in order to earn the respect of the public and business. However, surveys consistently show public frustration with civil service performance and the high burden that corruption places on the poor. Surveys of public perceptions of service quality can provide key information for Poverty Reduction Strategy (PRS) preparation. Of course, corruption is one aspect of poor service provision: service delivery is undermined by operational inefficiency and poor quality as well as by wrongdoing.

8.6.1 Public employment conditions

The civil service should be rewarded appropriately and sustainably. There are no hard and fast metrics for deciding when to reform public sector pay and employment. The correct framework is a level of pay consistent with the operation of a motivated and professional public service at a scale the country can afford on a sustained financing basis. Comparisons with GDP and population are useful only as guides to judgment. With those cautions in mind, the numbers of civil and public servants should be roughly in line with international practice,²⁰ with a fiscal weight—public sector wage bill as a percentage of GDP—that is not excessive. The key fiscal measures are the central government wage bill as a percentage of GDP and as a percentage of total government expenditure.

Levels of pay should be sufficiently competitive to recruit, retain, and motivate qualified staff at all levels. Symptoms of poor incentive regimes are likely to include attrition rates lower than one would expect given the low wage level, accompanied by many instances of employees retaining their public sector jobs while resorting to other income-generating activities. Outright corruption is perhaps the most pernicious effect. Although the empirical evidence as to whether low civil service wages foster corruption is mixed, the evidence indicates that meritocracy plays a strong role in inhibiting corruption.

When reviewing the aggregate public sector wage bill, it is important to note that salary levels often vary significantly across the public sector, particularly between the core civil service and other groups. One helpful disaggregation is between skill groups—often some groups of staff are overpaid by comparison with private sector equivalents, and others are underpaid.

Average government wages can be compared to per capita GDP and to average wages in the manufacturing, financial, and private sectors. The ratio of highest to lowest salary in the civil service (the vertical compression ratio) and the ratio of highest to lowest salary within the same civil service job classification (the horizontal compression ratio) are important measures.²¹ There should be an understanding of the competitiveness of total rewards, including allowances and taking job security into account.

Key questions include the following:

- Are there processes for ensuring that total compensation levels continue to retain and attract needed skills?
- What are the turnover rates?
- Is remuneration at senior levels appropriate to skills as indicated by compression ratios?

- Is the system undermined by the discretionary component?
- Are pay scales clearly and consistently linked to rank?
- Is the compensation system generally simple, monetized, transparent, and fair?
- Is the pension system affordable, effective, and fair?

8.6.2 Designing and implementing reform

Resistance to implementing reform from vested interests within the civil service can be an obstacle to providing vital services to the poor. Distributing basic data on performance and seeking client feedback (report cards and other types of client surveys) can help. Although patronage is generally frowned upon, the absence of explicit provisions for political appointments can itself be problematic: when transparent mechanisms to define the extent and conditions of political versus nonpolitical appointments are lacking, there is a risk that every position *de facto* becomes subject to political influence. This is particularly the case in countries that have experienced extended periods of intense politicization, such as the former socialist states of Central and Eastern Europe. Political appointments may be needed to craft and maintain a multiparty or multi-ethnic governing coalition, but should be accompanied by efforts to introduce basic skill and competency requirements, transparent hiring and firing procedures, and accountability mechanisms. Political appointees, like other staff, need to be subject to financial disclosure and conflict of interest requirements. Several countries use hybrid appointment methods without abandoning meritocratic principles that govern public administration.

Nevertheless, it is important that the number of political appointees in the civil service be limited. A useful guide is the situation in the United States, where the proportion of political appointees is approximately 1:400; in Sweden, it is approximately 1:2,000. The share of budget-funded public sector staff in core government ministries that were changed in the last two elections can be informative. The frequency of transfer or reassignment of civil servants before the end of term in their positions can be a symptom of political involvement in the civil service.

Indicators in assessing the quality of the civil service include the following. Is there clear legislation defining the scope of the civil service and the subsidiary regulations describing procedures? The nature of the code of conduct that governs the behavior of civil servants is also significant. A more general question is whether the civil service is politically neutral and whether there are rules, set by civil service legislation, defining allowable political activity by career civil servants and the nature of second jobs they may take. It is important to remember that the civil service proper may be limited to the central ministries. If it is defined in this way, it will be helpful to look at the rules and conditions of other public employees.

Other questions concern merit-based recruitment. Does the civil service operate on the basis of merit? Does civil service legislation prohibit patronage and nepotism in career appointments and promotions? Are job descriptions prepared and used? Does civil service legislation require that appointments and promotions to career positions be made through merit-based competition? Even if recruitment policy is decentralized, does the principle of merit govern practices across the civil service? Is a process defined for top-level appointments that ensures consideration of candidates on at least a civil-service-wide basis, not excluding lateral entry by those not in the civil service?

Staff responsibilities and career paths should be clearly set out, with a clearly defined organizational structure and a civil servant career classification system. This structure, including levels, units, and reporting relationships, should be consistently applied across management units. Rank and position classification systems should combine effectively to produce clear and adequate incentives to advancement while avoiding undue complexity. Key questions include the following: Is the position classification system effective in identifying families of jobs with distinct skills and requiring distinctive career management? Are there satisfactory equal employment policies and practices that mitigate gender, regional, and other discriminatory biases?

8.6.3 Reform options

Much more is known about what does not work than what does. A recent review of civil service reform programs (Girishankar and others 1999) supported by the World Bank found that, in broad terms, they were responding to three general areas of concern. Some reforms, particularly those pursued in the 1980s, focused on fiscal concerns arising from overstaffing and unsustainable wage bills. Other, more recent reforms were intended to facilitate policy agility in government and to ensure that legitimate policies could in fact be implemented. Most recently, reforms have tended to focus on improving operational efficiency and service quality.

On average, only about one-third of reforms achieved satisfactory outcomes. Even when desirable, outcomes were often not sustainable. Downsizing and capacity-building initiatives often failed to produce permanent reductions in civil service size and overcome capacity constraints in economic management and service delivery. In later reform programs, there is little evidence that civil servants began to own and adhere to formal rules such as codes of ethics.

Four factors are associated with this poor track record. First, reforms did not balance fiscal choices with labor-market realities—focusing, for example, on budget scenarios without also looking at how salary levels could affect projected demand for civil service jobs. Second, reforms were technocratic in that they assumed that the introduction of formal rules would be sufficient to change behavior, without looking at other incentives, such as how the political imperatives could be satisfied differently. Participatory processes to nurture reform constituencies in government, the private sector, and civil society were largely absent. Third, capacity-building efforts were overly based on wage enhancements. They did not look sufficiently at other incentives, including job security and pension prospects. Finally, the quality of data on civil service performance in general has been poor and inconsistent. Standardized indicators were neither fully developed nor operationalized for monitoring and evaluation.

8.6.4 Suggestions for sequencing

The key sequencing message is that comprehensive civil service reforms seem more likely to work in countries where governments are motivated by arrangements that enable citizens to express their views and hold public officials accountable for results. These arrangements include a fair and transparent electoral process (with power-sharing arrangements to protect minority groups), as well as mechanisms to incorporate civil society and local governments within the policymaking process. If governments are to be truly motivated by the concerns of their constituents, it is essential that the core state institutions have not been captured by special interests to any significant degree. This means that individuals, groups, or firms in both the public and private sectors have limited opportunities to bribe public officials to structure policies to their own advantage.

In other settings, particularly with high levels of state capture and weak governance, there are limitations to government-wide reforms. In these cases, it may be useful to focus initially on reforms in one agency or government entity so as to provide demonstration effects, convincing both the state and the electorate that reform is possible and that it has benefits. Reforms can also be piloted in a particular region or municipality. In some cases, placing services at the local level, closer to the client, may help, but this can backfire if accountability is low and funds and services are captured by local elites. Involving beneficiaries and other recipients of government services can help build a consensus on the standards to be set, the reforms needed to attain them, and the reporting and monitoring that will be needed to keep up the pressure for reform.

8.7 The Legal System

In some countries the legal system actually hurts the poor and prevents them from gaining access to legal services, protection, and redress.²² The legal system comprises the courts, public prosecutors, enforcement agencies, and the market for legal services. Lawyers usually predominate in this market, but legal aid, citizens' advice, and methods for self-representation can also be important.

A population that fears crime and has little confidence in the state's ability to protect citizens from crime, and reports that crime and theft are significant obstacles to conducting business or carrying out an ordinary life, suggests weak governance. Key indicators include the proportion of the population willing to report crime to authorities and the number of homicides per 100,000 population per year. Surveys can provide evidence of the views of firms and households on corruption in government.

Assessing the strengths and weaknesses of the key institutions of the judicial system requires nuanced judgments from informed observers. It is often helpful to open a dialogue with NGOs and other representative groups of civil society and with target professional groups, including government officials, lawyers, and judges. The extent to which information about the law is reasonably available to all citizens can best be assessed by a small group of officials and NGOs. However, to obtain a detailed breakdown of the caseload of the first-instance courts of general jurisdiction, for example, it might be necessary to survey court administrators, judges, and attorneys. It may be still more helpful to do an actual analysis of caseloads and case files, for experience indicates that even officers of the courts have an incomplete or inaccurate picture of what is really happening.

8.7.1 Judicial independence

The judiciary should be independent of the other branches of government. Media stories or reports may help to indicate whether this independence has indeed been honored. Are complaints about the police, the military, or other security forces heard by the courts? Are these ordinary or special courts? Special courts often, but not always, tend to give the benefit of the doubt to the security agency. Hence, they may represent a sign that these complaints are not taken seriously, although a special court may still be better than complete immunity.

Judges should be able and willing to decide cases with freedom from outside pressures. It is important to consider both the adequacy of judges' training and the structure of pay and incentives that they face, including the nature and length of any tenure. If a high proportion of judges are in office under an exception to the normal tenure rules, or if a large number can be transferred without their consent, independence may be weakened. Some key questions are the following: How are judges trained? What are the mechanisms by which the judiciary is held accountable and to whom? Are judges immune from the criminal or civil law? Independence, it should be stressed, is important at both the individual and institutional level. A completely independent court system may still excessively control its judges. Selection, promotion, and discipline can still be problematic, even where the judiciary is free. Another factor inhibiting the independence of individual judges (or entire court systems) may be the provision of additional benefits (cars, housing, access to training, or trips). In Eastern Europe and Africa, it has been reported that local or national governments may use these benefits to influence judicial decisions. In Latin America, the bodies of judicial governance (supreme courts, judicial councils, or justice ministries) may use them to the same effect.

8.7.2 Selection, promotion, and discipline of judges, prosecutors, and lawyers

The market for legal services, including private attorneys and notaries, should be as competitive as possible. The ways in which lawyers and notaries are held accountable for their performance, including ethical rules governing the practice of law, are also significant. Is there peer review?

What checks exist on decisions made by public prosecutors? Is the decision to charge recognized as discretionary? If so, are there guidelines for how this discretion is to be exercised? Are these guidelines public? Do lawyers, judges, and executive branch personnel believe the current decision to charge or prosecute is more or less influenced by politics or bribes than it was five years ago?

What protections do court officers have against the bureaucratic hierarchy? Do they have effective means of protesting (unfair) dismissals, reassignments, or disciplinary action? In Peru, under the recent executive-dominated reform, recalcitrant judges were not dismissed but were reassigned to less interesting positions. In Mexico, recent research indicates that judges tend to accept unreasonable delaying tactics because they fear a displeased attorney will register a complaint with the judicial council.²³

Further questions on the court environment include the following:

- 3 Who is responsible for court administration, and how are cases allocated to particular judges?
- 3 How are cases for “free” legal defense assigned?
- 3 Can clients have access to judges on a privileged and confidential basis, or is access transparent, with all parties represented?

8.7.3 Access to information

Transparency is important for general judicial accountability. Is notice given of impending hearings and cases? What information is collected on decisions and verdicts, and is it published in a timely way? Where decisions are publicly available, watchdog groups can monitor outcomes; the upper reaches of the judiciary can check on the probity, efficacy, and efficiency of the lower levels; and clients can check whether what their lawyers tell them is accurate. Information on judicial caseloads, budgets, salaries, asset declarations, disciplinary actions, and other statistics is also valuable. Some questions include the following:

- 3 What do corruption surveys indicate about corruption in the courts?
- 3 Are judicial decisions and other information on judges and court operations available to the public in an accessible form?
- 3 Are the media free to report on judicial procedures?
- 3 Are parties to disputes notified? Poor people are often hard to find and may never know about a case that directly or indirectly affects them.

8.7.4 Court procedures and services

If court procedures are complex, and proceedings inefficient and subject to long delays, the poor are likely to suffer most, as they cannot pay for expert advice to navigate the system or sustain the extra cost of appeals and repeated adjournments. Even the language in which court proceedings are conducted can present obstacles—communicating in the same language is important, as is making clear the use of legal parlance that may leave the less educated in the dark. Alternative forms of mediation can help but need to be scrutinized carefully because they can work against the poor by entrenching the power of local elites. Traditional approaches may incorporate biases against women, children, the handicapped, or local minorities. In some countries, support staff or clerks control the interface between the client and the court or court services and, sometimes, the outcome of the case. Key questions are the following:

- 3 Have efforts been made to simplify procedures? Are courts accessible?
- 3 How professional are court support staff? How are they recruited, monitored, and paid? How often do support staff perform judicial duties or have opportunities for unobserved contact with clients? Do support staff exercise inappropriate controls over access to registries or forms necessary to obtain services?
- 3 Are there judicial user fees? Are they well publicized, and how is collection controlled? Are there means of waiving or subsidizing them, in theory or in practice?
- 3 Are there gender, linguistic, or ethnic biases? In multilingual countries, are language services offered? Are special facilities available for those who cannot read?²⁴
- 3 Are there easily understood information programs in courts, or leaflets available explaining procedures for access to courts, registries, and other services?
- 3 Are there programs to take services to the poor? For example, itinerant judges, defenders, courts? Is village mediation available, and do women have access?
- 3 Do small claims courts, justices of the peace, single-stop courts, free legal clinics, and mediation services exist, and do they exist where the poor can access them? Are they adequately publicized? Do the poor know about them?

8.7.5 Court registries

Registries are a frequent site of corruption, and even when they are honestly run, they may be difficult for the poor to use because of location, fees, or lack of knowledge of the methods or need for registration. Corporate registries and registers of land and other asset transactions are important for property rights and access to market activity, while civil registries and registries of births are often necessary to validate claims for child support, medical services, and school entry. Key questions are the following: What kinds of registries are available, and what are the barriers to access them? Do the poor use them, and if not, why not? What proportion of land is formally titled? What effect does lack of registration, or lack of access to markets and services, or lack of civil rights have on the poor?

8.7.6 Judicial corruption

Corruption has both indirect and direct effects on the poor. Indirectly, any level of corruption is likely to work against the poor, as it will affect the way all laws are enforced and the likelihood that violators are brought to justice. Where justice is sold, and the wealthy or powerful are thus beyond its reach, the poor will suffer the consequences of elite impunity, whether as regards the unfettered exercise of rent-seeking activities in government or various abuses of private and public actors. More directly, judicial corruption deprives the poor of an ability to take their complaints to court or to have their conflicts resolved fairly. Corruption fostered by red tape can make it unnecessarily costly or even prohibitive to start a small-business enterprise and reduce the proportion of businesses operating in the formal sector. “Unofficial payments” are likely to have the strongest deterrent effect among would-be entrepreneurs, the poor, and others trying to establish a small business. Corruption and excessive regulation are two sides of the same coin. In preparing a PRS, it may be important to consider and review the costs in time and money needed to obtain business operating permits (see Djankov and others 2001).

8.7.7 Public willingness to use the legal system

Access to the courts or alternative dispute resolution (ADR) services may, by itself, not be enough because the system may reinforce existing inequalities. A useful indicator is the willingness of the population, particularly minority groups, to submit private disputes to the court system or to some form of ADR. What are the figures on use of courts or ADR by various social groups, and how does this match with their percentage of the population? Are most cases taken by men, whites, or the well-off?²⁵ Which courts and which proceedings are more likely to involve the poor? How well do they operate? Surveys can help to explore satisfaction with how disputes are handled, including the timeliness and costs of resolution. Case file analysis may provide more solid evidence as to what is actually happening. Surveys of potential users may indicate factors affecting a decision to take a conflict to court.²⁶

The proportion of the population that has litigated against government entities, including the police, in the past five years can be a useful indicator of citizen confidence and ability to redress abuses of power. Other key measures include the number of people indicating satisfaction with how cases were handled and with cases being resolved on a timely basis and at reasonable cost. Parliamentarians’ perceptions of court effectiveness in redressing executive abuses of power can provide useful insights in countries where legislatures are believed to have some degree of independence from the executive.²⁷

8.7.8 The market for legal services

Because lawyers largely control both the demand for and supply of services, they are a main determinant of whether the poor can get access to services and with what success. For example, even in countries that allow self-representation or a waiver of court and legal fees for those who cannot afford them, the poor may not take advantage of these offerings because they could only find out about them from an attorney.²⁸ Unscrupulous lawyers may overcharge for services, or take the filing fee and then, if the client can pay no more, drop the case. Lawyers may also ostensibly solicit bribes, although not necessarily in fact, on behalf of judges. Pro bono work may be neglected or public legal counsel may charge for services that should be delivered free, or take for-pay cases and ignore their publicly financed work. In many

countries, there is no self-policing or any other policing of the private bar, and little control exists over who can practice. In many countries, the only test is a law degree, which may be awarded simply for paying tuition fees. The rules that govern the profession (setting fees, terms of service, responsibilities to clients) may be mere legal formalities, and even the way fees are scheduled may encourage the fleecing of unknowing clients (if attorneys can charge per action). Questions to ask include the following:

- ⌚ What is the number and rural-urban distribution of lawyers per 100,000 population? Too many could be as bad as too few if it leads to predatory practices in pursuit of clients, or charging for services that should be provided free, creating extra steps and procedures, or filing of hopeless cases.
- ⌚ What are the formal requirements for practice, and how are they enforced? How many lawyers are investigated per year? How many licenses are revoked per year?
- ⌚ Do bar associations exist? Is membership compulsory or voluntary?²⁹
- ⌚ What is the role of paralegal staff, and how is their quality controlled?
- ⌚ What types of legal services are provided for poor clients (pro bono work; private- or state-financed clinics; number and location of cases carried; and some qualitative assessment and local monitoring of performance)?
- ⌚ How are attorneys paid, and how is money collected?
- ⌚ Is self-representation (pro se) possible? Are there small claims courts?
- ⌚ Are there accessible legal education programs or other kinds of information services? A major obstacle to the poor and a major opportunity for others to take advantage of them is lack of information on how to register a child, a marriage or a business, or on the services to which they are entitled (social security, pension, wage rights).

8.7.9 Enforcement and the criminal justice system

The criminal justice system is an important backup for civil awards, which may otherwise be ineffective. And in many countries, the criminal justice system may have more impact on the poor than the civil system. Significant characteristics are its own integrity (is it used to punish “enemies” of the state?) and its role in perpetuating or restricting violence, crime, racial and other forms of discrimination, and operational biases against the poor. For the poor, there are two problems: the system may not protect them, especially when police protection services are assigned to well-off areas and do not respond to complaints from the poor, and it may prey upon them. The accountability and standards of bailiff services generally matter more for the poor. Key questions include the following:

- ⌚ What do people say about their experiences with prosecution and enforcement and those responsible for it?
- ⌚ Are there unexplained delays in proceedings or cases withdrawn that involve the rich and influential?
- ⌚ What do crime statistics indicate about types of crime, victims, and locations?
- ⌚ Are records kept on enforcement, and are enforcement rates analyzed?
- ⌚ Are police well trained and supervised and appropriately paid?
- ⌚ Are bailiffs professional? Who oversees them, and who is responsible for payment of compensation in case they make errors?
- ⌚ How prevalent are private police and security forces, and how are they controlled?
- ⌚ Are certain classes of citizens or state officials above the law?
- ⌚ Are judges, prosecutors, and police trained to be sensitive to the poor, ethnic groups, and gender groups?
- ⌚ Is pretrial detention usual or mandatory? Is it possible or financially feasible to get bail? What is the proportion of unsentenced prisoners (prisoners on remand), who are they, and what are they held for?³⁰

8.7.10 Sequencing issues³¹

Little guidance on sequencing of legal and judicial reforms can be given that will be valid in all contexts. The following may be helpful, however.

An initial assessment of the situation is critical both to understand the problems and to identify opposition and possible allies. More detailed diagnostics can be developed as reforms progress. To get the process started, there needs to be at least one source of commitment, whether from a civil society group, judges, a government body, or a political party. The nature of the constituency will influence what can be done first.

Judges must be brought into the process early. While it is politically important to support or address some of their concerns, if they are the only targets of reform, there is a risk of serving only their interests. Individual champions are needed to get started, while building a broader constituency is a goal in itself. No institutional reform program can hope to succeed on the weight of one individual. Concrete activities, even if small, should be carried out early to solidify interest among the initial stakeholders and help attract allies, convincing people of the value of change, reducing fear about its consequences, and persuading potential allies to join the effort.

While changing a law does little in itself, fundamental legal changes (especially in procedural laws) may provide an organizing framework for a wider process of institutional change. For example, a new criminal procedures code can be used to push for improved investigation, strengthening of prosecution, and training for judges.

Certain kinds of organizational strengthening, such as providing the ability to collect statistics and report information, can help reform leaders understand and cope with problems. They also aid transparency as a means of combating corruption.

Who becomes a judge? How are they selected and evaluated? Where problems exist, these questions must be addressed as soon as possible, but the solutions will obviously take time. Judges represent an investment in human capital, and it has never proved effective to throw all the old ones out at once. Gradual improvement, via training, new methods for selecting the newcomers, and shifts in systems for evaluating performance, are the key.

Training programs might initially be remedial in focus (to bring judges up to speed on the laws they are supposed to apply), but are also a means of generating interest among the judiciary and identifying further problems. The initial curriculum will tend to evolve over time as reform proceeds.

Bridging the gap between “external” stakeholders and the judges tends to be difficult. The judiciary needs to realize that they provide a public service, and that the final test of their performance is client satisfaction, not of individual parties, but of the public as a whole.

8.8 Service Delivery

Several chapters in volume 2 of this book provide guidance on alternatives for providing education, health, and other crucial services to the poor. However, there may be general constraints on service delivery that arise from the broad and cross-cutting problems of governance and public management discussed in previous sections of this chapter. One effective way of identifying the impact of these cross-cutting governance issues is to take a specific service-delivery area and trace it back to all the systems that affect it. It is important to consider to what extent poor service delivery is caused simply by inefficiency and poor motivation (in which case technocratic reforms may be helpful) or by corruption in the form of state capture or in implementation of policies, regulations, and services. In all cases, it will be worth examining the role of incentives and asking how improved accountability and transparency could enhance outcomes.

Identifying specific shortcomings in the delivery of public services is challenging because there are few international standards against which to measure service levels.³² Survey tools can be used to measure access and unit cost for different services (for example, enrollment rates and costs per pupil) at

the appropriate point of delivery (for example, the school or district-level hospital). (See also chapter 3, “Monitoring and Evaluation.”)

More generally, service delivery can be measured by looking at

- access of particular groups and stakeholders to services;
- service use rates;
- operational efficiency, including the cost per given output;
- timeliness; and
- levels of perceived corruption.

Identifying districts or agencies that, in providing a service, perform particularly well or badly in relation to others—or in relation to their own past performance—can help highlight poor service delivery or outstanding best practice.

Research suggests that the effectiveness and sustainability of service provision is influenced by several factors. Attempts to expand the reach of services as well as the quality of services should be based on predictable and adequate resource flows. The credibility of policy and the degree to which officials understand and are committed to the programs that they are asked to implement can significantly influence service performance. The credibility of policy directives from higher levels of government is improved when policies are consistent with district priorities, when planning processes are participatory and inclusive, and when staff are not subjected to micromanagement or political interference.

The quality of the civil service is crucial, and the degrees to which basic civil service rules ensure staff discipline is a key driver of performance in service delivery. Assessing the civil service requires an examination of the formal legislation and rules as well as consideration of how these rules are enforced in practice.

What should be the degree and nature of agency autonomy? Service delivery agencies are usually constrained in the ways they can use inputs—human, financial, and technological resources—to achieve policy goals. Input restraints can limit opportunities for corruption. However, these restraints can prevent local staff from putting resources to their most efficient use in providing services. There is a balance to be achieved, as international experience suggests. Policymakers are typically less successful when they fully prescribe the means by which services should be delivered at the local level. Flexibility about the means of delivering services, subject to minimum standards if they can be enforced, is a preferable approach to ensuring efficient service delivery.

The level of service provision is also significant. Subsidiarity is the principle of providing services at the lowest practicable level of government. Following this principle can improve service delivery for the poor, although not always, as indicated elsewhere in this chapter.

8.9 Moving Toward a Pro-poor Governance Strategy

This chapter has posed some broad questions about governance arrangements and their impact on the poor. Table 8.1 summarized dimensions of governance against key dimensions of poverty. It is a crucial first step to assess the ways in which weak governance and corruption are hurting the poor, but it is quite another to move beyond assessment to build a strategy.

An initial assessment of the situation is critical both to understand the problems and to identify opposition and possible allies. More detailed diagnostics can be undertaken as reforms progress. In most cases, it is advisable for reforms to start on a small scale and build outward. It is likely that in the course of implementation, the underlying problems will themselves be redefined.

Constituencies and political will for reforms are essential. Rarely will they be fully developed at the start, but the strategy should aim to build them along the way. To find an entry point and get the process started, there needs to be at least one source of commitment, whether from a civil society group; a legislative, judicial, or government body; or a political party. The nature of the constituency will influence

what can be done first. If there are only a few stakeholders, the initial work will be limited and it is all the more important to design it so as to appeal to broader interests.

Certain kinds of institutional strengthening, especially those that enhance available information, are critical to help organizational leadership understand and cope with problems. They also provide a means of combating corruption. Once the reforms needed have been clarified, it is important to bridge the gap between external stakeholders and the executive (or legislature or judiciary, depending on the locus of reform). Pressure from outside may be an essential ingredient to initiate the process, but progress will be limited unless the executive or other state entity is clear about what is needed and how to deliver it, and has the capacity to do so. Alternatively, reforms may be led from within, in which case those on the inside should communicate their purposes and invite public debate and monitoring of results.

In building a strategy, it may be helpful to reflect on some main factors and characteristics of the country's institutional environment that will strongly shape the possibilities for effective institutional and policy reform and the sequencing of reforms. Three important factors are political commitment, political feasibility, and sustainability. The benefits of reform must outweigh the costs. Meeting all three conditions does not guarantee that a reform will succeed, but it does indicate a higher probability of success. The following points are offered as a guide to teams that are seeking to review their proposed governance reform agenda against the tests of practicability and sustainability.³³

8.9.1 Who gains and who loses from the proposed governance changes?

To the extent that important elements of the government's support base are negatively affected, political leaders' commitment to reform is reduced. However, to the extent that key groups supporting the government are expected to benefit from the proposed reform, political commitment will be strengthened. Who gains and who is likely to lose from the proposed reforms? Are any of these groups in the government's current support base? Are any of the groups that stand to win or lose "swing groups," that is, groups that are critical to the government's ability to remain in power and that can credibly threaten to shift their support to the opposition? Within the past 30 years, has there been any attempt at reform in this sector by this government or by a government with substantially the same support base?

8.9.2 Are these changes politically feasible?

Even if the governance reforms are politically desirable, they may not be politically feasible. To bring about institutional change, government decisionmakers must be able to ensure the support and cooperation of other parts of government, which are critical to approving and implementing the reform project—for example, the legislature, bureaucracy, and judiciary. Assessing the strength of opposition to reform is important. It entails identifying the critical "veto gates," or institutional junctures, at which particular actors can block the government's reform initiative. Who within the government needs to approve the proposed reform for its enactment? Who might be opposed to the reform project and why? What change in the design of the reform might win their support? Which groups outside government are known to be opposed to the reform?

And which organizations or groups—for example, tax officials, law enforcement agents, government regulators, and clerks—will have to perform tasks to implement the reform? How are their interests and incentives being taken into account?

8.9.3 Are these changes sustainable?

The issue of sustainability is particularly important for institutional reforms. Reforms have longer gestation periods than policy changes, which can be achieved at the stroke of a pen. The sustainability of governance reform is dependent on whether the current government can expect to be in power, with a reform-friendly support base, long enough to ensure implementation. If a government comes to power that opposes reforms, the key question is whether the new government would wish to continue with them. If the reform benefits certain groups, these groups may be able to pressure the new government to

continue the reforms. Alternatively, attention may need to be paid to the extent to which powerful private interests can subvert policy design and implementation.

Strengthening public oversight and other external accountability mechanisms makes an important contribution to sustainability. Which actors in the country are expected to monitor the reform project? And how will the central government be held accountable for results? Strengthening the formal institutions of accountability (the legislature, the auditor general, the judiciary, and the courts) is critical here, as is ensuring freedom of information and the media. Key to the effectiveness of this approach is increased availability of information on performance of the government and other state bodies. Specifically, information should be disseminated on public spending and procurement, judicial decisions, regulatory activities, and data on public service delivery effectiveness.

Sustainability can also depend on the speed with which reforms can create a constituency for their own continuation. It may be helpful to focus on reforming the agency that serves business or the general public, where improvements in service delivery will be noticed and appreciated. This can help to convince a cynical or disillusioned public that reforms are possible and desirable and, thereby, help to mobilize support behind a broader program of reform. Getting early results is harder than it appears, however, as there are usually networks stretching beyond the agency that will exert influence on the degree of change achievable. Finding a champion in the country who is prepared to make this initial difference is critical and may be the most important precondition for starting reforms that will ultimately move beyond dependence on that champion to become broad based and sustainable.

Perhaps most important for sustainability is the match between the design of reforms and the environment in which they must take root if they are to be effective. It is important to understand the workings of the rules in the society, the extent of informality, the role of informal networks, and the way in which power and influence are exercised if reforms are to be relevant to their institutional context. Strategies must start with feasible steps that lead by their internal logic, and by the public and other support they generate, toward long-term sustainable reforms that help the poor.

Notes

1. Diagnostic toolkits are available at <http://www.worldbank.org/publicsector/toolkits.htm>. For surveys of public officials and households that can be organized in collaboration with the World Bank Institute, see <http://www.worldbank.org/wbi/governance/tools.htm>.
2. For a more extensive discussion of governance and strategies for improving public institutions, see World Bank (2000c).
3. This leads to a working definition of corruption as “the abuse of public office for private gain.”
4. These issues are explored in more detail in World Bank (2000a). See <http://wbIn0018.worldbank.org/eca/eca.nsf/General/D74DB51B2D46615D8525695B00678C93?OpenDocument>.
5. This mapping of accountability relationships draws significantly on Schedler, Diamond, and Plattner (1999). See World Bank (2000d) for a practical example of applying this framework. See also World Bank (1999a, 1999c) for recent World Bank experiences.
6. A rule-of-thumb guide for reviewing the relationship between the executive and the legislature is provided in the *Public Expenditure Institutional Assessment Toolkit* available at <http://www.worldbank.org/publicsector/toolkits.htm>.
7. The World Bank Institute provides training programs and seminars to assist in developing Public Accounts Committees (<http://www.worldbank.org/wbi/governance/parliament.htm>).
8. The Inter-Parliamentary Union (IPU) (<http://www.ipu.org/>) and the Commonwealth Parliamentary Association (<http://www.comparlhq.org.uk/>) can provide valuable guidance on these issues. See also the list of other parliamentary sites maintained by the IPU (<http://www.ipu.org/english/otherweb.htm>).
9. Note, however, that the presence of elections does not necessarily translate into strong accountability.

10. See the *Assessing Constraints on Service Delivery Toolkit* available at <http://www.worldbank.org/toolkits.htm>. This toolkit is designed to assess constraints on frontline service delivery. It helps locate where the constraints are—identifying the degree to which they arise from problems within the service-providing agencies or from difficulties at other provincial or national levels. The toolkit is being piloted in Ethiopia, Benin, and Argentina.
11. See the *Intergovernmental Relations Institutional Review* available at <http://www.worldbank.org/publicsector/pe/index.htm>. This toolkit assesses arrangements for fiscal decentralization, including expenditure and tax assignment by function and level of government, intergovernmental transfers, and subnational borrowing. It also assesses institutional arrangements for administrative decentralization and key dimensions of political decentralization. For more general information see <http://www.worldbank.org/publicsector/decentralization/index.htm>.
12. See World Bank (2000b).
13. See, for example, World Bank (1999b).
14. It is calculated as the sum of all (absolute values of) deviations between approved and implemented budgets by functional classification.
15. Budgetary volatility can be calculated as the median of the year-to-year budget changes (absolute values) in each functional classification over the preceding four years, where such changes are defined as the difference between the percentage share in the budget from year n to year $n + 1$, calculated as a proportion of the year n figure.
16. A more detailed diagnostic is available in the *Public Expenditure Institutional Assessment Toolkit* available at <http://www.worldbank.org/publicsector/toolkits.htm>. This assessment of budgetary institutions includes models for assessing formal public spending institutional arrangements and for assessing the capability of cabinet arrangements for social and sectoral policymaking. The toolkit has been piloted extensively, but is now being extended to assess the fit between budgetary institutions and the particular executive and legislature configurations. The toolkit has been piloted in Thailand, Indonesia, Uganda, Malawi, Ghana, Australia, New Zealand, Colombia, and Benin. On public spending issues see also <http://www.worldbank.org/publicsector/pe/index.htm>.
17. Chapter 12, “Macroeconomic Issues” indicates some key ratios that should be monitored by the authorities. These include expenditure/gross national product (GNP), revenue/GNP, budget deficit/GNP, public sector borrowing requirement/GNP, public debt/GNP, guarantees/GNP, and inflation. An increasing budget deficit, or a significant increase in the ratios of mandatory and earmarked expenditures to discretionary expenditures, are warning signs that fiscal policy may not be sustainable.
18. See *Diagnostic Framework for Revenue Administration* at <http://www.worldbank.org/publicsector/toolkits.htm> for further details. The toolkit provides a comprehensive diagnostic framework for revenue administration, including an array of environmental factors that impinge on the revenue administration, organization and management functions, and informal culture. It has been piloted in Colombia.
19. More information can be found in World Bank (1999e).
20. Definitional problems abound in considering public employment. See <http://www1.worldbank.org/publicsector/civilservice/cross.htm> for guidance on measuring public sector employment.
21. See <http://www1.worldbank.org/publicsector/civilservice/ineffectivemon.htm>.
22. The quality of a legal system depends on how well it is performing four key functions: the deterrence of wrongful conduct, the facilitation of voluntary transactions, the resolution of private disputes, and the redress of governmental abuses of power.
23. See Hammergren (2000). The Mexican information will be reported in Hammergren and others (forthcoming).

24. A completely “unbiased” judicial system can still operate against poor users because it is assumed that they will have paid counsel, understand the basic procedures, and be able to communicate in the court language. Hence, “neutrality” is not enough if their interests are to be given a real hearing.
25. Bank-sponsored research in Argentina suggests, for example, that men are the predominant individual users of the court system by a factor of roughly two to one. See Garavano (2000, *supra* note 29).
26. This methodology has been used extensively in the United States for two decades, and has been applied (including in Bank-sponsored research) in less developed countries. See Grossman and others (1982).
27. Many legislatures in developing countries appear to have no more than a rubber stamp function.
28. In Argentina, an analysis of case files from the city of Buenos Aires and the province of Santa Fe indicated that only 1 percent of the plaintiffs used the fee waiver for reasons of poverty. See Garavano (2000, p. 33).
29. Here again, the answer must be interpreted in context. Compulsory membership may be only a means of controlling the offer of services and have no impact on quality.
30. Frequently, the minimum level for pretrial detention is so low, and the poor so lacking in resources, that a poor person accused of a crime will automatically spend months if not years in prison awaiting trial. The rich can often buy their way out, either by bribing the person responsible for the decision or by filing any number of appeals.
31. This passage draws on Hammergren (1998).
32. As a very rough proxy, the waiting time for telephone lines (International Telecommunication Union 1998) can provide some idea of the quality of services. The waiting time for a telephone line is an indicator of administrative capacity and responsiveness. This indicator is negatively correlated with an index of meritocracy in the civil service. Some data are provided at http://www.worldbank.org/data/wdi/pdfs/tab5_10.pdf.
33. See the *Commitment to Reform Diagnostic* at <http://www.worldbank.org/publicsector/toolkits.htm> for further details. This toolkit assesses the political desirability of proposed reforms, the political feasibility—including opposition to this project or to broader reforms inside or outside the government—and the sustainability of reform, including potential changes in key stakeholders. See also <http://www.worldbank.org/publicsector/anticorrupt/index.htm>.

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Chapter 9

Community-Driven Development

*Philippe Dongier, Julie Van Domelen, Elinor Ostrom,
Andrea Rizvi, Wendy Wakeman, Anthony Bebbington,
Sabina Alkire, Talib Esmail, and Margaret Polski*

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9.1 Introduction

Community-driven development (CDD) gives control of decisions and resources to community groups. CDD treats poor people as assets and partners in the development process, building on their institutions and resources. Support to CDD usually includes strengthening and financing inclusive community groups, facilitating community access to information, and promoting an enabling environment through policy and institutional reform. Experience demonstrates that by directly relying on poor people to drive development activities, CDD has the potential to make poverty reduction efforts more responsive to demands, more inclusive, more sustainable, and more cost-effective than traditional centrally led programs. CDD fills a critical gap in poverty reduction efforts, achieving immediate and lasting results at the grassroots level and complementing market economy and government-run programs. With these powerful attributes, CDD can play an important role in strategies to reduce poverty.

This chapter examines why and how governments can support CDD, synthesizing lessons learned from accumulated experience. The chapter is based on extensive consultations with lead practitioners—both within and without the World Bank—as well as a literature review and an analysis of 12 large and successful community-driven programs covering a variety of sectors and regions.

The chapter aims to introduce policymakers to the benefits and relevance of CDD by providing useful guidelines for designing CDD programs. It commences by asking the question “What is CDD?” then defines the concept of CDD, outlines its key components, and describes contexts in which CDD approaches might be relevant. Section 9.3 focuses on the advantages of using CDD approaches for sustained poverty reduction, touching briefly on the risks inherent in adopting CDD strategies (these risks, and mitigation measures therefor, are dealt with in more detail in section 9.7: “Principles for Sustainability and Effectiveness”).

Governments have a range of institutional options for supporting CDD. Although communities will always drive the process, they may receive support from a variety of actors, including local or municipal government, the private sector, civil society, and central government. Section 9.4 examines three broad sets of arrangements for CDD: partnerships between community-based organizations (CBOs) and local or municipal governments, partnerships between CBOs and private support organizations such as nongovernmental organizations (NGOs) or the private sector; and direct partnerships between CBOs and central government or a central fund. This section discusses key design principles specific to each of the arrangements, as well as considerations for selecting the right arrangements in different country contexts. Section 9.5 outlines the benefits of multisector and single-sector approaches to CDD to guide practitioners in their selection between these alternatives.

Although there is growing evidence that CDD offers an effective means of improving the efficiency of public financing, even in optimistic scenarios, the financing requirements to improve poor people’s access to basic services far outstrip the availability of public funds. It is thus important to leverage local and private financing sources in implementing CDD. The uses of community contributions, credit financing of community contributions, and private commercial investment are discussed in section 9.6.

The chapter concludes, in section 9.7, with a discussion of key principles for the effectiveness and sustainability of CDD, including design guidelines, tips, and tools for implementation.

9.2 What Is Community-Driven Development?

Poor people are often viewed as the target of poverty reduction efforts. CDD, in contrast, treats poor people and their institutions as assets and partners in the development process. Experience has shown that, given clear rules of the game, access to information, and appropriate support, poor men and women can effectively organize to provide goods and services that meet their immediate priorities. Not only do poor communities have greater capacity than generally recognized, they also have the most to gain from making good use of resources targeted at poverty reduction.

Definition. CDD gives control of decisions and resources to community groups. These groups often work in partnership with demand-responsive support organizations and service providers, including elected local governments, the private sector, NGOs, and central government agencies. CDD is a way to provide

social and infrastructure services, organize economic activity and resource management, empower poor people, improve governance, and enhance security of the poorest.

Support to CDD usually includes

- strengthening and financing accountable and inclusive community groups or CBOs (see box 9.1);
- facilitating community access to information through a variety of media, and increasingly through information technology; and
- forging functional links between CBOs and formal institutions and creating an enabling environment through appropriate policy and institutional reform, often including decentralization reform, promotion of a conducive legal and regulatory framework, development of sound sector policies, and fostering of responsive sector institutions and private service providers.

When is CDD appropriate and when is it not? CDD is relevant across many sectors. The potential for CDD is greatest for goods and services that are small in scale and not complex and that require local cooperation, such as common pool goods (for example, management of common pasture and surface water irrigation systems), public goods (for example, local road maintenance), and civil goods (for example, public advocacy and social monitoring).

But not all goods and services are best managed through collective action at the community level. Public goods that span many communities or that require large, complex systems are often better provided by local or central government. Similarly, private goods or toll goods are often better provided using a market-based approach, relying more on individual enterprises than on collective action. CDD can, however, fill gaps where markets are missing or imperfect, or where public institutions or local governments fail to fulfill their mandates.

9.3 Why Community-Driven Development?

According to the *Voices of the Poor* study (Narayan and others 2000), based on interviews with 60,000 poor people in 60 countries, poor people demand a development process driven by their communities. When the poor were asked to indicate what might make the greatest difference in their lives, they responded: (a) organizations of their own so they can negotiate with government, traders, and NGOs; (b) direct assistance through community-driven programs so they can shape their own destinies; and (c) local ownership of funds, so they can end corruption. They want NGOs and governments to be accountable to them.

CDD is an effective mechanism for poverty reduction, complementing market- and state-run activities by achieving immediate and lasting results at the grassroots level. Experience has shown that CDD can enhance sustainability and make poverty reduction efforts more responsive to demand. CDD has also been shown to increase the efficiency and effectiveness of poverty reduction efforts. Because it works at the local level, CDD has the potential to occur simultaneously in a very large number of communities, thus achieving far-reaching poverty impact. Finally, well-designed CDD programs are inclusive of poor and vulnerable groups, build positive social capital, and give them greater voice both in their community and with government entities. The following section describes in more detail some of the benefits of the CDD approach.

9.3.1 Complements market and public sector activities

Experience has shown that policies aimed at promoting national economic competitiveness and state-run public investment programs are essential but insufficient for poverty reduction. These policies and programs often do not benefit everyone, and benefits often take years to trickle down. CDD offers the opportunity to fill this critical gap by achieving immediate and lasting results at the grassroots level.

The market alone cannot provide all essential services and goods for poverty reduction—it often provides insufficient public goods (for example, roads, quality education, and health care for poor

Box 9.1. Community-Based Organizations

What is a CBO?

Throughout history, communities have organized themselves to address collective and individual needs. CBOs are normally membership organizations made up of a group of individuals in a self-defined community who have joined together to further common interests. They often consist of people living near one another, in a given urban neighborhood or rural village. They can also be groups of people who are united by a common interest but who do not live in the same geographic community. The common interest might be related to production, consumption, the use of common pool resources, or the delivery of services. Examples include women's groups, credit circles, youth clubs, cooperatives and farmer associations, irrigation associations, forest and watershed management groups, artisan groups, fishery associations, and parent associations. CBOs can be stand-alone groups, or they can be linked to federations of groups at the regional, national, or international level.

CBOs can be informal or formal. Informal organizations, such as women's and men's clubs and neighborhood groups, pursue joint interests and often appear more accessible to the poor than formal organizations, which have legal status, formally stated rights and responsibilities, and a legally binding governance structure for recruiting members, selecting leaders, and conducting affairs.

How do CBOs, NGOs, and elected local governments differ?

In this chapter, we consider a CBO to be a membership organization aimed at furthering the interests of its own members and an NGO, or nongovernmental organization, to have a broader scope of activities that might assist CBOs and pursue commitments that do not directly benefit NGO members. CBOs differ from elected local governments in that they are voluntary and choose their own objectives. In contrast, local governments are mandated to be responsible for revenue collection and for the delivery of a variety of infrastructure and services. CBOs may interact closely with local government, with other levels of government such as local representatives of central ministries, with the private sector, and with NGOs.

Making CBOs pro-poor

CBOs do not always represent the interests of poor people. To ensure that CDD has an impact on poverty reduction, *CBOs need to include poor people as members and represent their needs and interests*. That does not mean that CBO membership should always be limited to poor men and women, but it does mean that the functioning and leadership of the CBO should clearly represent the interests of poor people along with those of the less poor.

Deciding whether to work with new or existing CBOs

It is frequently advisable to work through existing organizations. But when there is no good match between the project and an existing organization (for example, if a local organization has very limited membership but the project requires the involvement of several villages or an entirely different group of people), the existing organization may be too limited. Also, when the social organization of a community is highly inequitable, new groups may need to be created to achieve program objectives or to promote the participation of disadvantaged people. Both new and special-purpose organizations are more effective when they build on positive organizational traditions of a community. This is the case for the Moldova Social Investment Fund, in which traditional decisionmaking mechanisms are used to establish community priorities, and for the Zambia Social Recovery Project, in which project committees formed around school investments draw on the strong tradition of parent-teacher associations.

people) while overharvesting common pool goods (for example, forests, watersheds, and fishery resources). Although national state-run programs focused on investing in human and physical capital have the potential to redress some of these imbalances, accumulated experience has shown that central government programs are often slow to deliver basic services and are often ineffective in reaching poor people. Market- and state-run activities can be effectively complemented by community-driven solutions that engage CBOs, local governments, NGOs, and the private sector. By using CDD approaches and local actors to provide key goods and services, governments can support immediate poverty reduction by efficiently building human and physical assets at the local level.

9.3.2 Enhances sustainability

CDD can make services responsive to demand expressed by poor men and women and as a result can enhance sustainability. As consumers, community members are the most legitimate, informed, and reliable source of information about their own priorities. Community-developed facilities such as health centers, schools, and water supply systems tend to have higher utilization rates and are better maintained than when investment decisions are made by actors outside the community. Experience also demonstrates that demand is better articulated when communities contribute to investment costs and control investment choices. A water supply study of 1,875 households in rural communities in six countries (Benin, Bolivia, Honduras, Indonesia, Pakistan, and Uganda) suggests that water system sustainability is significantly higher when communities control key investment decisions and when they pay part of the investment costs, ensuring that they get what they want and are willing to pay for (Sara and Katz 1997).

Box 9.2. What Happens When CBOs Are Trusted to Control Investments?

Service delivery can improve.

- 3 In Zambia, the Social Recovery Project (SRP) has provided matching grants directly to urban and rural community groups since the early 1990s. Communities choose from a menu of eligible social and economic infrastructure interventions. Impact evaluations of early interventions found that grant-financed schools and health centers performed better than similar institutions whose financing did not involve communities. Teachers and health workers attended more regularly, the physical infrastructure was better; more members of the community used the facilities, and they were more likely to pay school fees and organize health center maintenance committees than in similar facilities that did not receive SRP financing.
- 3 In Bangladesh, the Palli Karma Sahayak Foundation (PKSF) provides loans to NGOs, which in turn provide micro-credit services to the poor, often in partnership with community groups. Established in 1990, PKSF now finances 155 NGOs, financing services for more than 2 million poor people, of which 90 percent are women. Its disbursement in 1998–99 was US\$40 million. Average repayment rates have consistently been above 98 percent.

Programs can spread rapidly.

- 3 The Northeast Brazil Rural Poverty Alleviation Program has financed more than 30,000 subprojects. The program shifted its design from a centrally administered, integrated rural development program after this approach did not produce its expected results. The program was reformulated into a community-driven program that targets the poorest communities and involves them in decentralized decisionmaking, with a reduced role for public agencies. Funds are channeled directly to CBOs, which manage and are accountable for investments. It is estimated that 93 percent of program resources now reach communities, compared with 40 percent under the previous rural development programs and 20 percent under the first integrated rural development programs.
- 3 In South Africa, the Mvula Trust helped achieve large-scale coverage by providing grants for water supply and sanitation projects to be designed and managed directly by communities in remote rural areas. The program filled a vacuum in serving South Africa's homelands in the absence of government coverage. The success of these community-managed investments has increased social capital in the region, inspiring additional self-organized development activities and influencing government policy in other sectors.

9.3.3 Improves efficiency and effectiveness

Studies and practical experience suggest that CDD can improve the effectiveness and efficiency of services in many sectors and contexts. Examples of these benefits for infrastructure, education, microfinance, and natural resource management are given below.

Infrastructure. Community management of development investments usually results in lower costs and more productively employed assets. Studies of community-organized irrigation systems in Asia, for example, have repeatedly found that systems constructed and operated by the farmers themselves, often without much external assistance, generate a higher level of agricultural productivity than more modern systems constructed by government agencies with substantial external assistance (Lam 1998; Tang 1992). A recent study in Zambia compares CBO-managed and contractor-managed approaches to developing school infrastructure programs. Unit costs under the contractor approach were more than twice as high as under the CBO approach. Similarly, a recent study in South Africa shows that when CBOs are responsible for all aspects of the project (design, management, and monitoring), costs per beneficiary are less than half than when the CBOs are not decisionmakers (Adato and others 1999).

Education. There is empirical evidence that community management and accountability can improve education outcomes (Jimenez and Sawada 1998). Greater parental involvement in children's education can inspire children to attend school and put pressure on providers to deliver better services. Communities that oversee school management are also more willing to assist in financing. Preliminary results from the Philippines show that community-managed primary schools have lower costs while holding enrollment and quality constant (Jimenez and Paqueo 1996).

Group-based microfinance. Evidence suggests that certain models of both individual and group-based microfinance can extend the reach of financial services and achieve high repayment rates. Some microfinance programs rely on local groups that, because they know community members' characters and economic activities, can provide peer pressure. Group-based programs tend to do particularly well where the screening and monitoring costs of credit are too high for the lender and when the group approach reduces the cost of information gathering and creates incentives at the local level (Adams, Graham, and von Pischke 1984).

Natural resource management. Several countries have moved from state to community management of natural resources, mainly as a result of poor outcomes under state-led programs. The joint forest

management program in the Indian state of Andra Pradesh shows how community management can increase the effectiveness of services (Venkatamaran and Falconer 1999). More than 5,000 CBOs have rejuvenated more than 1.2 million hectares of degraded forest in the state. Degraded forests have sprung back to life, timber smuggling has almost stopped, and cattle grazing is under control. Village labor is more gainfully employed and out-migration has declined. Soil conservation has saved local water resources.

9.3.4 Allows poverty reduction efforts to be taken to scale

Because CDD devolves responsibilities and resources to the local level, activities can occur simultaneously in a large number of communities without being constrained by a central bureaucracy. When poor communities are trusted to drive development and are given appropriate information, support, and clear rules, a system can be put in place not to provide for poor people, but to facilitate their active and ongoing role in rolling out poverty reduction efforts. Box 9.3 provides an example of a large-scale program of support to CDD that has been successfully implemented in Indonesia.

9.3.5 Makes development more inclusive of the interests of poor people and vulnerable groups

Representative CBOs can provide voice and empowerment to groups that are typically excluded from the development process. The interests of women, indigenous groups, ethnic minorities, the disabled, and people with AIDS might not be effectively expressed through standard political and economic structures. If these minority groups are actively involved in CBOs, they will help make development processes more inclusive.

Inclusion also requires that scarce public resources be targeted to groups that most need them. In the absence of reliable information to allow means testing (such as for household income), involving communities directly in the targeting process can improve efforts to target the poorest and most marginal individuals and groups. For example, parent-teacher associations might be in the best position to determine which children should receive tuition or school lunch subsidies, as shown in a recent study of a targeted school enrollment subsidy program in Bangladesh (Ravallion 1999)

9.3.6 Empowers poor people, builds social capital, and strengthens governance

CDD empowers poor people. The objective of development is not merely to increase incomes or to improve poverty indicators, but also to expand people's real freedoms. These are the choices people make between different valuable beings and doings, such as being nourished, being educated, participating in public debate, or being free to walk about without shame (Sen 1999). This analysis is reflected in the *World Development Report 2000/2001* (World Bank 2000b), which identifies empowerment as one of the three elements of poverty reduction.

Box 9.3. Large-Scale Poverty Reduction Efforts Through CDD: Project Identification and Design in Indonesia

The Kecamatan (subdistrict) Development Program (KDP) is an effort to address long-term structural poverty in Indonesia through targeted, decentralized block grants. The KDP is financed with an International Bank for Reconstruction and Development (IBRD) loan of \$225 million and \$47 million from the government of Indonesia. Its goal is to support village-level investments in 751 Kecamatan covering a total of 9,000 villages and approximately 25 million people.

How are these village-level investments identified? A participatory village project identification and planning process prioritizes one or two projects that are then formulated with the help of trained facilitators—often college students. Projects can only be submitted by CBOs that have existed for at least a year. If more than one project is identified, then one has to come from a women's CBO. The project has an "almost open" menu of eligible investments (excluding a few options, such as religious buildings and environmentally damaging projects), trusting the poor to select investments that will have the greatest influence on poverty reduction.

The projects are technically appraised by local experts (villagers with relevant skills or experience), in consultation with line agencies in order to seek possible synergies and avoid conflicts with planned line agency operations. Proposals that pass these filters are then submitted to the Kecamatan council, which discusses and prioritizes them according to their overall impact, poverty impact, and technical and financial feasibility. Those that are approved are funded.

Targeted community-driven approaches devolve control and decisionmaking to poor women and men, which empowers them immediately and directly. While clear rules, transparency, and accountability are important safeguards to prevent corruption or the capture of community resources by elites, the speed and directness with which CDD empowers poor people is rarely matched by other institutional frameworks for poverty reduction.

Control over decisions and resources can also give communities the opportunity to build social capital (defined as the ability of individuals to secure benefits as a result of membership in social networks) by expanding the depth and range of their networks. This kind of network expansion, which is critical for long-term growth and development, also has positive short-term effects on welfare and risk exposure. Several studies conducted in Bolivia, Burkina Faso, Indonesia, and Tanzania found that social capital has a positive effect on household welfare (as measured by per capita consumption), and that the effect was several times greater than that of human capital alone (Grootaert 1999a; Grootaert and Narayan 2000; Grootaert, Oh, and Swamy 1999). The creation of networks and social capital also helps to reduce household exposure to risk. Poor individuals and households manage risk in many ways, including offering reciprocal self-help, participating in local organizations, and building linkages with people outside their social networks. For example, rotating savings and credit associations in Bolivia, Peru, Guatemala, and Indonesia are a means by which people save and lend among themselves on the basis of reciprocity and mutual trust. Development strategies that strengthen CBOs and build social capital can also strengthen the safety net for poor people and reduce their exposure to risk.

Finally, strengthening local associations that are inclusive can increase poor people's voice in local political processes and governance. In Bangladesh, for example, leaders of community groups formed and strengthened with the help of NGOs are increasingly being elected to leadership roles in local government bodies.

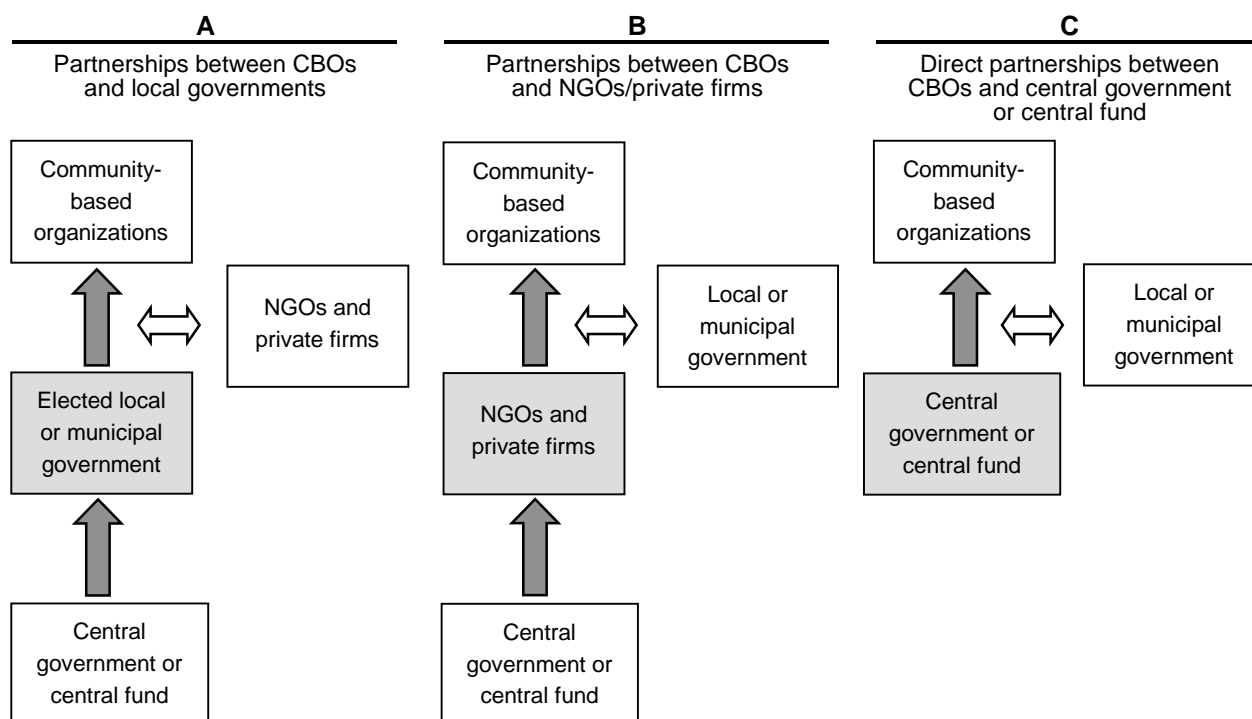
For all its potential benefits, CDD also presents risks. If CBOs are not appropriately strengthened or exclude the poor, if they cannot finance recurrent costs, if they crowd out local government or are manipulated by vested interests, then CDD may not be the optimal strategy. These risks, as well as ways to mitigate them, are discussed in more detail in section 9.7, "Principles for Sustainability and Effectiveness."

9.4 Alternative Institutional Arrangements

Where CDD arrangements are appropriate, governments can consider a range of institutional options to support CBOs. Local or municipal government, the private sector, civil society, and central government or central funds can provide critical support to CDD. Although there are many variations regarding the exact roles of each player, three broad sets of arrangements have emerged:

- partnerships between CBOs and elected local or municipal governments;
- partnerships between CBOs and private support organizations (NGOs or private firms); and
- direct partnerships between CBOs and central government or a central fund, including other, higher-level governments and funds, for example, states or provinces in federal systems.

These three approaches to CDD are depicted schematically in figure 9.1. In each diagram, the flow of funds is represented by shaded arrows, with primary partner organizations shown shaded. In each arrangement, support may be provided by other institutions, and these are shown to the side of each diagram. Table 9.1 summarizes the three different approaches. The first alternative (partnerships between CBOs and local or municipal governments) links CDD with the decentralization agenda that has gained momentum in many countries. In contexts where there is commitment to genuine decentralization (devolution of resources and functions to elected local and municipal governments), promoting partnership between CBOs and elected local or municipal governments is the preferred option. This approach can strengthen the national system of intergovernmental transfer of resources, allows resource allocation decisions to be accountable to local priorities (see section 9.4.1), and provides a sustainable source of CBO funding.

Figure 9.1. Examples of Common Institutional Arrangements for CDD

There are contexts, however, where decentralization is not a government priority, or where the timeframe for reform is ambiguous or drawn out. In these contexts, a diversified strategy that engages local government and also works directly with NGOs or private firms, or provides CBOs direct access to resources, can be appropriate. A diversified strategy can create healthy competition among actors and introduce incentives for stronger performance—provided issues of duplication and coordination are thoughtfully considered. Such a strategy may, in certain contexts, allow targeting of poor or marginal groups that may otherwise not be targeted by elected local governments. The other two sets of arrangements (partnership between CBOs and NGOs/private firms, and direct partnerships with CBOs), which might be considered alongside, or in lieu of, the local government approach, have also delivered good results. In all arrangements, it is important to forge functional linkages between CBOs and government institutions and to promote an enabling environment through appropriate policy and institutional reform (see section 9.7.1).

It is important to note that each of these arrangements can be more or less community driven. The extent to which communities have control over investment and management decisions is determined less by the model applied than by the division of roles between the partners. Partnership arrangements in which the key investment decisions (for example, choices of level of services, contracting decisions) are made primarily by a support organization cannot be described as community driven. CDD requires community control of investment and management decisions. Furthermore, partnership with CBOs that do not include women or minorities, or do not represent their interests, can be described as neither community driven nor inclusive because key members of the community are excluded.

There are other models of successful CDD in addition to these three. In particular, there are highly successful CDD activities that do not access external resource flows. However, this chapter focuses on CDD models that can be partly supported by external resource flows as a means of scaling up CDD.

Sections 9.4.1, 9.4.2, and 9.4.3 describe, in turn, each of these three arrangements and identify key design principles specific to the success of each arrangement. Section 9.4.4 discusses considerations for selecting appropriate institutional arrangements for different country contexts.

Finance	<ul style="list-style-type: none"> Local government or CBO provides upfront investment (in cash or kind). Untied intergovernmental fiscal transfers complement local tax revenues - alternative is for transfers to be tied to specific program outputs. Matching grants to CBOs from local governments. Credit financing recommended for the more private goods. 	<ul style="list-style-type: none"> CBOs provide upfront investment (in cash or kind). Matching grants received from central government/fund (either directly or through the NGO/private firm). NGO financing can also be leveraged. Credit financing recommended for the more private goods. 	<ul style="list-style-type: none"> CBOs provide upfront investment (in cash or kind). Matching grants received from the central fund/government. Credit financing recommended for the more private goods.
Community mobilization	Local government mobilizes the community with the help of contracted NGOs or private firms employing facilitators.	NGO/private firm contracted by central fund/government mobilizes the community.	National program oversees mass information campaigns to solicit community demand and clarify rules.
Training & capacity building	Local government contracts with private sector or NGOs for capacity building and training support to CBOs.	NGO/private firm contracted by central fund/government provides capacity building and training support to CBOs.	Private sector or NGOs contracted by CBOs themselves.
Initial request & prioritization	Consultations with communities and CBOs, with local government facilitation.	Community/households with support from NGO/private firm.	Community/households, often with support from local private sector or NGO chosen by CBOs.
Approval of investments	Local government.	Central government/fund sometimes delegated to NGO/private firm (where possible involving local government).	Central government/fund (where possible, decentralized to local government or local council).
Project design & implementation	Local government may provide technical or supervisory support in design and implementation, either directly or through the private sector/NGOs.	CBOs with support from the private sector or NGOs (where possible, involving local government).	CBOs with support contracted from private sector or NGOs.
Operations & maintenance (O&M)	Responsibility of local governments versus CBOs will vary by sector and type of good or service.	CBOs with support from the private sector or NGOs (where possible, involving local government).	CBOs, in some cases with support from local private sector, local or national government.

9.4.1 Partnerships between CBOs and local or municipal governments

Description

In this approach, the function of coordinating support to communities is decentralized to elected local or municipal governments. In addition to political and electoral incentives encouraging local governments to work in partnership with CBOs, policies and incentives are designed so that local governments

- create an enabling environment for community efforts to flourish, ranging from building more participatory, citizen-oriented planning of local investment priorities to subcontracting with CBOs for the provision of goods and services for which CBOs have comparative advantages;
- bring government closer to the people, increasing accountability and transparency, as well as building bonds of trust; provide long-term recurrent cost financing within a framework of fiscal decentralization and intergovernmental fiscal flows, thereby creating a local funding base for CDD; and
- help balance competing needs and demands in allocating resources across diverse communities.

To complement local tax revenues, fiscal transfers to elected local governments, are preferably made in the form of untied fiscal transfers (block or general-purpose grants) from higher levels of government. In the case of block grants, local governments have full discretion over allocation of resources. Local government officials are then accountable primarily to their constituents.

An alternative is for central government funding support to be tied to specific program outputs (specific-purpose grants). Under this approach, local governments become accountable both upward, to resource providers, and downward, to constituents. Experience has shown that, given the frail state of local governance and the weak voice of poor communities in most developing countries, upward accountability can quickly dominate, and accountability to local communities becomes secondary. Unless this approach is carefully managed, local governments will have stronger incentives to respond to finance providers than to their often powerless constituents.

Nevertheless, in some cases it may be warranted to tie central support to specific program outputs and to partnerships between local government and CBOs, for example, where there is a need to target resources to poor or marginalized groups that have not been adequately represented in local government programs. Tying the use of funds in these instances might be necessary to ensure that funds reach excluded groups. A combined strategy may also be considered, comprising untied block grants to local governments complemented by tied funds for special outreach programs.

Box 9.4 describes a successful partnership between CBOs and local governments in Bolivia.

Key design principles for partnerships between CBOs and local or municipal government

Align program rules with national decentralization policies. Program rules should complement any existing efforts to increase the role of local governments in development. The types of partnerships between CBOs and local or municipal government will vary according to the size of local government and its scope of responsibilities. Some local governments represent very small local communities, whereas others represent larger districts containing multiple villages or neighborhoods. Similarly, their responsibilities range from keeping streets clean and recording essential data to policing, education, water and sanitation, local roads, and public health. Therefore, the optimum role of local government in its partnership with CBOs will vary accordingly.

Strengthen community voice and participation in local government decisionmaking. Local or municipal governments are more likely to be responsive, accountable, and transparent in relationships with their constituents if there are mechanisms through which CBOs can express their priorities and concerns and monitor local government processes. These mechanisms include centrally mandated or supported local elections (including open list elections), municipal oversight councils with CBO representation, and participatory or transparent planning and budgeting (for examples, see chapter 16, “Urban Poverty,” boxes 16.12 and 16.13).

Box 9.4. Partnerships Between CBOs and Local Governments in Bolivia

Program scope and scale. The Bolivia Rural Communities Development Project and the subsequent Bolivia Participatory Rural Investment Project aimed to alleviate rural poverty by carrying out rural investments (primarily building and improving access roads, bridges, small irrigation systems, and river embankment; rehabilitating cultural heritage; setting up market and storage facilities; and providing technical assistance to rural producers) and by improving the capacity of municipal governments and rural communities to implement municipal development plans. The total cost of these projects was approximately US\$118 million. The investment component was national in scope, and the capacity-building component covered more than 200 municipalities out of 301.

Focus on the Law of Popular Participation. These projects also directly supported design and implementation of legislative changes as a response to previous top-down forms of rural development. The Law of Popular Participation (1994) aimed to decentralize political, fiscal, and administrative responsibilities and resources to municipal governments. This law introduced three innovations: (a) municipal governments' share of the national budget increased from 10 to 20 percent, (b) territorially structured community organizations became legally able and required to elaborate local development plans that became the ingredients of a municipal plan, and (c) members of these community organizations driving the oversight committees were given the power to monitor, audit, and veto municipal budgets.

Project cycle. Participatory planning at the community level was leading to subproject identification. This was facilitated by paid external agents (NGOs and commercial firms) contracted by the program. Volunteer community facilitators also supported the process. Municipal plans were aggregates of community plans. In addition, municipal plans included supracommunity investments that communities agreed on.

The municipal development plans were financed by a range of national financing channels (primarily the Peasant Development Fund and the Social Investment Fund). The program provided matching grants to communities. Communities could make contributions in cash or in kind—in practice, almost always in kind. These contributions had to be a minimum of 10 percent of project costs, and could be up to 30 percent.

Many of the implementation services were contracted out to intermediary implementing organizations, both nongovernmental and private commercial. Maintenance responsibilities fell largely on the municipal government and in practice also on communities. Operational responsibilities varied, often falling to line agencies (for example, to fund the salaries of teachers or health workers working in buildings financed under the program).

Lessons learned. In the first project, communities identified projects and monitored the implementation of the municipal development plan, but they did not contract for services directly. In the second project, communities could contract directly for investments of less than US\$30,000. This is reported to have reduced cost levels significantly and to have enhanced ownership and sustainability. A second key lesson relates to capacity building. The second project reduced the emphasis on this component, mainly because of growing doubts about the value of generalized capacity building and the felt need for a more demand-driven approach in this area.

Invest in capacity building at local and municipal government levels. To support CDD effectively on a large scale, local governments need to have access to qualified personnel and to finance, planning, and monitoring systems. Capacity can be built internally or can be accessed via partnerships and contracting arrangements with private sector firms or NGOs capable of supporting local and municipal governments. Experience has shown that there is no alternative to learning by doing, and other capacity-building support can only complement the necessary experiential learning.

Invest in capacity building and facilitation of CBOs. Experience suggests that environments with a long history of community empowerment and capacity building are more likely to foster inclusive local governance. Successful programs have invested significantly in community mobilization in order to create community-level demand and capacity to participate in processes overseen by local governments.

Apply the subsidiarity principle: delegate control to the lowest appropriate level. CDD programs operating through local and municipal governments should be consistent with the approach of having CBOs themselves drive the development process for those goods and services best handled at the community level (to be determined country by country, sector by sector). This means that for some types of goods or services, local and municipal governments should focus on resource allocation across communities, and the CBOs should then be entrusted with resources and making the key service provision decisions, seeking support from local government and other service providers as they require.

9.4.2 Partnerships between CBOs and private support organizations (NGOs or private firms)

Description

An alternate institutional arrangement is for central government to finance and contract with private support organizations to provide support to CBOs and facilitate CDD. Private support organizations may

be NGOs or private firms (see box 9.5 for a description of these organizations). Their role is to help reach communities, form or strengthen CBOs, and support CBOs in the process of CDD. This mode of support has been tested in many countries, where important resources have been channeled through NGOs to facilitate and support CBOs. There may be coordination with local development planning processes and with local or municipal governments and line ministries.

Large-scale CDD programs working through private support organizations are typically overseen by a central government agency or fund that selects, funds, and monitors a large number of intermediary private support organizations. These intermediaries support CDD by performing a range of functions - in some cases, focusing on facilitating and building capacity, and in other cases, also funding and providing implementation services. Box 9.6 describes a CDD project in India's rural water supply and sanitation sector, where NGOs were limited to acting as facilitators and providers of technical support and CBOs accessed subproject funds directly from the state government. This approach has the advantage of placing responsibility for the subprojects with the CBOs themselves, clarifying accountability, building CBO capacity, and limiting their dependence on NGOs.

Key design principles for partnerships between CBOs and private support organizations

Screen intermediaries. NGOs and firms will be of varying quality. Many bring substantial commitment, professionalism, and accumulated experience to helping communities help themselves. Some also bring external funds of their own. Many NGOs and firms, however, have sprung up in capital cities primarily in search of opportunities to obtain funding from donors, with little to offer beyond fundraising abilities. Careful screening of NGOs and firms based on strict eligibility criteria is a key factor for success.

Create performance incentives. Payments and funding levels for intermediaries should be tied to their performance, measured through objective evaluation against clear standards, including indicators related to sustained service provision and institutional sustainability of CBOs, and not just physical outputs or service setup. This can create positive incentives for intermediary performance.

Forge links between CBOs and local governments. Given proper incentives, NGOs and firms can facilitate development of lasting links between communities and local governments. This is important to help ensure community access to resources available from local governments, help build accountability of local governments toward poor communities, and ensure long-term sustainability. Promotion of such links can be included in the performance standards by which intermediary support organizations are evaluated.

Support growth of competent support organizations. Experience in many countries shows that an adequate supply of private support organizations can develop rapidly. Key to this growth is a demand for their services, at sufficiently attractive terms, over several years. Capacity building and training support are important, but more important is the power of market demand in inducing social entrepreneurs to create support organizations. Most countries and sectors have adequate human resources and entrepreneurial talent available to create and staff such organizations.

Ensure that an exit strategy is in place for intermediaries. Capacity building of CBOs is an important building block for sustainable CDD. While private support organizations can play a key role in building capacity, an objective should be the eventual phasing out of intensive capacity-building support. This is important for the long-term sustainability of CBOs. NGOs and firms looking for work can sometimes extend their stay with communities beyond what is required to leave behind strong local institutional capacity; thus incentives need to be designed to encourage appropriate exit strategies. This may include funding of intermediaries' operating costs on a declining basis or providing rewards for those organizations able to hand over services to CBOs and local governments, where appropriate.

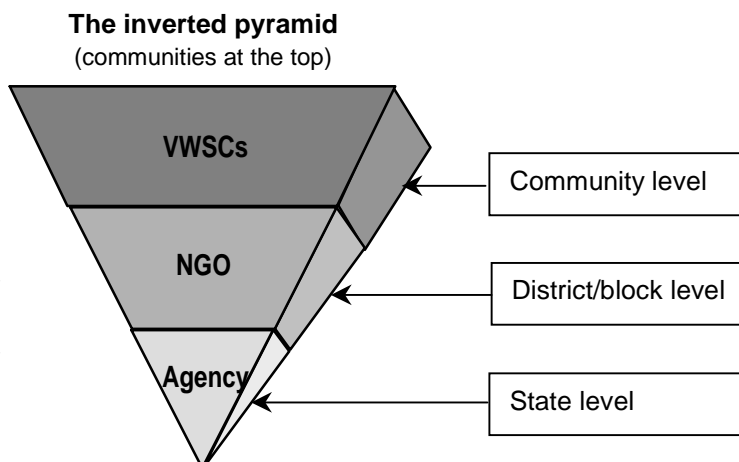
Box 9.5. What Are Private Support Organizations (NGOs and Private Firms)?

Private support organizations (NGOs and private firms) come in different types and sizes. They include local and international charities, foundations, consulting firms, churches, political interest groups, and professional associations. Some NGOs are also able to draw on external voluntary contributions and thus play a double role as a provider of services and a donor. In this chapter, we focus on those NGOs and firms that provide support services to communities for social and economic development. While CBOs are themselves a type of NGO, we draw a distinction between CBOs and the support NGOs with which they partner.

Box 9.6. How NGOs Can Act as Facilitators

India's Uttar Pradesh Swajal Water Supply and Sanitation Project uses a community-driven approach to respond to the demands of the poor and build local capacity. The total project size is US\$71 million, covering approximately 1,000 villages with a population of 1.2 million, in 19 districts in the Hill and Bundelkhand regions of Uttar Pradesh over a period of six years (1996–2002).

The institutional arrangements consist of a partnership of three organizations: the Rural Development Agency at the state level, the NGOs, and the Village Water and Sanitation Committees (VWSCs). The agency, operating as an autonomous body, plays a facilitating, coordinating, and monitoring role. The NGOs serve as links between the agency and the villages and help both to select communities and build the capacities of the VWSCs. The NGO fieldworkers work closely with both the VWSCs and the community as a whole and, as part of capacity building, arrange for community members to visit other successful communities. The VWSCs plan, implement, and ultimately manage the water and sanitation schemes. They access matching investment funds directly from the state agency. VWSCs consist of seven to 12 elected members, including socially and economically disadvantaged sections of the community and women.



9.4.3 Direct partnership between CBOs and central government or central fund

Description

In another arrangement, CBOs access financial resources directly from a central fund or central government without the assistance of intermediaries. In this arrangement, all support and technical services required for project planning and implementation are purchased directly by the CBO. There may be coordination with local development planning processes and with local or municipal governments and line ministries. Box 9.7 describes the Northeast Brazil Rural Development Program, initially a direct partnership between CBOs and the state governments that has evolved to include local government as a key player, resulting in a program that has effectively delivered services to tens of thousands of communities during the last decade.

Key design principles for direct partnerships between CBOs and central government or central fund

Broad dissemination and consistent enforcement of simple and transparent rules. Community access to resources needs to be governed by simple rules that are easy to communicate to participating communities. Mass communication campaigns are essential to reach poor communities and inform them about available resources and the rules for accessing funds and making investments. Although these principles apply to all CDD arrangements, they are particularly critical where CBOs are directly partnered with central agencies because there are no intermediaries to facilitate outreach and communication with communities, and CBOs must navigate the program procedures without assistance. Transparent enforcement of rules is important for the credibility of the system.

Capacity building and community-friendly procedures are essential. Relying fully on community organizations to manage development interventions directly requires investment in training, both on how to manage the implementation of an investment *and* its operation and maintenance. Simplifying forms, reducing unnecessary bureaucratic requirements, and building in support systems for groups (that is, contacts with other communities that have been successful) will all reinforce the ability of communities to carry out their assigned functions.

Box 9.7. Evolution of the Rural Development and Rural Poverty Alleviation Programs in Northeast Brazil (1985–2001)

To alleviate persistent levels of rural poverty in the northeast of Brazil, the state governments of the northeast have supported a series of community-driven efforts. Although early CDD interventions took the form of a direct partnership between CBOs and a central agency, the institutional arrangements gradually evolved to include an increasing role for local government. This program successfully delivered more than 44,000 community-managed subprojects, providing basic services to an estimated 2.5 million of the poorest families of northeast Brazil in 30,000 separate communities. It has also increased social capital and led to a transformation of governance at the local level.

The program's institutional arrangements evolved in three distinct phases: (a) *Programa de Apoio Comunitário* (PAC), (b) *Fundo Municipal de Apoio Comunitário* (FUMAC), and (c) *Fundo Municipal de Apoio Comunitário-Piloto* (FUMAC-P). State technical units housed in the Ministry of Finance or Ministry of Planning played a key role in all phases. They coordinated municipal councils (MCs) comprising 80 percent elected representatives from community associations, and 20 percent nominated by local governments. In turn, MCs interacted with community associations (CAs) comprising elected community representatives. To be eligible for funding, communities had to demonstrate that their CAs were self-organized and self-governing and had to permit all adults in the community to vote on project-related matters.

1. **PAC (State Community Schemes).** This approach was used in the first Northeast Brazil Rural Development Project (NRDP) and continues to operate in those municipalities that lack the will or capacity to adopt the more evolved FUMAC or FUMAC-P approaches. The state unit receives applications directly from community groups across the state. To evaluate each request, project staff are required to visit the community to check the transparency of the consultative process, the legitimacy of the CBO formed, and the process of project selection. Based on this visit, the state unit then screens and approves projects. It authorizes the release of funds directly to the CA, upon receipt of an operating agreement that clearly spells out the CA's ongoing obligations. The CA controls and manages accounts for all project funds and is responsible for project design, implementation, and its operational obligations as per the agreement.
2. **FUMAC (Municipal Community Schemes).** The FUMAC approach was successfully piloted under the reformulated NRDP and continues to operate in many municipalities. Decisionmaking regarding resource allocation is delegated to MCs, which prioritize community demands and approve subprojects within a municipal budget set by the state unit. A fixed budget constraint induces rationality in allocation of scarce public funds. In this way, communities themselves, in partnership with local government (both of which have representatives on the MC), analyze applications, conduct site visits to verify transparency of processes of CA formation, and so forth, and determine the best use of funds at the local level. The state unit performs an oversight function and is informed by the MC of project choices. The MC enters into an operating agreement with the CA that spells out ongoing obligations for the project, then authorizes the release of funds to the CA. The CA then controls, manages, and accounts for all project funds and is responsible for project design, implementation, and those operational obligations agreed upon with the MC.
3. **FUMAC-P (Pilot Municipal Community Funds).** The FUMAC-P is a more decentralized variation of the FUMAC, still in pilot phase. Selected high-performing MCs are allocated an annual budget based on a distribution formula and past performance. The MCs then prioritize and approve community-proposed subprojects and finance them from this annual budget—simulating a process of intergovernmental transfers. In this way, locally determined MC investment planning is supported and mainstreamed. Once a project is approved for funding and an operating agreement has been executed with the MC, the MC authorizes the release of funds from its own account to the CAs, which control, manage, and account for all project funds and are responsible for implementation, operation, and maintenance as per the operation agreement with the MC.

Source: Van Zyl and others (2001).

9.4.4 Choosing institutional arrangements that fit country context

The most appropriate institutional arrangement in any particular country will depend on the specific circumstances of that country or region or location. Some guidelines to assist in choosing among options are provided in the following section.

Contexts favorable to partnerships between CBOs and local or municipal governments

Partnerships with local or municipal governments are most appropriate where there is political commitment and where policies for democratization, decentralization, and revenue sharing are already in place. Favorable contexts are defined below.

- *A decentralization framework exists* in which elected local government actors have both the power and resources to address local development issues (that is, a political-legal framework for formal decentralization exists, with supporting administrative and fiscal frameworks). In the most favorable of circumstances, external support agencies would supply resources in the form of general budget support to central governments, which would then pass on funds to local govern-

ments according to a predetermined revenue-sharing formula. Local governments would use these funds to provide matching grants to communities.

- 3 *Local governments have the potential to develop reasonable capacity*, implying that they can gain access to qualified personnel and systems in finance, planning, management, implementation, and monitoring, in order to manage the responsibilities being passed to them. Some local governments may not have this capacity in house but are able to access it through partnerships with other local actors.
- 3 *Central government is willing to facilitate community empowerment*. For local governments to be a vehicle for CDD, it is also important that national government provide a supportive environment for strengthening civil society and for the empowerment of CBOs. At a minimum, this implies legal recognition of such organizations and of their right to do business, but more important, it implies a central government commitment to the enhanced participation of these organizations in local governance.
- 3 *Mechanisms exist (or are being established) to foster organized community voice and participation in local government decisionmaking*. More open and more accountable local government is likely to be more responsive to local needs and more involved in finding solutions to community problems, which in turn generates greater trust on the part of civil society. More open governments also tend to encourage community-wide participatory initiatives, such as the formation of groups and associations, providing an enabling environment for social capital to flourish.

Contexts favorable to partnerships between CBOs and private support organizations

Partnership arrangements between CBOs and private support organizations (NGOs or private firms) may be a suitable option, particularly where communities are highly polarized, but there should be political support for development of these organizations.

- 3 *Polarized local social and power structures*. In some contexts, communities are characterized by highly polarized local social and power structures along class, ethnic, or religious lines. In such contexts, it can be appropriate to rely on private support organizations to facilitate the formation and capacity building of new inclusive CBOs. In such contexts, working directly with CBOs, without intermediaries, may exacerbate tensions, inequalities, and social exclusion.
- 3 *Support for development of viable, capable private support organizations*. The potential for intermediary support organizations to play a positive role in facilitating CDD depends on the experience, coverage, and density of such organizations in a given country. Some countries have a long history of NGO activity, with NGOs having a strong base of experience and established capacity to support CDD. In other countries with less established capacity, it is possible to induce rapid development of intermediary support organizations by establishing consistent demand for their services and through programs of capacity building. NGOs and private firms can grow quickly as a result of entrepreneurial initiatives, but it is key to have a supportive government and the correct legal and regulatory environment to allow these organizations to thrive. It is equally important to put in place effective measures to screen these private players and to hold them accountable for their results.

Contexts favorable to direct partnerships between CBOs and central agencies or central funds

Contexts characterized by weak formal local governance, but strong social capital and trust in local informal institutions, may be favorable to direct partnership with CBOs.

- 3 *Weak local governance frameworks*. Direct CBO partnership arrangements should be considered where local governance is weak, where the political environment does not support the expression of local choice, or where local governments lack the mandate or interest to promote community empowerment and are not inclusive of the poorest. If local governments are not responsive to community initiatives, then CBOs can help demonstrate the benefits of local participation and accountability as well as local revenue-earning potential, which, in the medium term, have the positive spillover effect of strengthening local governments.

- 3 **Strong social capital and social trust.** Communities that are relatively homogeneous, with equitable local power structures and a high level of social trust (usually most developed where there is a tradition of local cooperation, and where institutions enforce rights and agreements and reward trustworthy behavior), are likely to have a stronger capacity for collective action and thus be more effective in self-organizing and governing development projects.

9.5 Multisector and Single-Sector Instruments

CDD may be supported through single-sector or multisector instruments. An example of single-sector CDD is the Education Reform Project in El Salvador, where reform was achieved by transferring responsibility for school management to the community level, and where new school financing was done as part of a single-sector investment program. CDD may also be supported through multisector approaches, systematically applied to broader national policies and investments across sectors, as in the case of the comprehensive decentralization in Bolivia in the mid-1990s. In the Bolivia case, responsibilities and funds for a wide range of activities, encompassing numerous sectors, were transferred to municipal governments—which, where appropriate, further delegated responsibility to CBOs.

Both single-sector and multisector approaches to CDD have advantages, serving different objectives in different circumstances. While multisector programs have the potential to offer greater choice to communities and thus to enhance responsiveness to demand and local ownership, single-sector programs offer greater opportunities to build supply capacity to respond to community demand, innovate in specific sectors, and promote sector policies that ensure more sustainable operation of services. Multisector and single-sector instruments can be used in sequence or in parallel, but efforts should be made to ensure cohesion and general consistency between investment policies and the ways the instruments work with local institutions.

9.5.1 Benefits of multisector instruments

Improved responsiveness. By giving greater choice, a multisector approach has the potential to respond better to the priority demands of each community and thus make services more appropriate, targeted, and sustainable.

Efficiency and quality gains in outreach, social mobilization, and community capacity building. A sector approach offers the opportunity to share the cost of the outreach, social mobilization, and capacity-building support to communities. By sharing this cost across several sectors and thus potentially across a larger amount of investment, it becomes affordable to provide more intensive capacity-building support to CBOs over a significantly longer period, thus enhancing program quality and sustainability.

Enhanced impact on poverty reduction. The study *Poverty and Social Development in Peru 1994-1997* (World Bank 1999) showed that households that had access to basic services (that is, water, electricity, sanitation, and telephones) had a significantly higher growth rate of per capita consumption than households that did not have such access. The study also showed that the additional positive impact of each new service *increases* with the total number of services available, illustrating the importance of bundling access to these four types of services in this particular context. The analysis showed that adding a fourth service had about seven times additional impact than linking a second service to households.

9.5.2 Benefits of single-sector instruments

Greater attention to sector policy and sector institutional issues. CDD requires different policies and institutional arrangements in different sectors. For example, local governments can be expected to play a greater role in overseeing local transport infrastructure than in irrigation system management or agricultural marketing. Single-sector programs focus on a narrow range of issues and thus can frequently offer greater opportunity to experiment with alternative methods and approaches and demonstrate innovations with the aim of reforming national policies. Single-sector approaches are often more effective in building capacity and in promoting policies that ensure sustainable operation of the service.

Reduced complexity. Multisector programs encompass a broader range of issues and thus tend to be more complex to execute. The disappointing outcomes of previous multisectoral attempts (for example, the integrated rural development projects and integrated urban projects of the 1970s and 1980s) have led to some disenchantment with integrated approaches to poverty intervention. The rationale for integrated projects was that poor communities face a multitude of problems, and that poverty reduction efforts should attempt to address a range of these needs at once by providing a package of services to the poor at a relatively low cost. Results were not encouraging, however, because of complex delivery arrangements. Specific lessons from this experience are discussed in box 9.8.

9.6 Financing Options

Financing for CDD has traditionally been provided in the form of public sector grants that match community contributions. Programs have tended to be heavily subsidized by external donor support. Given the growing evidence that community-driven investments result in greater sustainability at substantially lower unit costs than centrally managed investments, CDD offers an effective means of improving the efficiency of public financing and ensuring that public resources reach more communities.

However, even in optimistic scenarios, the financing requirements to improve poor people's access to basic services far outstrip the availability of public funds. It is, therefore, important to finance as much of the poverty-reducing investments as possible through private and community investment and through credit. Similarly, it is key to keep grants focused on those things that cannot be financed through private and community investment or credit, and in those communities most in need of subsidies. A coherent financing strategy should involve a combination of alternative financing options—public sector grants, community contributions, credit, and private commercial investment—tailored to the specific context. Box 9.9 describes a coherent financing framework developed in Bolivia.

9.6.1 Leveraging private and community financing

One of the key challenges for scaling up CDD is to stretch scarce public financial resources over a greater number of communities and subprojects. This can be achieved by supplementing public financing with local and private finance sources, promoting market delivery of private goods, and retaining matching grants only for those goods and services that communities and the market will not sufficiently finance. Private and community financing can be mobilized in three ways: through community contributions, credit financing of community contributions, and private commercial investment. Distinct strategies and policies will need to be in place to mobilize the different sources of funds.

Box 9.8. Lessons from Integrated Rural Development Projects (IRDPs)

Supply-driven blueprints

- Analysis of IRDPs has shown that they were often supply-driven planning exercises, designed and implemented as blueprints with limited flexibility. Although planning was often delegated to the regional or provincial level, the beneficiaries were generally excluded from decisionmaking.
- Building rural roads and schools should have been much simpler than building large dams or ports, yet the latter were typically found to be more sustainable. One reason is that a fixed blueprint approach implemented by a centralized authority may be suitable for large infrastructure projects, but it is less suitable for projects spread over large areas with widely differing conditions and weak administrative capacity (World Bank 1995).

Lack of local participation

- IRDPs are believed to have failed partly as a result of the inability of central government agencies and donors to respond to local priorities and to take advantage of local skills. Fund allocations were driven by donors and central government, not by communities. IRDPs failed to generate local ownership or interest in maintaining assets, but instead created dependence on these funding sources.

Complexity of coordination across sectors

- The coordination of the required range of different sector practices necessary to achieve sustainable services in each sector was a logistical nightmare that led to failure. Experience has shown that coordination is hard to achieve at central levels and that it should instead be anchored at the community or local government level, provided that local actors are empowered to control resources.

Box 9.9. Establishing a Coherent Financing Framework: The Example of Bolivia

Bolivia has pioneered the use of CDD in many sectors. Instruments include the Social Investment Fund (FIS) to finance basic social infrastructure (health, education, water, sanitation), the Rural Development Fund (FDC) to finance productive activities and economic infrastructure, the Regional Development Fund (FNDR) to provide credit for larger urban and regional infrastructure projects, and a National Environmental Fund (FONAMA) to finance environmental initiatives. In December 1999, the Bolivian government merged the boards of directors of the various funds into one body, the Unified Board of Directors (DUF), which was mandated to improve coordination among programs and develop consistent rules for cofinancing investments with municipalities. The system establishes a consistent set of central government subsidy levels for different types of investments, which are a function of: (a) the level of priority the government assigns to the various sectors in its poverty reduction strategy (currently being developed based on the results of the second National Dialogue Process) and (b) the poverty level of the municipality. The system aims to provide incentives to local governments to invest in poverty-reducing investments, and thus plays an important role in alleviating poverty in Bolivia.

Community contributions

Contributions from beneficiaries and local actors toward initial startup costs and the recurrent operation and maintenance (O&M) costs of service can help reduce the burden on scarce public resources and improve sustainability of service. Mandatory contributions have been shown to be important in building community ownership, helping to ensure that cost- and service-level choices are not distorted by external grants, and ascertaining through willingness to pay that services respond to real demand—all of which contribute to greater sustainability. Possible mechanisms for collecting local contributions include

- upfront financial or in-kind contributions from the community for capital investment or setup costs;
- local fiscal revenues from increased property or betterment taxes to cover the cost of improving communal or public goods; and
- consumers' payment of tariffs or user fees for private goods and utility services (Kessides 1997).

User fees, in particular, have become important for the delivery of social services in many countries where the public sector has failed to provide adequate services. Some caution is warranted, however, when applying user fees to public goods, because of the risk of underprovision of services to poor people. Although private financing is critical for private or combined private and public goods and helps to stretch scarce public funds for these goods over as many communities as possible, it should not cloud the need for public financing of public goods. Examples from Cameroon and Vietnam illustrate this concept (see box 9.10).

Credit financing of community contributions

Access to credit can help resolve cash flow constraints that prevent poor individuals and community groups from being able to afford upfront investment or contributions. Poor people have demonstrated their capacity to use credit at commercial rates (see box 9.11).

Private commercial investment

Entrepreneurs are active investors in and providers of local services in the developing world. They do, in several sectors, provide essential services to poor consumers and compete with collective approaches. For example, small, independent entrepreneurs account for a large share of total investment in water supply provision in Latin America (see box 9.12) and represent a large part of service provision in Africa.

If subsidies are not carefully designed and allocated—for example, if programs in urban areas do not recognize the potential for small, independent water supply providers—there is a risk that community block grants offered in CDD programs may crowd out private investment in services that could reduce poverty. Entrepreneurs may not invest if they risk being displaced by community grants. This shows the importance of defining financial policies for each sector and providing clear rules for community investments. Ignoring the potential of commercial private provision in certain sectors and contexts could reduce the total amount of services provided to poor people and increase the burden on public finance.

Box 9.10. Experiences with User Fees in Cameroon and Vietnam

In Cameroon, government policy to increase community participation in managing and paying for primary health care led to improved quality of services and higher utilization, despite the introduction of user fees (this was true for all households, including the poorest). In Vietnam, however, the failure of the public sector to deliver local services led to heavy reliance on household payments. These payments were onerous and led to underprovision of basic services in poor areas. The conclusion is that the scope for private financing of mixed or private goods should not cloud the need for public financing of public goods.

9.6.2 Developing a financing strategy

The optimum financing strategy for each CDD program will vary, but should consider the affordability of subsidies and cost-recovery principles. This may encourage communities to search for private financing alternatives or mixed approaches that employ a complementary blend of public and private financing options.

In developing a financing strategy for CDD, one should consider the following principles:

- 3 *Set sector-specific minimum levels of community contribution and maximum grant levels.* Effective and undistorted local financing requires the establishment of sector-specific policies that set minimum levels of local contributions and maximum grant levels (based on poor people's capacity-to-pay constraints, fiscal constraints relating to the affordability of subsidies, and cost-recovery principles). It is critical to recognize that financial policies on minimum levels of local contributions need to vary from sector to sector, to capture the higher local financing potential of the more private types of local services.
- 3 *Eliminate subsidies for private goods and services* that could be provided on a fully commercial basis. This requires setting clear sector policies specifying that goods that can realistically be expected to be provided to poor people by the private sector on a commercially viable basis should be removed from the list of services CDD grants can finance.
- 3 *Support development of viable financial institutions,* allowing poor people to access a range of financial services essential to address their short-term cash flow constraints and to increase their capacity to make investments.
- 3 *Maintain an arm's length between the management of grant programs and institutions providing financial services,* so as not to erode the financial discipline of credit institutions.

9.7 Principles for Sustainability and Effectiveness

How can CDD be supported on a large scale so that many communities can each simultaneously drive investment decisions? Ten principles have been identified to guide policy formulation and program design, to enhance the effectiveness and sustainability of support to CDD. These principles, listed below, are discussed in detail in the following pages. They have emerged from an analysis of large-scale CDD programs that received positive evaluations and from consultations with leading practitioners.

Box 9.11. Extending Credit to Community Groups to Fund Service Provision: Genesis in Guatemala

The Genesis Empresarial Community Infrastructure Lending Program (CLIP) works in more than 200 low-income rural communities in Guatemala. It provides microfinance for infrastructure services such as rural electrification and water supply.

Communities wishing to have water supply or electricity must complete a self-funded feasibility study and deposit in a bank account their full upfront contribution before they can apply for a matching grant from the government. If full funding is confirmed, the community is then responsible for implementation and installation, and it contracts with a private firm to carry out the required work. Genesis provides two types of services to low-income rural communities: (a) it makes loans on commercial terms to small borrower groups (four-12 families) that live in the same community, to allow them to fund these mandatory contributions; and (b) it provides communities with a variety of technical assistance services (for example, technical advice on implementation of infrastructure, procedures for subsidy application, or information on alternative credit facilities).

Source: Ruster (1999).

Box 9.12. Small, Independent Entrepreneurs in the Water Sector

Throughout the developing world, a large proportion of urban poor people depend on small-scale entrepreneurs for water and sanitation services. These providers typically sustain themselves without government resources by offering services for which customers are willing to pay.

In Latin America, studies conducted by the Water and Sanitation Program (an international, broad-based partnership program) reveal that private independent operators provide a large share of water and sanitation services. Paraguay, Peru, Colombia, and Bolivia have burgeoning entrepreneurial water and sanitation services. More than one-third of the growth in urban water service in Paraguay over the past 20 years has been the result of independent operators. These enterprises operate and compete for customers in business niches alongside the public companies, with greater presence in slum and periurban areas that are underserved or left out by official utilities. They include both mobile providers (mostly tanker trucks) and fixed networks (piped delivery), and exist in a variety of enterprise forms and sizes, including enterprises managed by both individuals and communities.

Key findings of the studies show that:

- Small enterprise can be a part of the solution to the challenge of ensuring universal access to water supply by poor urban populations. Small enterprises bring high value in slum and periurban areas, where official utilities are most deficient.
- Independent operators do not necessarily charge more than public utilities. In fact, research shows that small network operators in several cities can compete favorably on price with the main utility, even though they get no subsidies—suggesting that returns to scale may not be as essential to all segments of the water service industry as often thought.
- Different government policies can promote or hinder the development of small enterprise in water supply. The presence of small private network operators varies sharply across cities (lots in Guatemala City and Asunción, almost none in Lima) in a way that seems related less to consumer demand than to the government's enforcement of exclusive utility licenses and other regulatory constraints. Policy changes can also explain changes in small enterprise activity over time. A periurban water entrepreneur may not feel threatened by a cash-strapped municipal utility with a track record of slow expansion, but will stop investing if the license is transferred to a concessionaire who has the means and incentives to expand rapidly.
- Policy development thus needs to be informed by the potential of this “other private sector” and to think twice before adopting proposals that ignore or stifle its potential.

Source: Solo (1998, 2001).

Principles for supporting sustainable and effective CDD:

1. Establish an enabling environment through relevant institutional and policy reform.
2. Make investments responsive to informed demand.
3. Build participatory mechanisms for community control and stakeholder involvement.
4. Ensure social and gender inclusion.
5. Invest in capacity building of CBOs.
6. Facilitate community access to information.
7. Develop simple rules and strong incentives, supported by monitoring and evaluation.
8. Maintain flexibility in design of arrangements.
9. Design for scaling up.
10. Invest in an exit strategy.

9.7.1 Establish an enabling environment through relevant institutional and policy reform

CDD involves more than strengthening CBOs and funding their projects—it also requires active measures to establish an appropriate enabling environment. Large programs of support to CDD will not be sustainable without the policies, laws, systems, and governance processes that encourage effective collaboration among local governments, central governments, civil society, service providers, and CBOs.

Specifically, such an environment should include (a) elected local governments that are responsive to constituents and are empowered to serve them (b) intergovernmental arrangements for fiscal flows to local governments and CBOs, (c) a conducive legal and regulatory framework that supports community action, and (d) clear sector policies with well-defined financing rules and defined roles and responsibilities of key players in each sector.

Ideally, an appropriate enabling environment should be in place before initiation of any CDD effort. This is not always possible. Where such conditions are not present, well-designed CDD programs have nevertheless succeeded by incorporating measures in the program design to address deficiencies in the surrounding environment. By empowering communities and generating upward pressure on governments and agencies, these programs can serve as catalysts to initiate the necessary policy and institutional reforms.

Responsive, decentralized local governments and intergovernmental frameworks

Regardless of the mode of CDD intervention (CBO partnerships with local government, private support organizations, central government, or central funds), local governments can be critical to the success and sustainability of CDD. Local governments are often well positioned to facilitate coordination across communities and allocate resources. When local governments interact with communities and informal groups in a participatory way, it is possible to achieve economies of scale in producing and providing goods and services that could not be achieved by CBOs operating independently. Furthermore, in many cases, local governments are needed to support operation and maintenance of services, and for continuing funding of community groups.

Local governments are generally more responsive and effective where there has been political, administrative, and fiscal decentralization.

- ***Political decentralization*** transfers policy and legislative powers from central governments to autonomous, lower-level assemblies and local councils that have been democratically elected by their constituencies.
- ***Administrative decentralization*** transfers planning and implementation responsibilities to locally situated civil servants and places these local civil servants under the jurisdiction of elected local governments.
- ***Fiscal decentralization*** accords substantial revenue and expenditure autonomy to local governments, including the power to levy taxes and user charges.

These three complementary forms of decentralization are important for creating an enabling environment for CDD.

Conducive legal and regulatory environment that supports community decisionmaking

CDD approaches are more sustainable where community decisionmaking and management of resources are supported by a legal and regulatory framework. This means that policies and enforceable regulations that support local initiatives must be in place, accompanied by laws that protect community rights. Specifically, CBOs should be able easily to obtain legal status and own assets, particularly natural resources. Systems may need to be developed to hold both local governments and CBOs accountable for their actions. Procurement and contract laws may need to be changed to enable direct resource transfer to CBOs. An overall freedom of information act—including legal protections for the press, free speech, and the right to organize—is also essential for effective community action. Finally, readily accessible dispute resolution mechanisms are required.

Key legal and regulatory policies that support CDD include

- the ability of CBOs to register for legal status and own assets;
- systems to hold local governments and CBOs accountable;
- ability of local governments to transfer resources directly to CBOs;
- freedom of press, and speech, and the right to organize; and
- easy access to dispute resolution mechanisms.

Sector policies and institutional frameworks

CDD requires different policies and institutional arrangements in different sectors. For example, electricity distribution or local water supply works tend to have greater revenue-earning potential than natural resource management or the provision of primary health and education. This difference in revenue-earning potential calls for different financial policies with respect to minimum amounts of community contributions and credit financing. Similarly, the relevance and competitiveness of CBOs relative to other institutions will vary across sectors. These differences call for sector-specific policies that define roles of players and financing rules. Depending on circumstances, sector-specific pilots and demonstration programs may be required to test and refine sector policies.

9.7.2 Make investments responsive to informed demand

Enabling communities to be involved in decisionmaking is not sufficient to achieve sustainable outcomes. Decisions need to be based on accurate information about the costs and benefits of various options, and communities need to have some of their own resources invested.

- *Informed, meaningful choice.* Communities and stakeholders should have access to sufficient information to weigh tradeoffs and make realistic choices from a range of options that meet their needs and fit local conditions, culture, values, and available operation and maintenance capacity. Alternative solutions should be designed to be affordable to the community—in terms of both up-front capital and long-term operating costs (Kessides 1997). Financing of specific projects should then be subject to a field-based ex ante evaluation against transparent criteria that are known in advance.
- *Community contributions to investment and recurrent costs.* Community cofinancing has been shown to be an important factor in building ownership and in helping to ensure that appropriate choices are made and investments are sustainable. People seem to make better choices when they have their own resources at stake and opting for a more expensive option implies a proportionally higher cost. Community contributions can also help leverage scarce public financing to benefit a larger number of communities. The level and type of community contribution should be appropriate to the sector and type of service.

9.7.3 Build participatory mechanisms for community control and stakeholder involvement

Communities that have ownership of a project or program are more likely to sustain outcomes. This implies providing inclusive community groups with knowledge, control, and authority over decisions and resources throughout all phases.

Programs should be designed to engage relevant stakeholders (government, local leaders, NGOs, civil society, the community) at the earliest opportunity and dynamically over time. Political will—garnered through broad-based support or “political champions” to drive necessary reforms—have played critical roles in the scaling up of many existing CDD programs. Broad stakeholder participation helps tap into local technical and financial resources in support of community initiatives. It also ensures that local knowledge and preferences are incorporated in the project design.

9.7.4 Ensure social and gender inclusion

CDD has the potential to increase the power of poor communities to negotiate with government, the private sector, and civil society. But to fulfill this potential, CDD needs to be responsive to the priorities of all poor groups. Communities are not homogeneous; thus CDD needs to be designed to be socially inclusive, giving voice and decisionmaking responsibility to women, the elderly, youth, religious and cultural minorities, indigenous and other ethnic groups, those with HIV/AIDS, and the disabled. When CDD does not pay attention to issues of social inclusion, groups of poor people may be excluded, investment choices may not reflect the true needs of the poor, and impacts may be significantly compromised. Typical examples of this are

- when cultural practices restrain women from attending or speaking at community meetings, often resulting in underinvestment in health services, literacy programs, water supply systems, and other interventions typically more valued by women;
- when the needs of those affected by HIV/AIDS fail to be identified as community priorities because of shame, denial, and social isolation; and
- when input and participation from indigenous groups are curtailed because program materials and planning discussions are in languages unfamiliar to them.

Various participatory methods can facilitate the inclusion of marginal groups. Because gender cuts across other forms of exclusion, specific gender-sensitive approaches are needed to ensure the participation of both women and men. When designing inclusive programs, it is important to understand existing community decisionmaking processes and the often complex local political and social context. It is also important not to think that a program that was once inclusive will remain so; issues of inclusion will require periodic attention throughout the life of any organization that is active at the community level.

Some general guidelines for building in social inclusion include

- identifying subgroups among the poor, especially those at risk of exclusion;
- structuring project rules and procedures to promote their participation;
- determining participatory techniques that can help facilitate their involvement (where existing systems of social organization are highly inequitable, new groups may need to be created to enable excluded groups to participate);
- ensuring that intermediaries (NGOs, local government, and so forth) working with communities have expertise in working with these groups and using participatory techniques;
- investigating how local institutions can be made more responsive and inclusive of these groups; and
- including specific indicators related to these groups in monitoring and evaluation systems, and involving all stakeholders in monitoring and evaluation;

Some general guidelines for building in gender inclusion are

- Determine gender roles, priorities, and access to resources in the relevant sector(s) in the proposed project area.
- Identify any barriers to gender-appropriate project implementation.
- Structure project rules and procedures to reduce barriers and facilitate participation.
- Ensure that intermediaries (NGOs, local government, and so forth) working with communities have expertise in gender issues.
- Provide necessary capacity building.
- Include gender-specific indicators in monitoring and evaluation systems. Collect disaggregated data and involve all stakeholders (men and women) in monitoring and evaluation.

Box 9.13 provides more details on commonly used participatory techniques to promote inclusiveness. Chapter 10, “Gender,” also includes a fuller discussion of ways to address gender issues in a Poverty Reduction Strategy. Many of those techniques can be implemented at the community level, to address both gender and social inclusion.

9.7.5 Invest in capacity building of CBOs

The lasting impact of CDD programs depends on the capacity of CBOs to provide services and goods on a sustainable basis, often in partnership with responsive formal institutions. Capacity building of CBOs, and strengthening linkages with formal institutions, is a critical area for investment.

The impact of CDD programs is directly related to the strength of the CBOs driving the process. Experience and studies have shown that those CBOs with clear lines of responsibility, open decision-making processes, and direct accountability to the community improve service provision, make more

Box 9.13. Participatory Tools and Techniques to Improve Inclusiveness

Many tools and techniques can be used to promote gender-balanced and inclusive CDD. Some of these options are outlined below. These techniques require facilitators well trained in their use. It takes time to use these methods, and this must be factored into project plans.

Participatory Rural Appraisal (PRA) (Chambers 1994a–c, 1997), now more commonly known as Participatory Learning and Action (PLA), is a set of tools and techniques for gathering, sharing, and analyzing information, and for planning and action. It is heavily based on visualization exercises that include impact diagrams, transects, timelines, community maps, matrices, ranking, and scoring. Analysis of difference is an extremely important underlying theme of PRA/PLA. PRA/PLA approaches have often been used for community-level planning and decisionmaking.

SARAR (Srinivasan 1990) is a participatory approach similar to PRA that emerged in India. It aims to empower people at the community level to initiate and implement their own development activities. It can strengthen local capacity to assess, plan, and evaluate interventions.

Beneficiary Assessment (BA) (Salmen 1995, 1999) is a systematic inquiry into people's values and behavior in relation to a planned or ongoing intervention. BA relies on participant observation and semi-structured conversational interviewing, and has become widely used in World Bank-financed interventions.

The **Methodology for Participatory Assessments** (Dayal, van Wijk, and Mukherjee 2000) provides a framework for measuring sustainability, along with participatory tools that promote inclusion of poor men and women in projects. It contains activities that can be adapted for project design, as well as indicators for monitoring and evaluation.

The **Social Capital Assessment Tool** is a methodology to assess social capital. It is a field-tested set of indicators and methodologies that measures levels of cognitive and structural social capital in communities designated for project implementation. The SCAT is useful for determining baseline levels of social capital and monitoring progress over the course of project implementation.

Social Assessment (World Bank 1996b; Cernea and Kudat 1997) is a process that provides an integrated and participatory framework for prioritizing, gathering, analyzing, and incorporating social information and participation in the design and delivery of Bank-assisted operations. It provides a more comprehensive way to identify stakeholder subgroups among the poor and assess what may need to be done to promote their full participation in a project. It usually includes some participatory exercises (PRA, SARAR, or BA), in addition to surveys, semi-structured interviews, key informant interviews, observation, and background reading.

Human Scale Development (Max-Neef 1991, 1992) brings together communities or groups for two days to analyze needs (for example, subsistence, protection, participation, leisure, identity, and so forth) that have constructive or destructive effects in their community. Communities develop medium- and long-term plans that are multidimensional.

effective use of resources, and are more sustainable (Ostrom, Schroeder, and Wynne 1993). CBOs need the managerial and technical skills required to undertake the necessary tasks. Training and capacity building of CBOs through “learning by doing” should thus be an important component of CDD programs. Where appropriate, capacity building should build on existing community strengths, including local organizations, traditional knowledge, and culture-based skills, so that existing capacity is strengthened rather than undermined. Because CBOs rely on volunteer efforts, which can dissipate at critical stages or can lack continuity, an important component of any capacity-building activity is to institutionalize the leadership function in CBOs.

Principles of capacity building also apply to NGOs, local governments, public sector institutions, and the private sector (see chapter 8, “Governance”).

9.7.6 Facilitate community access to information

Support to CDD is as much about facilitating flows of information among all groups in a community as it is about facilitating flows of funds. The lack of information is often the most significant limitation on CBOs' capacity to play a part in the development enterprise (Krishna 2000). Community organizations need information on market opportunities, on what support resources are available, and on how to use these resources productively and efficiently. A variety of media may be used to facilitate access to and stimulate flows of information. Information technology and the Internet, adapted to community needs, are playing a growing role in this process and can dramatically accelerate local learning and connections with a wide range of opportunities.

Types of information essential to CDD:

- 3 **Program contents and rules.** Communities should be well informed about the program content, conditions, and terms of CDD programs. Mass communication campaigns that provide wide public dissemination of this material help to place control in the hands of communities, thereby

mitigating risks of manipulation by politicians, government officials, contracting agencies, and local elites.

- 3 ***How to interact successfully with the government and the market.*** An essential component of any CDD program should be to provide community members with knowledge and information useful to conduct transactions with both the government and market organizations. Successful CDD programs serve to facilitate linkages between community groups and both government and markets.
- 3 ***Learn from experiences of other CBOs.*** Although CBOs learn by doing, the pace of learning and quality of implementation can be increased if CBOs learn from the good practices and innovations of other CBOs. Community-to-community exchanges provide opportunities to observe the potential benefits of participating in specific initiatives, and facilitate learning on how to replicate successful processes.
- 3 ***Technical information.*** CBOs require technical information and support, including accounting and managerial skills required for decisionmaking and implementation of activities.

9.7.7 Develop simple rules and strong incentives, supported by monitoring and evaluation

Experience indicates that sustainability and effectiveness of CDD are enhanced when processes are simple and transparent and when actors have strong and consistent incentives for performance. Regular monitoring and evaluation then provide the necessary information to ensure that the integrity of the system is maintained.

- 3 ***Simple rules.*** Community access to resources needs to be governed by simple rules that are easy for participating communities to interpret and apply. Clearly defined procedures, outlined and widely disseminated, help to avoid confusion and minimize administrative complexity. To maintain the credibility of the system, these rules should be monitored and transparently enforced.
- 3 ***Strong performance incentives.*** Key actors at all levels should be rewarded for performance through objective evaluation based on clear criteria. For example, payments to intermediaries—and the level of funding of intermediaries—could be tied to their performance against indicators of access to service and of CBO institutional sustainability.
- 3 ***Regular monitoring and evaluation.*** Systematic monitoring and evaluation of program processes and outcomes are critical to ensure that programs continue to grow and adapt to changing conditions. This is particularly important where programs are being scaled up—monitoring systems supply the necessary information and feedback to ensure that processes are appropriately modified to the needs of different localities and that potential bottlenecks or problems are identified and overcome early, before they become constraints to expansion. Programs should not just monitor physical and financial progress, but also consider quality of participatory processes and indicators of effectiveness of local institutions and economic impact of activities. Participatory monitoring and evaluation is also a useful tool for evaluating how the activities are seen and valued locally. The monitoring system used in the Northeast Brazil Rural Development Program is described in box 9.14.

9.7.8 Maintain flexibility in design of arrangements

Flexibility in design, often through piloting, is essential to allow systems to evolve and adapt better to local demand and capabilities. Flexible program planning and decentralized decisionmaking mechanisms, situated as close to the community as possible, facilitate quick response to change.

For example, in Zambia, the SRP is experimenting with more direct capacity building and integration of local governments in the project cycle. In both the Moldova and Albania Social Investment Funds, the initial pilot phase was extremely important to work out operational procedures before the program was offered nationwide.

As part of this learning process, direct feedback from the community on program performance is essential. Most successful programs routinely conduct beneficiary assessments, focus group interviews, client surveys, and other forms of evaluation that provide policymakers and program managers with information on whether investments reflect community priorities, the level and type of participation they have used, their sustainability, and their impacts.

9.7.9 Design for scaling up

Despite the many islands of success in CDD, most countries still have significant opportunities for scaling up CDD. To have a material impact on macroindicators of poverty, CDD needs to take place in many communities simultaneously. It is no longer acceptable to design CDD as small, nonreplicable, isolated interventions. However, the challenge of scaling up is not about bigger projects or bigger organizations, but rather about achieving sustainable results in a large number of communities.

Principles for scaling up CDD are for the most part the same principles for making CDD more sustainable. Arguably the most critical consideration for scaling up CDD, however, is *to ensure that approval and disbursement processes are as decentralized as possible*. This reduces delays, ensuring that program benefits can be accessed relatively quickly by local groups, so that program momentum is maintained and can respond rapidly to demands from additional communities.

Scaling up can be achieved either through networks among CBOs or through a larger number of small CBOs. In some contexts, as CBOs manage more programs over time, and as their capacity increases, a subset of CBOs may grow into larger networks, or unite more formally with public sector processes. In other contexts, CDD will remain driven by a growing number of small CBOs. Different models can be appropriate depending on context. Some tools for promoting scaling up are outlined below:

- **Cluster program activities.** Concentrating CDD activities into a nodal area or microregion can be an effective strategy for focusing inputs in the initial stages, rapidly demonstrating impacts, convincing neighboring groups of the benefits of collective action, gaining credibility, spreading information, and self-mobilizing demand for project activities. Over time, numerous nodes emerge, each acting as a demonstration project to motivate surrounding communities to participate in CDD.
- **Promote networks among CBOs.** As CDD programs grow, lateral communication between communities and grassroots organizations can become very valuable. For example, such networks can inform member groups about changes in procedures or policies that affect their work. They can also coordinate activities, support horizontal learning, accelerate the establishment of new CBOs, build social capital and relationships, and branch out into new strategic activities. Support for CBO networks can take the form of organizing meetings for clusters of CBOs in a particular region, establishing a newsletter or annual conference, providing training for key leaders, and so forth.

9.7.10 Invest in an exit strategy

An exit strategy for external support is a critical component of all CDD interventions. A clear distinction must be made between support services that are recurrent or permanent in nature and those that are temporary. For recurrent services, sustainability requires putting in place permanent institutional and financing arrangements at a cost that can be supported over the medium and long term. Temporary

Box 9.14. Monitoring Systems in Northeast Brazil

The Northeast Brazil Rural Development Program and Rural Poverty Alleviation Program have supported 30,000 community subprojects proposed by CBOs, with the assistance of NGOs and entrepreneurs. To monitor these subprojects, the State Technical Unit (STU) in the Ministry of Finance maintains information on location, community profile, project type, project cost, number of beneficiaries, technical assistance, and subproject status, which communities use to compile semi-annual reports and implementation reviews. The STU also systematically checks a sample of the community associations and municipalities that select subprojects. Information collected by the STU is highly transparent and made available through an interactive, Internet-based management information system to verify targeting effectiveness, cost-effectiveness of investments, history of project implementation, and monitoring reports for project supervision. A core, field-based team of three people provide ongoing monitoring and supervision of the project. In addition, an annual technical and financial review is conducted on 10 percent of subprojects by an independent auditor.

services, such as initial intensive capacity-building support to CBOs, may, however, not require sustainable financing or permanent institutional structures. For such temporary services, explicit exit strategies need to be designed and implemented.

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Chapter 10

Gender

*Michael Bamberger, Mark Blackden, Lucia Fort, and
Violeta Manoukian*

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10.1 Introduction

This chapter is designed to guide those involved in poverty reduction strategies (PRSs) at the country level in identifying and implementing policies and programs that will benefit both men and women and maximize potential benefits for poor families.

Poverty is experienced differently by men and women. A full understanding of the gender dimensions of poverty can significantly change the definition of priority policy and program interventions supported by the PRS. Evidence is growing that gender-sensitive development strategies contribute significantly to economic growth as well as to equity objectives by ensuring that all groups of the poor share in program benefits. Yet differences between men's and women's needs are often not fully recognized in poverty analysis and participatory planning and are frequently not taken into consideration in the selection and design of PRSs. It is essential, then, to integrate gender analysis into poverty diagnosis and to ensure that participatory consultation and planning processes are specifically designed to give voice to all sectors of society—women and men as well as different age, ethnic, and cultural groups. One of the messages of this chapter is that conventional poverty research and analysis tools can address most gender issues, and when this is not the case, the problem lies mainly in a lack of recognition by policymakers and planners of the importance of gender as a key development issue. If the right questions are asked, conventional poverty research tools can provide most of the gender-related answers; but, as is often the case, if the right questions are not asked, poverty analysis will frequently ignore many of the important gender differences in the experience of poverty.

The chapter contains the four sections described below, in addition to the introduction:

- Section 10.2, “Rationale for Integrating Gender into PRS Processes,” provides a rationale in terms of the associated potential efficiency and equity benefits and a framework that describes the gender issues and the different dimensions of poverty.
- Section 10.3, “Integrating Gender Analysis into Poverty Diagnosis,” gives an overview of how to integrate gender analysis techniques for data collection and analysis into the poverty diagnosis on which the PRS is built.
- Section 10.4, “Using a Gender-Informed Poverty Analysis in Defining Priority Public Actions in the PRS,” offers a step-by-step approach for using a poverty diagnosis to identify key gender gaps and issues that need to be addressed in the PRS, and policy and program interventions that could be used in addressing these issues, along with checklists to use in selecting and designing gender-inclusive PRS programs.
- Section 10.5, “Integrating Gender into the PRS Monitoring and Evaluation,” suggests how to monitor differences in the ways men and women are involved in selecting, designing, and implementing PRS programs, and how to evaluate gender differences in the outcomes and impacts of these programs.

Table 10.1 summarizes the contributions of gender analysis and how this will improve outcomes during poverty diagnosis, identification of public policy responses, and design of the M&E indicators. Figure 10.1 describes the nine steps required to ensure that gender issues are fully integrated into the processes of poverty diagnosis, selection of priority interventions, and M&E. These steps are discussed in more detail in sections 10.2, 10.3, and 10.4.

Stakeholder participation is an essential element in each stage of the PRS to ensure that the views of all groups are reflected in poverty diagnosis, selection of public actions, and evaluation of outcomes and impacts, and to ensure commitment of all groups to the PRS process. However, in many cultures where men are the main decisionmakers, women either may not be invited to participate in the PRS consultations or their ability to contribute to the selection of priority poverty reduction interventions may be limited. Consequently, it is essential to ensure that all consultations are specifically designed to ensure the full participation of both sexes. Technical note I.1 provides more detailed guidelines for engendering participation.

Table 10.1. Integrating Gender into the Poverty Reduction Strategy Paper (PRSP)

<i>The building blocks of the PRSP</i>	<i>Contribution of gender analysis to the PRSP</i>	<i>Tools and approaches for engendering the PRSP</i>	<i>Expected outcomes</i>
Knowledge of poverty—poverty diagnosis underpinning the PRSP. Support to broader and more inclusive understanding of poverty and its components: <ul style="list-style-type: none"> 3 Capability 3 Opportunity 3 Security 3 Empowerment. 	<ul style="list-style-type: none"> 3 Nature, causes, and impacts of poverty are different for men and for women. 3 Specification of gender-based inequality in access to and control of economic, human, and social assets. 3 Tradeoffs and externalities between household and market economy integrated into the poverty analysis. 	<ul style="list-style-type: none"> 3 Country gender assessment (CGA) to address the nature of gender-based differences and disparities. 3 Sex disaggregation of data and indicators. 3 Gender empowerment measure (GEM) and gender-related development index (GDI) (U.N. data). 3 Gender analysis of survey and other poverty data. 3 Time budget analysis. 3 Gender balance in teams preparing the PRSP. 	<ul style="list-style-type: none"> 3 Country's understanding of poverty is informed by these gender-based differences and is more complete. 3 Multiple dimensions of poverty and inequality are addressed, including focus on household needs and links to market economy. 3 Implications of gender-based asset inequality for poverty reduction and growth strategy are identified and addressed.
Participatory analysis and processes. Giving voice to poor women and men to capture the gendered nature of poverty and how it is experienced differently by men and by women.	<ul style="list-style-type: none"> 3 Gender-inclusive participatory analysis. 3 Understanding the gendered nature of poverty. 	<ul style="list-style-type: none"> 3 Gender-inclusive mapping of stakeholders. 3 Gender-inclusive consultations with the poor. 	<ul style="list-style-type: none"> 3 Different issues raised in poverty analysis: vulnerability, violence, social capital, time-poverty, insecurity. 3 Opportunity for women and men to articulate expressed needs and priorities.
Public policy responses and priority actions.	<ul style="list-style-type: none"> 3 Gender as a criterion for prioritizing poverty reduction measures. 3 Gender-aware growth strategy. 3 Investment in the household economy, with a focus on labor-saving technology, water and sanitation, intermediate means of transport (IMT). 	<ul style="list-style-type: none"> 3 Gender as a criterion to prioritize, sequence, and reorient spending priorities—specifically supports country efforts to establish effective public action priorities with maximum poverty impact. 3 Gender budget initiatives and local-level audit of budget impact by gender. 	<ul style="list-style-type: none"> 3 Gender understanding of poverty informs public policy and investment choices and priority setting. 3 Different needs identified, including those in the household economy. 3 A different poverty agenda.
Participatory analysis and process.	<ul style="list-style-type: none"> 3 Assurance that the priorities of poor men and women are the actions retained in the PRSP. 	<ul style="list-style-type: none"> 3 Structured participatory process to elicit different needs, constraints, and priorities of women and men and to ensure these are effectively prioritized. 	<ul style="list-style-type: none"> 3 Participation frames this different agenda and the priorities for retention in the PRSP. 3 Responsive to different needs, constraints, and priorities of men and women.
M&E—setting and tracking performance indicators.	<ul style="list-style-type: none"> 3 Prioritizing of indicators with higher gender impact. 3 Selecting indicators that capture cross-cutting benefits and externalities. 	<ul style="list-style-type: none"> 3 Gender-specific targets and performance criteria. 3 Focus on reducing tradeoffs in time allocation. 	<ul style="list-style-type: none"> 3 Performance indicators retained or prioritized to reflect the different needs and constraints of men and women.
Participatory process.	<ul style="list-style-type: none"> 3 Responsiveness to the poor via reprioritization of monitoring indicators. 	<ul style="list-style-type: none"> 3 Different emphasis given to specific indicators, such as water access, time saving. 	<ul style="list-style-type: none"> 3 Gender-inclusive participatory monitoring of indicators. 3 Tracking of gender-differentiated impact of the PRSP.

Integrating gender into poverty diagnosis

Step 1: Ensuring that gender is addressed across the four dimensions of poverty

Step 2: Documenting the experience of poverty for both women and men for all four dimensions

Step 3: Conducting gender analysis of the data gathered and integrating findings into poverty diagnosis

Using a gender-informed poverty analysis in defining priority public actions in the PRS

Step 4: Defining the policy implications of gender analysis in the country

Step 5: Identifying gender-responsive priorities for the PRS

Step 6: Integrating gender-responsive priorities into the policy responses and priority actions in the PRS

Integrating gender into monitoring and evaluation

Step 7: Integrating a gender dimension into outcome monitoring

Step 8: Integrating gender into the PRS evaluation strategy

Step 9: Building institutional capacity for gender-sensitive M&E

10.1.1 Lessons from the analysis of the first PRSPs and Interim PRSPs

Table 10.2 summarizes the findings of an analysis of how gender issues were addressed in a sample of the Interim PRSPs (I-PRSPs) and four PRSPs completed up to February 2001. A total of 15 I-PRSPs and four PRSPs were analyzed to rate how gender issues were addressed in the poverty diagnosis, the selection of priority public actions, the definition of targets and indicators for M&E, and the discussion of participatory consultation processes. Each area, and subcategories within each area, was rated according to whether there was (a) no reference to gender, (b) a general reference to gender issues, or (c) a more detailed discussion of gender issues.

Table 10.2. Treatment of Gender Issues in the First 15 I-PRSPs and Four PRSPs

<i>Stage of the PRSP</i>	No reference to gender issues	A brief reference to gender issues	More detailed discussion of gender
Poverty diagnosis	4	7	8
➤ Gender differences in the incidence of poverty	4	7	8
➤ Labor markets, income, and employment	7	7	5
➤ Health	5	9	5
➤ Education	4	9	6
Priority public actions	3	10	6
➤ Safety nets	11	6	2
➤ Labor markets, income, and employment	9	8	2
➤ Health	3	11	5
➤ Education	5	8	6
Indicators, targets, M&E	6	11	2
Participation and the consultation process	10	5	4

The analysis shows that for all areas fewer than one-half of the documents included a detailed discussion of gender issues: 42 percent for poverty diagnosis, 31 percent for selection of priority public actions, 10 percent for M&E, and 21 percent for participatory consultations. A significant proportion of the documents contained no reference at all to gender for many areas.

The analysis found that most of the PRSPs principally focus on 11 areas described below. The following list orders these priority sectors according to the extent to which gender issues were discussed.

More detailed discussion of gender	<ul style="list-style-type: none"> ➤ Education ➤ Health
Some discussion of gender	<ul style="list-style-type: none"> ➤ Labor markets, employment, and microenterprise development
Very limited discussion of gender	<ul style="list-style-type: none"> ➤ Agriculture, land rights, and rural development ➤ Environment and natural resource management ➤ Safety nets and food security ➤ Water supply and sanitation ➤ Violence
No discussion of gender	<ul style="list-style-type: none"> ➤ Urban development ➤ Transport ➤ Energy

The analysis shows that while most of the I-PRSPs and PRSPs identify gender issues as being important in at least some sectors, the discussion of how to integrate gender into the selection and design of priority public actions is quite limited, and there are many missed opportunities.

In view of these findings, the main objective of this chapter is to provide practical guidance on how to

- identify gender issues in the poverty diagnosis (section 10.2);
- translate the gender dimensions of poverty into the selection and design of priority public actions (section 10.3 and technical notes I.3 and I.4);
- design indicators to evaluate the effectiveness of the PRS programs in reaching and benefiting both women and men (section 10.4 and technical notes I.2 and I.3); and
- ensure that participatory consultations give voice to both women and men (technical note I.1).

10.2 Rationale for Integrating Gender into PRS Processes

Men and women experience poverty differently. As a result of their different constraints, options, incentives, and needs, women and men frequently have different priorities and are affected differently by many kinds of development interventions. For these reasons, a full understanding of the gender dimensions of poverty will significantly improve both the equity and efficiency of PRS efforts.

10.2.1 Attention to gender improves efficiency and equity

Although women and men share many of the burdens of poverty, in most societies women are also subject to socially imposed constraints that further limit their opportunities to improve their economic conditions or to enjoy equal access to public services and consumption goods (World Bank 2001). Poor women are also subject to heavy time burdens due to their need to balance the demands of their productive, social, reproduction, and community management roles. Poor men may also suffer the consequences of rapid economic and social change when, for example, they lose their traditional sources of livelihood or are forced to migrate to inhospitable cities or mines in search of employment. A recent report entitled *Engendering Development* (World Bank 2001) shows the ways in which gender inequality is costly to development. Poverty reduction strategies that are based on an understanding of the gendered

Box 10.1. Does Gender Matter in Sub-Saharan Africa? Evidence from Regional Case Studies

- Women's triple responsibility—child bearing and rearing, household management, and productive activities—and the increasing pressures on their time and energy—have significant consequences for human resource development, agricultural productivity, and environmental sustainability. Efforts to intensify agriculture, conserve natural resources, and reduce population growth will have to focus primarily on reducing women's severe time constraints; lowering barriers to women's access to land, credit, and extension advice; introducing technologies usable by and beneficial to women; and upgrading women's educational standards and skills (Cleaver and Schreiber 1994).
- The time spent by an average household on domestic transport activities ranges from 1,150 to 1,490 hours per year, which translates into between one hour and two hours 20 minutes daily for the average adult female. Water, firewood, and crops for grinding are transported predominantly by women on foot, normally being carried on the head (Malmberg-Calvo 1994).
- Recognition that gender is a key dimension of economic structure in SSA, and that economic capacities and incentives are strongly differentiated by gender, has led to effective integration of gender concerns into designing and implementing economic reform measures (*Gender Issues at the SPA*. Synthesis Report, Ottawa, Canada, October 1–3, 1995).
- Macroeconomic- and microeconomic-level analyses of the links between gender inequality and growth reveal that gender-based asset inequality acts as a constraint to growth and poverty reduction in SSA. Gender inequality in education and in employment is estimated to have reduced SSA's per capita growth in the 1960–92 period by 0.8 percent per year (Blackden and Bhanu 1999).
- Female education is a critical pathway to promote social and economic development. Evidence from SSA indicates that although female participation has improved, girls' and women's access to education remains limited. Unless urgent action is taken to enhance female education, the ambitious goals set for education across the region will remain out of reach (Odaga and Heneveld 1995).
- A child's health is affected much more by the mother's than the father's schooling. Data for 13 African countries between 1975 and 1985 show that a 10 percent increase in female literacy rates reduced child mortality by 10 percent, whereas changes in male literacy had little influence (World Bank 1993b). Maternal mortality rates in Africa are higher than anywhere else in the world, and adolescent pregnancy rates are among the highest in the world. By age 18, more than 40 percent of girls give birth in Côte d'Ivoire, Nigeria, and Mauritania (World Bank 1994).
- In Nigeria, female farmers are often among the voiceless, particularly in influencing agricultural policies and projects. The Women in Agriculture program has created much greater awareness among policymakers about the needs of women farmers, led to a rise in the number of women extension agents, and resulted in a significant increase in the percentage of women reached by the extension system (World Bank 1996).

nature of poverty will enhance both the efficiency and equity of PRS impacts. Box 10.1 documents the importance of gender for the promotion of economic and social development in Africa.

Improving efficiency of the PRS

Rigid gender roles are often barriers to poverty reduction and economic growth. There is no doubt that both women's and men's contributions to household income and production are crucially needed for reducing poverty (see box 10.2). Many families rely on women's production to keep them out of poverty or to keep them from falling deeper into poverty. In their efforts to increase family welfare, women face different constraints than men. For example:

- 3 Women are often engaged in low-productivity agricultural tasks. They typically have much less access to agricultural extension than men, even though women are more likely than men to adopt the techniques introduced by agricultural extension agents.
- 3 Female-owned enterprises are often undercapitalized. Female entrepreneurs often cannot access credit because they do not have collateral, such as titles to land. Landlessness is also a problem among men who find themselves forced out of agriculture.
- 3 Where women farm their own plots, as in many parts of Sub-Saharan Africa (SSA), the absence of secure land rights can reduce their agricultural productivity because they do not benefit from long-term improvements to land.
- 3 The beneficial impacts of a woman's education on the family—in terms of fertility, decisions on the education and health of her children, and her future earnings—are well known. Yet in many countries, more girls than boys are still not attending school. In some cultures, boys are kept out of school to work on the family farm or care for animals or because the families are too poor to pay for their schooling. This issue is now emerging in projects that are providing scholarships to encourage poor girls, and sometimes boys, to stay in school.
- 3 At the macroeconomic level, evidence suggests that absolute and relative levels of female education affect economic growth. Cross-country evidence on the impact of gender inequalities in education indicates that if countries in SSA, South Asia, and the Middle East and North Africa closed their gender gaps in average years of schooling at the rate achieved by East Asia from 1960 to 1990, gross national product (GNP) per capita in those regions could have grown by about one-half percentage point higher per year—equivalent to 30 to 45 percent increases. Recent evidence from India indicates that female literacy is also a key determinant of the extent to which growth reduces poverty (Klasen 1999).
- 3 Where women work for wages, they generally earn less than men, even when women and men have the same education and work experience. Labor market segmentation frequently limits women to lower-paid occupations.
- 3 Women's rights and participation in public life are associated with lower levels of corruption in business and government. Cross-country findings from several studies show that in countries where gender equality in public life is higher, the level of corruption is lower (Dollar and Gatti 1999; Swamy and others 1999). This holds true even when comparing countries with the same civil liberties, education, legal institutions, and gross domestic product (GDP).
- 3 Evidence is growing that gender disparities are not only inequitable but also lead to economically inefficient outcomes, resulting in slower growth and lower levels of welfare—that is, higher poverty. Increasing evidence shows that growth and social development significantly determine poverty outcomes.

Box 10.2. Mongolia: Women Prevent the Poverty of Ultra-Poor Households from Worsening

In post-transition Mongolia, if women's contributions were ignored, the rural Gini and households' poverty gap ratios would be 0.63 and 32 percent, respectively. When women's income is counted, however, the ratios drop to 0.49 and 29 percent. This means that for ultra-poor households, women are crucial to preventing their poverty from worsening. Strategies that consider how best to enhance women's economic contribution can, in turn, enhance their potential for reducing household poverty.

Source: Subbarao and Ezemenari (1995).

- Macroeconomic-level studies also confirm that better-educated women contribute to the welfare of the next generation by reducing infant and child mortality, lowering fertility, and improving the nutritional status of children (Hill and King 1995; Klasen 1999; Smith and Haddad 2000).
- Additional evidence points to the significant negative impact of gender inequality in secondary education on economic growth: a 1 percentage point increase in the share of women in secondary school education is associated with a 0.3 percentage point increase in per capita income (Dollar and Gatti 1999).

Improving equity of the PRS

Different members of a household experience many aspects of poverty differently. Average household, or per capita, estimates of consumption and expenditure can underestimate poverty among certain household members, particularly women and girls.

Perhaps the most dramatic example of gender inequality is the excessively high female mortality rates in some countries.

- Evidence from many countries indicates that when both household and market work are considered, women work considerably longer hours than men. This gap is particularly pronounced in poor households.
- Women continue to be vastly underrepresented in political decisionmaking at the national and local levels. With few exceptions, progress has been minimal in most industrial and developing countries. At the same time, poor men, particularly in rural areas, may also have a limited voice.
- Evidence from many countries shows that disparities between women's and men's access to, and control over, resources are associated with systematically lower access to health and education facilities for women and less than optimal participation in economic activities (Elson 1991b; Anker 1998).

10.2.2 Engendering the poverty analysis framework

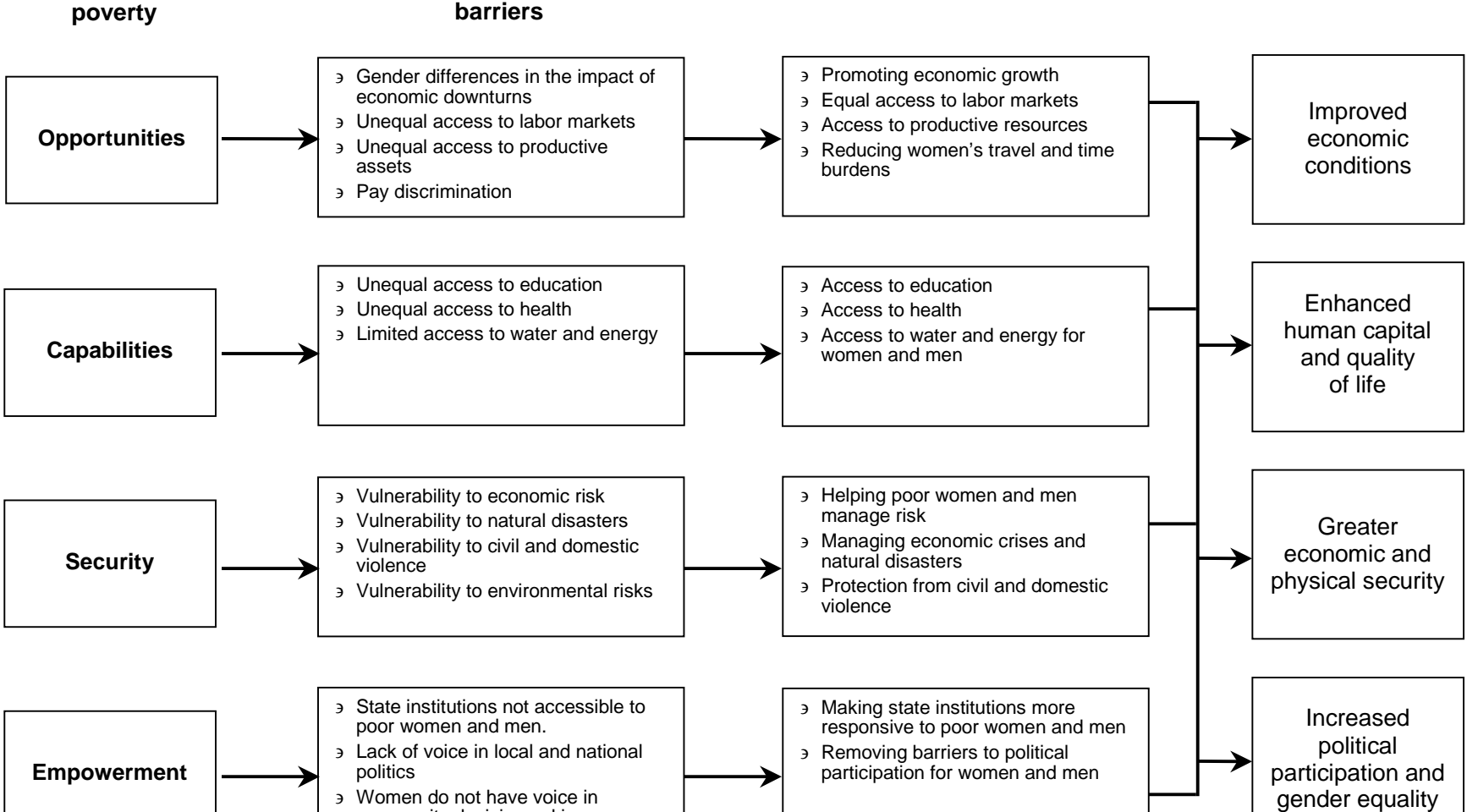
The *World Development Report 2000/2001: Attacking Poverty* (World Bank 2000b), *Engendering Development* (World Bank 2001), and the work of authors such as Sen (1993) identify four main dimensions of poverty:

- **Opportunities.** Lack of access to labor markets and employment opportunities and to productive resources, constraints on mobility, and, particularly in the case of women, time burdens resulting from the need to combine domestic duties, productive activities, and management of community resources.
- **Capabilities.** Lack of access to public services such as education and health.
- **Security.** Vulnerability to economic risks and to civil and domestic violence.
- **Empowerment.** Being without voice and without power at the household, community, and national levels.

A PRS involves policies and program interventions to help the poor to overcome each of these dimensions. Figure 10.2 provides an overview of the constraints, areas of intervention, and benefits for each of these four dimensions.

Opportunities

Gender inequalities in access to credit and financial services are often exacerbated by women's limited ownership of land. In much of Sub-Saharan Africa, women obtain land rights through marriage, and these rights are secure only as long as the marriage remains intact (Due and Gladwin 1991). Recent household surveys from Bangladesh, Indonesia, Ethiopia, and South Africa show that women have substantially fewer assets than men (Quisumbing and Maluccio 1999). As a result, they do not have the collateral necessary to secure loans. It is estimated that in Africa, where as many women as men are



Box 10.3. Gender and the Labor Market

In many parts of the world the increasing participation of women in the labor force is driving employment trends. The labor force activity rates of males are declining while those of females are increasing. The structural transformation of economies, demographic change, informalization, and new notions of working time have redefined working and living conditions for both women and men. They have also modified gender roles in the labor market. While both men and women are affected by these trends, women are more vulnerable. The result is occupational segregation, with women finding themselves in the least-protected sectors of the economy. The growth of female-headed households due to migration, divorce, and abandonment also means that the insecurity of women's employment directly affects children and other dependents. Gender inequality is often built into labor institutions. Social security systems, for instance, frequently assume that the breadwinner of the family is male. Labor market segmentation along gender lines generates structural wage differences between men and women that are difficult to address through conventional labor market policy (ILO 1999).

The 1998 International Labour Organization (ILO) *Declaration on Fundamental Principles and Rights at Work* obliges member states to promote and realize core standards, including (a) the freedom of association, (b) the elimination of all forms of forced labor, (c) the effective abolition of child labor, and (d) the elimination of discrimination in employment and occupation.

farmers, women receive less than 10 percent of all credit going to small farmers and 1 percent of the total credit given to the agricultural sector. When female entrepreneurs do obtain credit, average loan sizes tend to be smaller than for males (UNDP 1995). Saito, Mekonnen, and Spurling (1994) reveal that, compared to men, women generally have limited social and business networks of the type that facilitate access to financial services.

There is also significant evidence of inefficient allocations of productive inputs within households by gender, which have significant costs to household output and income (Jones 1986; Udry 1996). Similarly, there is evidence that female enterprises are undercapitalized and that there are high returns from directing credit toward those enterprises.

Capabilities

Differential access to essential public services such as education and health may be determined by gender differences. For example, both by being stereotyped in school curricula or development assistance projects and because of family and community socialization, girls and women from poor households run a higher risk of dropping out of school or being trained for tasks that yield lower returns, such as sewing or basket weaving. Women in SSA have experienced the lowest average annual growth in total years of schooling between 1969 and 1990 of all regions, raising the average years of schooling of the adult female population over this period by a mere 1.2 years. Although women have different health needs and priorities than those of men, such as reproductive health or HIV/AIDS prevention needs, these services are not as accessible to them. This is seen in the enormous gender differential in Africa's sexual and reproductive burden of disease. Data for Uganda, for example, indicate that AIDS infection is six times greater among young girls aged 15–19 compared with boys of the same age (World Bank 2000b).

Security

Insecurity is an integral part of the experience of poverty. Gender-related security risks include economic and social changes such as death, divorce, or desertion of a spouse that erode the household as a social unit; the consequences of community and domestic violence and conflict; physical and cultural isolation and marginalization; ambiguity in legal status and rights; impact of environmental degradation; and precarious access to water. Participatory Poverty Assessments (PPAs) point to female-headed households, especially those with children who are too young to work or care for themselves, as being particularly vulnerable. PPAs also show that women and men respond differently to social, political, and economic dislocations. When men are no longer able to make an important economic contribution to the household budget, the stage is set for family conflict. Although domestic violence is a leading cause of injury and death to women worldwide, it is often ignored or even condoned by the state and society on the grounds that it is a private matter.

The PPA for South Africa mentions also that poor women need to undertake a number of dangerous and risky occupations, including prostitution. In many countries, women also complain of sexual harassment from co-workers and managers. Although many women organize, take action, and protest

against harassment, most poor women report remaining silent or using indirect ways of asserting or protecting themselves (Narayan and others 2000). Women in many countries are treated as legal minors in ownership of land and property.

Empowerment

A sense of not having a voice and power is another key dimension of poverty. Poor persons, especially women, are frequently excluded from social and political processes that affect their lives. These processes lack transparency, and the decisionmakers are not accountable to them. With few exceptions, poor women, even more than poor men, do not participate in decisionmaking in matters that directly affect their lives, whether these relate to public institutions or to civil society organizations. This pattern is also repeated in the household. Gender inequity and powerlessness are learned from early childhood in households around the world.

10.2.3 Engendering the participatory processes

As described in chapter 7, “Participation,” it is essential to use participatory processes in the design, implementation, and monitoring of the PRS. Although the need for beneficiary consultations is now widely acknowledged and is a required part of the preparation of every PRSP, experience has shown that socially and economically weak and voiceless groups will frequently be excluded from the consultation process. In societies where community councils and local political bodies are largely run by men, or where men are considered to speak for the whole family, it will frequently be the case that most women will have little involvement in the selection, design, or management of projects. It should be emphasized, of course, that other vulnerable and voiceless groups such as ethnic or religious minorities, the landless, the poorest households, or people of either sex under a certain age may also be excluded.

Technical note I.1 builds on the methodology described in chapter 7 to present guidelines for ensuring that both women and men are fully represented in PRS participatory processes. Some of the first steps for integrating gender into the participation and consultation processes include

- Identifying the key stakeholders and ensuring all will be invited to participate in the consultations. Identifying all of these subgroups early in the process will ensure that the PRS will be as inclusive as possible.
- Consulting representatives of these identified subgroups, including both women and men, when planning any type of participatory event to determine the times and locations most convenient for their attendance.
- Assessing the current scope, level, and quality of participation. To what extent are groups representing both women and men involved, and what are the factors limiting the fuller participation of any groups that are underrepresented?
- Identifying and putting in place measures to strengthen the capacity to participate of weak and vulnerable groups (including but not limited to women). Make appropriate budget allocations to cover travel expenses and some form of financial compensation for participants, particularly women, who may need assistance to participate.
- Assessing the existing capacity of government and other agencies to organize participatory processes. Where necessary, rapid capacity-building activities such as training, study tours, or technical assistance may be required to ensure that the capacity exists to manage the participatory processes.

Readers may also wish to review chapter 8, “Governance,” chapter 9, “Community-Driven Development,” and chapter 11, “Environment,” which discuss participatory issues from these different perspectives.

10.3 Integrating Gender Analysis into Poverty Diagnosis

This section describes three basic steps along a critical path to integrate gender into the poverty diagnostic stage of the PRS:

Step 1

Ensuring that gender is addressed across the four dimensions of poverty: opportunities, capabilities, security, and empowerment.

Step 2

For each of these dimensions, documenting the experiences of poverty.

Step 3

Undertaking gender analysis of the data gathered and integrating findings into the country's poverty diagnosis.

The three steps for integrating gender into the PRS (see shaded boxes in figure 10.3) aim to improve the quality of poverty analysis by examining the differences in how poverty affects men and women. The section also discusses the need to strengthen the gender database for future stages of the PRS (section 10.3.4) and recommended actions for PRS managers (section 10.3.5).

10.3.1 Addressing different dimensions of gender and poverty

The gender and poverty diagnosis should be structured around the four dimensions of poverty (opportunities, capabilities, security, and empowerment) described in section 10.2.2. This analysis will often require the use of different data collection methods to produce key indicators on the four dimensions of poverty. The indicators and data collection methods are described in table 10.3 (see technical note I.2 for further discussion of the indicators and chapter 1, “Poverty Measurement and Analysis,” for more information on data collection tools).

- **Opportunities** indicators reveal gender differences in access to the productive resources and opportunities needed to escape from poverty and to promote economic growth.
- **Capabilities** indicators can identify current gender gaps and monitor changes in the basic welfare indicators for women and men over time (see chapter 3, “Monitoring and Evaluation,” and technical note I.1). Some opportunities and capabilities indicators, such as employment and health and nutrition status, can change fairly rapidly and, therefore, can be used to measure the short-term impacts of interventions such as improved access to schools or health. Others, such as life expectancy, change much more slowly and are used to assess longer-term structural changes.
- **Security** indicators identify vulnerability to economic shocks, natural disasters, and violence. Although the *World Development Report 2000/2001* focuses mainly on economic risks and economic vulnerability, domestic, public, and conflict-related violence are also a major security concern for women.
- **Empowerment** indicators measure gender differences in participation and in access to decision-making in the political process at the national and local levels and in control over resources within the community and the household.

10.3.2 Documenting the gendered experiences of poverty

Special data collection issues for gender analysis

As indicated in section 10.5.2 below, all methods of data collection, whether quantitative or qualitative, participatory or nonparticipatory, can be gender sensitive—or not—depending on how they are applied. When gender issues are not addressed in, for example, poverty diagnostics, this is likely to be due as much to lack of awareness of the importance of gender as to the limitations of the data collection methods per se. However, table 10.2 above shows that gender issues are not adequately addressed in the majority of the PRSP poverty diagnoses. The same limited treatment of gender is found in most World Bank project design studies and many similar types of project planning and poverty research. Why is this? Table 10.4 suggests that data collection and analysis methods can be ranked along a continuum in terms of their adequacy for addressing gender issues.

At one extreme are the many studies using standard household survey instruments and sampling methods that include a full analysis of gender issues. Examples include the extensive literature on intrahousehold resource allocation (Quisumbing and Maluccio 1999), the differential gender impacts of

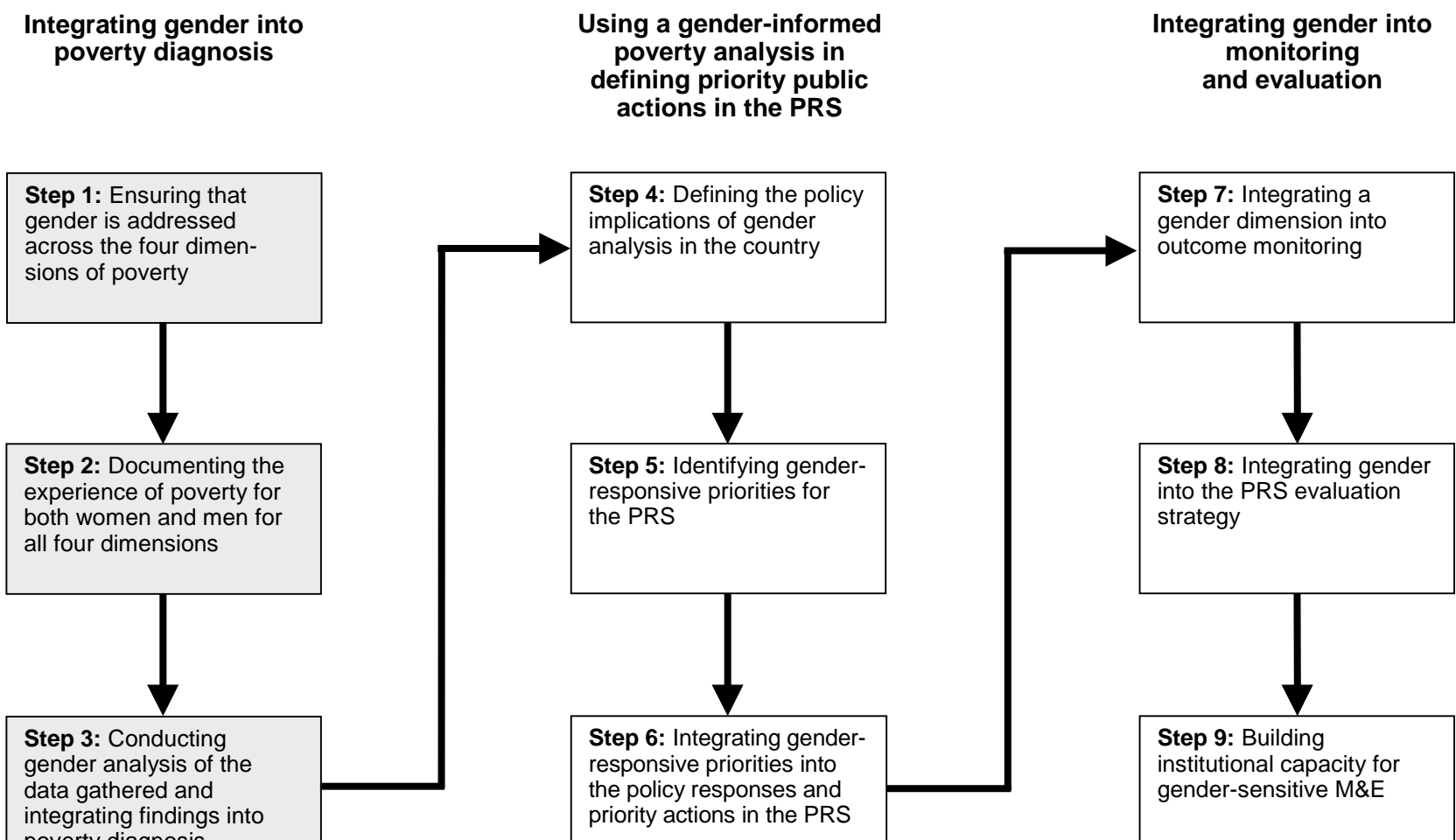


Table 10.3. Indicators of the Dimensions of Poverty and Their Measurement

<i>Dimension of poverty</i>	<i>Indicators</i>	<i>Measurement</i>
Opportunities	<ul style="list-style-type: none"> ⌢ Time budgets and time poverty ⌢ Employment and labor force participation ⌢ Capital and assets 	<ul style="list-style-type: none"> ⌢ Household surveys, focus groups, and direct observation ⌢ Household and labor market surveys, household surveys, records of credit, and finance institutions
Capabilities	<ul style="list-style-type: none"> ⌢ Demographic indicators (infant mortality, life expectancy, and so forth) ⌢ Education ⌢ Health and nutrition ⌢ Qualitative indicators of capabilities (culture, freedom, and autonomy) 	<ul style="list-style-type: none"> ⌢ Household and health surveys, clinic records, anthropometric studies, national and sectoral statistical records ⌢ Household surveys, school records ⌢ Household surveys, clinic records, participant observation, focus groups ⌢ Focus groups, participant observation, national quality of life surveys
Security	<ul style="list-style-type: none"> ⌢ Economic vulnerability ⌢ Exposure to violence ⌢ Social capital 	<ul style="list-style-type: none"> ⌢ Household surveys, focus groups, Participatory Rural Appraisal (PRA) techniques such as timelines, and periods of stress, diaries ⌢ Focus groups, participant observation, case studies ⌢ Household surveys, interhousehold transfer studies
Empowerment	<ul style="list-style-type: none"> ⌢ Political empowerment ⌢ Control over household resources 	<ul style="list-style-type: none"> ⌢ Voting records, key informants, participant observation ⌢ Household surveys, case studies, participant observation, key informants, focus groups

microcredit programs (Khandker 1998), and the impacts of female labor force participation on time use (Newman 2001).








Although, as indicated above, excellent studies of intrahousehold resource allocation have been based on household surveys, these surveys frequently have difficulties in analyzing how resources such as food, money, and productive resources are allocated and controlled within the household. Consequently, surveys may underestimate the level of malnutrition, lack of access to medical services, and so forth among girls and women that result from customary patterns determining resource allocation.

There are also many studies where the information is available to conduct gender analysis, but this was not done because gender was not considered an important issue by the researchers. A common example is the many cases in which sex-disaggregated data are available on, for example, school enrollment, labor force participation, and successful applications for loans. There are many other instances where sex-disaggregated data could have been used but was not, presumably because the researchers did not consider gender an important issue. Common examples in this category include transport user studies and the sexual division of labor at different stages of the agricultural production cycle.

There are other cases where gender-relevant questions are included in the survey, but the information is not collected from the right person or in the right way. In some cases, information about the needs, attitudes, time use, or consumption patterns of all household members is obtained from a single interview, usually with the so-called (usually male) household head. He will often not have the full information or may claim that all household members have the same opinion or priorities as himself. Men often underestimate, or undervalue, the multiple tasks that their wives must carry out and, consequently, put a low value on projects to save time and energy. In other cases, when women are asked about sensitive topics in the presence of other household members, they are unlikely to respond honestly and openly.

Another common situation is where the study should include (but does not) not only sex-disaggregated data on questions applicable to both sexes, but also additional questions reflecting the particular concerns of one sex or the other. For example, questions addressed to women might refer to domestic and other forms of violence, time burdens, and the problems of balancing multiple social and

Table 10.4. The Adequacy of Conventional Household Surveys for Gender Analysis

Adequacy for gender analysis	The extent to which gender issues are addressed in conventional household surveys and data collection methods	Examples
 Fully adequate	1. Gender issues are fully analyzed.	<ul style="list-style-type: none"> ➤ Analysis of intrahousehold resource allocation (Quisumbing and Maluccio 1999). ➤ Impact of employment in cut-flower industry on household division of domestic chores (Newman 2001).
 Fully adequate	2. Information is available, but gender issues have not been addressed; or sex-disaggregated data have been collected but not analyzed.	<ul style="list-style-type: none"> ➤ Housing studies often do not examine differences in housing demand for male- and female-headed households. ➤ Data on school enrollment, labor force participation, and use of health facilities are often collected on each household member, but sex-disaggregated data are not presented in analysis.
 Fully adequate	3. Sex-disaggregated data could have been included in the survey but was not.	Data on consumption, employment, or household travel could have been collected on each household member, but this was not done.
 Fully adequate	4. The survey instrument asks the right questions, but the information is only provided by one person (usually the "household head").	Information on needs, expenditures, and time budgets is often provided for all household members by only one person. The respondent (usually the husband) cannot respond correctly for all household members.
 Fully adequate	5. The data collection method is adequate, but additional gender-relevant questions should be included.	Surveys on education or labor force participation often do not include information on time use or cultural constraints on girls' or women's participation.
 Inadequate	6. The survey instrument is adequate, but certain people must be interviewed without the presence of other household members or neighbors.	Both women and men may be unwilling to respond to sensitive questions on topics such as domestic violence. In addition, women may not speak freely about their development priorities in the presence of male family members. Similarly, men may not give complete information on their earnings in the presence of their wives.
 Inadequate	7. The instrument and data collection methods are not appropriate for the purposes of the study.	Information on domestic violence cannot usually be obtained from household surveys because discussion of it is taboo in many cultures. Separate focus groups with women and men, interviews with a key informant, or participant observation may be required.

economic roles. Similarly, questions addressed to men might include the psychological, social, and economic stresses caused by unemployment, and the changing structure of the labor market.

Finally, there are cases where the household survey is not appropriate for collecting gender-relevant information. Examples include information on sensitive questions such as domestic violence and (in some cultures) contraceptive usage, or where the purpose is to observe household or group behavior when people may be unaware of, or unwilling to discuss, interpersonal behavior or leadership styles.

Some of the key gender issues to be addressed in data collection and analysis at the poverty diagnostic stage include

- Ensuring that household surveys collect information on the general social and economic conditions of the household combined with information on the constraints, opportunities, incentives, and needs of individual household members. This will often require administering special modules directly to subsamples of household members.
- Ensuring that both women and men are interviewed in a situation in which they are able to speak freely. This will often require interviewing women without male household members present, which can be quite difficult to arrange in many cultures.
- Ensuring that interview teams include both men and women and also interviewers who are fluent in the local language (men are often more fluent than women in the national language).

- 3 Combining quantitative and qualitative methods at the individual and household level with data collection and analysis at the group and community levels.
- 3 Combining quantitative and qualitative definitions of poverty to address the differences in the way that men and women experience and perceive poverty.

Box 10.4 presents examples of gender-sensitive indicators used in the Cambodia I-PRSP.

Selecting the right mix of data collection methods

Table 10.5 summarizes a range of data collection methods that can be used to address the gender dimensions of poverty. No single method can cover all of the issues, and it is important to combine quantitative and qualitative methods. The methodologies chosen should seek to ensure the participation of poor women and men in all stages of the PRS. In selecting a particular combination of methods, researchers need to consider how the information is to be used and by whom, as well as timing and budget implications. Table 10.5 also indicates the likely additional cost and time required to engender data collection with each method. In many cases, the information can be obtained simply by ensuring that it is requested on both men and women, but in other cases, it is necessary to conduct follow-up interviews with individual household members or to use special data collection methods such as focus groups or PRA methods. Additional data collection not only obtains information on women but also improves the understanding of the needs and attitudes of all sectors of the target population and all stakeholder groups.

The incremental costs and time will vary considerably between countries and between rural and urban areas, but the following are some possible methods and processes.

- 3 Administration of special modules to subsamples of household members. If the modules are relatively short, and if women and other household members can be interviewed immediately following the household survey, the additional cost may be quite small. However, the cost will increase if follow-up interviews require the interviewers to return to the household. Even then, if individual interviews are conducted only on a subsample, the additional cost may be only 10–15 percent of the total interview cost, and an even smaller proportion of the total survey cost (as there will be little impact on the cost of data analysis).
- 3 Depending on the purposes of the study, it will often be necessary to conduct interviews with at least six to eight focus groups (to ensure that all important population groups are covered). Each focus group may take one day to organize and conduct the interview and perhaps another day to analyze and write up. The cost is likely to be around four researcher days per focus group plus incidental costs such as travel, renting space (if required), and provision of refreshments and, possibly, payment to the respondents.
- 3 The cost of a PRA can vary considerably, but a good estimate is to assume that a two-person research team, plus a team of two or three interviewers, would be required for one week (plus travel time) for data collection per community, plus an additional five days for analysis and report writing, making a total of approximately four person-weeks per community.

Box 10.4. Indicators of Women's Insecurity and Vulnerability in the Cambodia I-PRSP

The following gender-responsive indicators of insecurity and vulnerability were included in the Cambodia I-PRSP:

- 3 Unemployment rates were higher for women.
- 3 A high proportion of women worked as unpaid family workers.
- 3 There was no difference in poverty rates between male- and female-headed households. However, female-headed households were more likely to transmit poverty to the next generation.
- 3 Women experienced poverty more intensely because of their multiple domestic and production tasks.
- 3 There was a high proportion of women and children among the conflict-displaced population.
- 3 The report includes several references to cultural and economic sex discrimination.
- 3 There are important gender differences in exposure to, and impacts of, HIV/AIDS.

Source: Cambodia I-PRSP, January 18, 2001.

Available at <http://poverty.worldbank.org/files/Cambodia%20iprsp.pdf>

Household surveys	Household composition and household welfare.	Sex disaggregated questions can be included at no cost. However, applying submodules to individual household members increases interview time and often requires a second visit.
Attitude studies	Analysis of attitudes toward different organizations or prioritization of needs and projects.	These can be included in the household survey, but they require additional time to administer.
Willingness and capacity to pay	Estimates of how much households are currently paying for services such as health, water, education, and transport and assessment of their willingness and capacity to pay for improved services for different household members (boys versus girls, and so forth).	Questions can be included in the household survey, but it is essential to interview both women and men. Qualitative methods such as direct observation may be required to check the reliability of the information.
Time use studies	Estimating the time women and men spend on collecting water and fuel, traveling to work, domestic activities, unpaid and paid productive activities.	Questions can be included in surveys, but, where possible, this should be combined with focus groups or direct observation. Household diaries can also be used.
Qualitative methods		
Stakeholder analysis	Identifying main groups affected by or affecting planned or actual policies and determining their interests, influence, and importance.	This requires individual interviews, but often with a relatively small number of respondents.
Institutional analysis	Evaluating the efficiency and client friendliness of the main public and private sector agencies providing services to the poor.	Some questions can be included in household surveys, but where possible, this should be combined with focus groups.
Focus groups and community forums	Seeking the opinion of community groups on their problems and priority needs and their experience with the projects and programs being provided—a valuable complement to household surveys.	Properly conducted focus groups require time to invite the right people and to write up the discussions. A team of two researchers is required. The sessions should be tape recorded, further increasing the analysis time.
Participatory Rural Appraisal and other participatory methods	These methods are used to understand the world of the poor and to listen to their concerns and priorities rather than asking them to respond to a set of survey questions prepared by outside agencies.	Several days and, ideally, at least one week should be allowed for each community studied. It is important to allow sufficient time to understand the community and to gain the trust of residents before the sessions begin.
Photographs and videos	Photographs provide a dramatic complement to written reports and an effective way to document physical and economic change over time (by taking photographs from the same location at different points in time).	Photographs are quick and easy to take. Videos are also an excellent way to present findings, but they are much more expensive to produce – particularly if editing is required.

For more information on data collection methods, see chapter 7, “Participation”; chapter 1, “Poverty Measurement and Analysis”; chapter 3, “Monitoring and Evaluation”; and Bamberger (2000).

10.3.3 Undertaking gender analysis of the data gathered

After collecting quantitative and qualitative data, the next step is to identify the practices that cause the observed gender differentials. For each of the gender dimensions of poverty (opportunities, capabilities, security, and empowerment [see figure 10.2]), there are a number of barriers that differentially affect men and women. Technical note I.2 recommends gender-sensitive indicators that should be collected during the poverty diagnosis phase on each of the four poverty dimensions.

Gender analysis needs to consider the imbalances in the gender division of labor—including rigidities in labor allocation—as well as the diversity of households and intrahousehold relationships, the gender-based differentials in productive resources, and the implications of the invisibility of women’s work in the system of national accounts (SNA). The analysis will inform policy choices and interventions and the M&E of outcomes and impacts.

Analyzing consequences and impacts of gender differences

An analysis of the impacts of gender differentials for poverty reduction should consider issues such as the following:

Time use

Country studies point to significant differences in how men, women, and children allocate time. As noted above, women’s multiple responsibilities subject them to increasing time constraints, and time poverty is a major factor in determining what choices are made at the household level. For example, in Uganda, women work longer hours than men, between 12 and 18 hours per day, with a mean of 15 hours, compared with an average male working day of approximately eight to 10 hours (World Bank 1993a). Reducing women’s time burden in the ways suggested in section 10.4.2 below and in technical note I.4 is a critical first step to promoting women’s economic opportunities and participation in community activities.

As shown in box 10.5, women in Kenya work 50 percent more hours than men on agricultural tasks. They work half as many hours again as men when agricultural and nonagricultural tasks are combined: 12.9 hours compared with 8.2 hours (Saito, Mekonnen, and Spurling 1994). In Tanzania, men have an average of 4.5 hours per day of leisure time, compared to an average of two hours per day for women. In economic activities, women’s labor input is 52 percent versus 42 percent for men. Women are involved in almost all activities on the farm as well as housework (in which men hardly participate). Women were found to make significant labor contributions, even in traditional male activities such as cash crop farming (Tibaijuka 1994).

Interdependence of household and market economies

Poor households face critical tradeoffs in allocation of scarce labor resources among economic production, bearing and rearing children, managing household and community responsibilities, and attending

Box 10.5. Kenya: Comparison by Gender of Work Hours in Agriculture (SNA)^a and Nonagriculture (Non-SNA)^b Activities (Shares of SNA/Non-SNA in Total Work)

	<i>Female</i>		<i>Male</i>		<i>Total</i>
	Hr./day	%	Hr./day	%	%
SNA	5.7	42	6.3	76	56
Non-SNA	6.6	58	2.0	24	44
Total	11.3	100	8.3	100	100

a. SNA = included in the system of national accounts.

b. Non-SNA = Not included in the system of national accounts.

Source: Elson and Evers (1997).

school. These tradeoffs are further complicated by social rules that define the gender division of labor. Multiple demands on women's time severely constrain their ability to respond to economic incentives and to participate in the market economy.

Consequently, a key challenge for PRS policies is to undertake complementary investments in the market and household economies that explicitly recognize these tradeoffs and build on positive externalities. This, in turn, has important implications for prioritizing poverty reducing interventions through which investment in the household economy will benefit the market economy in terms of improved efficiency, productivity, and growth. For example, the introduction of intermediate means of transport (IMT) such as bicycles or handcarts can enable households to market their agricultural produce while freeing up women's time for other domestic or economic activities.

Importance of considering gender roles

The economic roles of men and women need to be analyzed explicitly and integrated into PRS policies and key interventions to ensure appropriate, gender-inclusive targeting. In agriculture, for example, this would bring a different dimension to which agricultural technologies are developed, which crops and tasks are prioritized, which extension messages are developed and delivered, which research priorities are pursued, and, most important, how all of these activities will really reach both women and men. Box 10.6 provides an example of how traditional agricultural roles may need to be adapted to the requirements of new crop production.

For more examples on the relevance of gender when addressing poverty reduction interventions in Africa, see box 10.1.

10.3.4 Looking to the future: strengthening the gender database for the future stages of the PRS

During the preparation of the I-PRSP and the PRSP, many countries will not have access to much of the information required to conduct a satisfactory gender analysis, though much more data and information are available than are generally used in PRS preparation. Certain measures can be taken even in the accelerated timeframe of PRSP preparation, such as ensuring that participatory consultations are designed to capture the priorities and concerns of both women and men, drawing on available data and analysis that might otherwise be neglected (such as time budget surveys), systematically disaggregating data by sex where possible, and conducting gender analysis of these available sex-disaggregated datasets. Nonetheless, the time pressure under which the PRSP is prepared means that it is not usually possible to fill in the data gaps in time to incorporate a full gender analysis into the I-PRSP and PRSP.

The PRS is a long-term strategy that will evolve over time. Consequently, part of the preparation of the PRSP should be to define and implement a strategy for improving the gender database in order to provide a foundation for strengthening the relevance and quality of gender analysis in subsequent phases of the PRS. There are two main elements to this: integrating into the PRS a strategy for the collection and analysis of sex-disaggregated and gender-relevant data and information (using both quantitative and qualitative methodologies), and preparing a strategic synthesis of gender issues in the country to provide direction and structure to work in this area in the form of a country gender assessment (CGA).

Defining a strategy for collection and analysis of gender-responsive data

The creation of a gender-responsive database involves:

- 3 Identification of data and studies that already exist. Often more data are available than had been expected.

Box 10.6. Gender Analysis Is Not a Zero-Sum Game: Introducing Pole Beans In Uganda

Pole beans have a higher yield than traditional runner beans but require two people to stake the beans. A local theater group was able to convince women and men to cooperate in bean staking by putting on a popular skit showing women and men working together and increasing total household production.

- Identification of databases that contain sex-disaggregated data that have not yet been analyzed and preparing a plan for the analysis of key information.
- Preparation of a list of major social and economic studies to be conducted over the next few years and meeting with the survey planners to agree on how gender-relevant information can be included and what changes, if any, may be required in the data collection methods.
- Identification of critical gaps in gender-relevant data, and where currently no surveys are planned, through which key missing data could be obtained. Preparation of proposals on the means of collecting the data and reaching agreement with PRS planners on the means for funding the studies.

The country gender assessment (CGA)

Once the strategy for data collection and analysis has been defined, it is important to turn the information into usable knowledge through the preparation of a policy-relevant and operationally focused CGA. The CGA provides a basis for integrating gender issues into policy dialogue with governments and into other elements of the Bank's country assistance program, including further analytical work, policy design, advisory services, partnerships, and project activities. Technical note I.6 provides guidelines for preparing a CGA.

The CGA normally comprises:

- a country gender profile;
- a review of the country's institutional and policy context and its gender implications; and
- a set of suggested policy and operational interventions.

The CGA may be a stand-alone document or part of the Poverty Assessment or other larger analytical product (for example, a country social or economic analysis). CGAs generally draw upon a combination of quantitative and qualitative analyses, including participatory approaches. The CGA may contain original analytical work produced either by the Bank or by other agencies (for example, governmental, international, or academic institutions).

10.3.5 Recommended actions for PRS managers

Listed below are some specific actions to be considered by PRS managers during the poverty diagnostics stage, along with a checklist of gender issues to address (box 10.7).

- If the surveys have not yet been conducted, commission exploratory gender studies to identify the key issues and concerns of women and men and to ensure that they are incorporated into the survey design. Use participatory processes to identify the major concerns of women and men for their visions of the future, the constraints they face in improving their economic and social conditions, and the kinds of assistance they would like to receive from government and development agencies.
- Promote studies on gender issues in key development areas such as labor markets, schools, environment, HIV/AIDS, and community management.
- Promote gender balance in teams and participants responsible for PRS development and implementation.
- Ensure that both male and female stakeholders are included in the PRS participatory process. Proactively involve both men and women in building and sustaining country ownership of the PRS processes.
- Review all data collection methods to assess how effectively they cover the gender indicators presented in technical notes I.2 and I.5. It may be necessary to contract with a gender specialist to assist with this task.
- Ensure that a forward-looking strategy is put into place to strengthen the gender database for the subsequent stages of the PRS and preparation of the CGA (if this does not already exist).

- Ensure that the poverty analysis combines quantitative and qualitative methods and that survey design and data collection methods adequately cover gender issues. Use the gender checklist in box 10.7 to assess how effectively gender issues have been addressed in the poverty diagnostics.

10.4 Using a Gender-Informed Poverty Analysis in Defining Priority Public Actions in the PRS

This section suggests how to integrate gender analysis in the policy and priority interventions stage of the PRS—steps 4, 5, and 6 (see shaded boxes in figure 10.4)—and concludes with recommended actions for PRS managers (section 10.4.4).

Step 4

Defining the policy implications of gender analysis in the country.

Step 5

Identifying priorities for the PRS.

Step 6

Integrating gender-responsive priorities into the policy responses and priority actions in the PRS.

10.4.1 Defining the policy implications of gender analysis

When results have been obtained from the gendered poverty diagnosis, the next task is to define the policy implications of this analysis for the poverty strategy to make more informed, gender-aware policy responses and action priorities that address the gender-differentiated experience of poverty.

A gender-aware analysis of poverty contributes to a fuller understanding of the causes of poverty and indicates, in turn, different policy responses and investment priorities to reduce poverty. Analysis of the gender dimensions of poverty has four principal policy implications of relevance for the PRS. These are:

- Both men and women play important roles in economic activity (especially in Africa), but they are not equally distributed across the productive sectors, nor are they equally remunerated for their labor. This means that different sectoral growth and investment patterns make different demands on men's and women's labor and have different implications for the division of labor and the distribution of income.
- The market and the household economies coexist and are interdependent, as revealed in time allocation data showing the "double workday" of women. This means that short-term intersectoral and intergenerational tradeoffs (and positive externalities) may be very significant for asset- and labor-constrained individuals and households, that is, for the poor.
- Persistent gender inequality in access to and control of a wide range of human, economic, and social assets has direct and indirect costs for economic growth and development and diminishes the effectiveness of poverty reduction efforts.

Box 10.7. Gender Checklist for Poverty Diagnostics

- How many men and how many women are included in the team(s) preparing the PRS? How many men and how many women are involved in the different consultative processes for the PRS? What provisions are made for the participation of different stakeholders in the design, implementation, and monitoring of the PRS?
- How will the PRS process ensure that participation is conducted in ways that elicit information from both men and women about their respective constraints, opportunities, incentives, and needs?
- Do the PRS performance indicators reflect gender concerns? If not, how might they do so? How will both men and women be involved in the participatory monitoring of these indicators?
- What use is made of gender-responsive methods to collect and validate information on men's and women's different experience of poverty and analysis of gender dimensions of poverty?
- What methods are used to ensure that both women and men are able to participate actively in the process?
- Has a forward-looking strategy been initiated to strengthen the gender database for future stages of the PRS and to prepare the CGA?

Integrating gender into poverty diagnosis

Step 1: Ensuring that gender is addressed across the four dimensions of poverty

Step 2: Documenting the experience of poverty for both women and men for all four dimensions

Step 3: Conducting gender analysis of the data gathered and integrating findings into poverty diagnosis

Using a gender-informed poverty analysis in defining priority public actions in the PRS

Step 4: Defining the policy implications of gender analysis in the country

Step 5: Identifying gender-responsive priorities for the PRS

Step 6: Integrating gender-responsive priorities into the policy responses and priority actions in the PRS

Integrating gender into monitoring and evaluation

Step 7: Integrating a gender dimension into outcome monitoring

Step 8: Integrating gender into the PRS evaluation strategy

Step 9: Building institutional capacity for gender-sensitive M&E

- 3 The poor in general, and poor women in particular, have little or no voice in decisionmaking, and their different needs and constraints do not inform public policy choices and priorities. Therefore, proactive measures are needed to ensure inclusive participation in the PRS and in the formulation of inclusive policies and programs. In this respect, gender needs to be a criterion of inclusion in PRS participatory processes and a criterion of choice in prioritizing the PRS policy responses and interventions.

One of the key policy implications of gender-informed poverty analysis is that there are critical interrelationships and linkages among different sectors of activity, especially between the paid and unpaid economies (Barwell 1996; Cleaver and Schreiber 1994). Choices and tradeoffs are at the core of these interrelationships, as revealed in time use analysis. This is why it is so important for the poverty analysis underlying the PRS to include gender-based time budget analysis. Time constraints are in many instances severe; they affect women more than men, given the unequal division of labor; and they are especially acute for the poorest. Addressing these constraints can therefore be seen as one of the highest priorities for a PRS. Building on these interconnections can have positive multiplier effects by reducing the time burden of domestic work and raising labor productivity throughout the economy. To reduce domestic work, it is necessary to give the highest priority in the PRS to measures that save time (or improve the productivity of time use), such as improvements in accessibility and transport of wood and water, IMT, labor-saving technologies across the full range of household tasks (domestic and productive, which is especially critical for women) and promoting greater gender balance in undertaking domestic work.

10.4.2 Identifying gender-responsive priorities for the PRS

The next step builds on the policy implications of the gender analysis to prioritize policy responses and priority actions as the basis for developing PRS interventions. Readers who have particular sectoral interests are encouraged to review the respective chapters, especially chapter 15, “Rural Poverty”; chapter 16, “Urban Poverty”; chapter 17, “Social Protection”; chapter 18, “Health, Nutrition, and Population”; chapter 19, “Education”; chapter 22, “Transport”; and chapter 23, “Water and Sanitation.” Some areas that particularly warrant consideration from a gender perspective are described below.

Analysis of PRSPs to date suggests there are 10 priority sectors most frequently included in the country PRSs. The priority sectors include:

- 3 agriculture, land rights, and rural development;
- 3 environment and natural resource management;
- 3 education;
- 3 health and violence;
- 3 transport;
- 3 energy;
- 3 water supply and sanitation;
- 3 labor markets, employment, and microeconomic-enterprise development;
- 3 safety nets and food security; and
- 3 urban development.

For each of these sectors, technical note I.4 provides a checklist of gender questions and issues that should be addressed both in their contribution to the poverty diagnosis and in formulating sectoral policy responses and priority actions. Promising policy and operational approaches that could be used to address these issues are also identified. In most cases, examples are given of countries in which these policies and projects have been implemented.

Table 10.6 offers suggestions for using the findings of the poverty diagnostics to identify gender-sensitive policy, program, and project options for the PRS. The actions included in the PRS should reflect the priorities of poor men and women. What is relevant and appropriate will vary by country and by regions within countries. Priorities should be based on country circumstances.

Table 10.6. Using Poverty Diagnostics to Identify Gender-Responsive Policy, Program, and Project Options for the Poverty Reduction Strategy

<i>Principal sectoral components</i>	<i>Key gender dimensions from poverty analysis</i>	<i>Key policy responses and priority actions</i>
Opportunities: improving the productive assets of the poor		
<ul style="list-style-type: none"> 3 Productive sectors, especially agriculture and rural development 3 Financial services 3 Labor (paid and unpaid employment; wage discrimination) 3 Infrastructure (water and sanitation, transport [IMT], domestic energy, communications) 	<ul style="list-style-type: none"> 3 Lack of collateral 3 Property ownership 3 Access to paid labor 3 Control over product (income) 3 Different transport tasks of men and women (especially around domestic tasks) and access to means of transport 3 Domestic tasks and time constraints (tradeoffs and externalities) 3 Gender imbalance in resource allocation decisionmaking 3 Low priority given to water and sanitation investments, and to time-saving investments more generally 	<ul style="list-style-type: none"> 3 Proactively enhance access of poor women and men to productive assets such as land, financial services, inputs, information, and other economic services 3 In agriculture, prioritize the food (“nontraded”) sector with focus on food security at the household level (greater balance with export promotion/diversification efforts) 3 Refocus agricultural research and extension, as well as other services, to meet the different and specific needs of male and female farmers 3 Facilitate the access of poor women and men to production and other technology 3 Gender-inclusive legal and regulatory reform with a focus on enhancing women’s land security and property rights 3 Prioritize and sustain concurrent investment in the household economy through targeted investments to reduce the time burden of domestic work, minimize tradeoffs, and build on externalities with the market economy: <ul style="list-style-type: none"> – Water supply and sanitation – Labor-saving technology – Domestic energy – IMT
Capabilities: strengthening the human capital assets of the poor		
<ul style="list-style-type: none"> 3 Education 3 Training and skill development 3 Health 3 Nutrition 	<ul style="list-style-type: none"> 3 Bias in access to social services 3 Different health needs and priorities 3 Gender stereotyping in curriculum and in socialization 3 Opportunity costs, including domestic tasks and time constraints (tradeoffs and externalities) 3 Sociocultural constraints (attitudes and beliefs) 	<ul style="list-style-type: none"> 3 Prioritize and sustain investment in basic educational services focused on increasing enrollment and retention of girls 3 Prioritize and sustain investment in basic health services, with a focus on accessible and appropriate reproductive health care 3 Integrate gender-responsive HIV/AIDS prevention and community-level coping measures 3 Prioritize and sustain concurrent investment in the household economy through targeted investments to reduce the time burden of domestic work, minimize tradeoffs, and build on externalities with the market economy: <ul style="list-style-type: none"> – Water supply and sanitation – Labor-saving technology – Domestic energy – IMT
Security: economic, social, and natural capital assets of the poor		
<ul style="list-style-type: none"> 3 Conflict 3 Law (including property rights) 3 Isolation 3 Environment: insecurity resulting from environmental factors (deforestation, rainfall, water, soil fertility) <p>See also the discussion of economic opportunity (above).</p>	<ul style="list-style-type: none"> 3 Household relations (decision-making, structure and composition of households) 3 Domestic tasks and time constraints 3 “Pooling” and “separate spheres” 3 Gender effects of conflict 3 Physical and cultural isolation and marginalization 3 Impact of environmental degradation and precarious access to water <p>See also the discussion of economic opportunity (above).</p>	<ul style="list-style-type: none"> 3 Gender awareness raising and capacity building of policymakers and implementers 3 Gender-inclusive reform of laws and regulatory frameworks, especially as concerns access to and control of financial services and property 3 Gender inclusion in land allocation, ownership, and use 3 Prioritize and sustain concurrent investment in the household economy, as indicated above <p>See also the discussion of economic opportunity (above).</p>
Empowerment: inclusion in decisionmaking at household, community, and national levels		
<ul style="list-style-type: none"> 3 National policy-making 3 Community development 	<ul style="list-style-type: none"> 3 Ambiguity in legal status and rights 3 Barriers to participation 	<ul style="list-style-type: none"> 3 Political leadership and commitment to gender equality 3 Implement “gender budget initiatives” along the lines of the South Africa and Tanzania models 3 Capacity building: focus on literacy and skills development for community-based organizations

Articulating gendered priorities and responses

Technical note I.3 illustrates how the poverty dimensions framework can be used to identify priority policy and project interventions and gives examples of different options that have addressed each issue. For example, five issues are identified that constrain women's economic opportunities: (1) women's time burden, (2) insecure property rights, (3) gender wage gap, (4) lack of access to financial services and other productive resources, and (5) gender-based constraints on access to employment and income-earning opportunities. A number of options are given for addressing each issue. Possible options for alleviating women's time burden, for example, include provision of IMT accessible to women, bringing services such as water closer to home, and labor-saving devices such as fuel-efficient stoves, grain mills, and so forth.

A key challenge for public policy and project design is to undertake concurrent actions across a range of sectors that explicitly recognize and seek to minimize tradeoffs and raise labor productivity. An important policy and program area in low-income countries is support for rural livelihood strategies to raise the labor productivity of this sector. Therefore, concurrent actions should be considered to maximize the synergy of interventions. Examples include focusing on food security at the household level through agricultural research extension programs, facilitating the access of poor women and men to production technology and to appropriate financial services, and implementation of gender-inclusive land reform, with a focus on enhancing poor women's and men's land security and property rights.

Engendering the budget

Chapter 6, "Public Spending," emphasizes the key role of the national budget in ensuring that public expenditure priorities are consistent with development policies and that the overall budget framework is pro-poor (see sections 6.2 and 6.3 of chapter 6). It is necessary to go one step further and to engender the national budget to ensure that (a) both women and men are involved in the budget development process, (b) resources are allocated for priority investments that respond to the needs of both women and men, and (c) budget tracking processes certify that the impact of public spending benefits both men and women.

- To increase girls' enrollment in primary and secondary schools in rural areas, it is of course necessary to have appropriate buildings and equipment. But it may also be necessary to provide special accommodation or travel allowances so that women teachers are available to teach in the schools.
- Increasing women's use of rural health facilities may require hiring and training paramedical staff who speak the local language.
- Ensuring positive gender impacts of land reform may require major investments in legal literacy programs so that both women and men are aware of their new land rights and how to obtain them.

The success of a recent South African initiative of gender analysis of budgets has raised interest in this area. So far, the initiative has stressed reprioritizing rather than increasing the overall government spending.

Gender and the labor market

As indicated in box 10.3 in the section on opportunity, women's labor force participation rates in many parts of the world are increasing at the same time that male activity rates are declining. Both men and women are affected by these trends, and while women have sometimes succeeded in obtaining greater opportunities and economic autonomy, they are more vulnerable. The result is occupational segregation, with women finding themselves in the least-protected sectors of the economy. The growth of female-headed households due to migration, divorce, and abandonment means that the insecurity of women's employment directly affects children and other dependents. Gender inequality is often built into labor institutions. There are a number of potential areas for PRS interventions to promote gender equality in the labor market:

- labor legislation to enforce existing legislation affecting women;

- studies to identify factors affecting women’s access to and equality of opportunities in the labor market and the introduction of measures to address these constraints;
- improved transport facilities for getting to work; and
- financial services and technical assistance to help both female and male entrepreneurs.

10.4.3 Incorporating gender priorities into key poverty reduction measures

The final step involves integrating the gender-responsive priorities identified into the policy responses and priority actions retained in the PRS itself. This will also include integrating appropriate indicators and benchmarks (see section 10.5) to reflect differences in focus in the action agenda. Technical note I.3 provides examples of gender-sensitive policies and project interventions developed in Africa, Asia, and Latin America based on the findings of poverty diagnostics. It offers a synthesis of gender issues and promising approaches in major sectors, including agriculture, education, health and violence, transport, water supply and sanitation, and microenterprise development. Technical note I.4 identifies key gender issues in major sectors and promising gender-inclusive approaches to these issues. Technical note I.4 can be used in combination with table 10.6 as a checklist to prioritize gender-responsive interventions.

10.4.4 Recommended actions for PRS managers: gender-responsive policy interventions to address poverty

The following bullets indicate points that need to be addressed in selecting and designing PRS interventions to address poverty in its multiple dimensions. Box 10.8 describes how the Mozambique I-PRSP addressed some of the gender issues identified in the poverty diagnosis.

- Review the gender analysis of the data gathered in the poverty diagnosis to identify the major gender gaps and issues in each of the four areas of the poverty framework.
- Apply the poverty framework to these options to provide guidelines for selecting and designing policies, programs, and projects (see technical notes I.3 and I.4).
- Compare these options with the priority areas being defined for the overall PRS program and with feedback from participatory studies. Particular attention should be given to the concerns of the poor about intersectoral linkages (for example, the impacts of time spent collecting water and fuel on the ability of girls to attend school).
- Identify packages of interventions, or concurrent actions, that simultaneously address key issues, constraints, and opportunities in different sectors.
- Use the checklist in box 10.9 to assess the policy implications of the gender analysis.

Box 10.8. Gender-Responsive Interventions in the Mozambique I-PRSP

The Mozambique I-PRSP proposed the following measures to improve the gender responsiveness of the national PRSP:

- increase girls’ access to education;
- make parents and communities aware of the importance of girls’ education;
- free provision of school materials, uniforms, and other expenses;
- increase access to, and quality of, health care for women and children;
- provide sex education;
- reduce maternal mortality;
- protect child victims of prostitution;
- provide female immunization;
- distribute iodine;
- reduce prevalence of micronutritional deficiencies in women;
- promote microeconomic-income-generating projects for women; and
- generate 6,000 jobs for women.

Source: Mozambique I-PRSP, March 2, 2000.

Available at <http://poverty.worldbank.org/files/mozambique%20iprsp.pdf>

10.5 Integrating Gender into the PRS Monitoring and Evaluation

This section describes three basic steps for integrating gender into the PRS outcome monitoring and impact evaluation systems (see shaded boxes in figure 10.5). The approach adopts the framework of chapter 3, “Monitoring and Evaluation,” and by following the steps described in this section, gender analysis can easily be integrated into the M&E framework. The section concludes with recommended actions for PRS managers (section 10.5.4).

Step 7

Integrating a gender dimension into the outcome monitoring system.

Step 8

Integrating a gender dimension into the PRS evaluation strategy and using gender monitoring and impact evaluation results.

Step 9

Building institutional capacity for gender-responsive monitoring and evaluation.

Integrating a gender dimension into monitoring and evaluating the PRS contributes to a better understanding of poverty, enables better and more effective targeting of the poor and vulnerable, and maximizes stakeholder participation. Chapter 3, “Monitoring and Evaluation,” provides a comprehensive discussion of the M&E process and stages, and the resources and tools needed to carry it out successfully. Readers are also encouraged to review chapter 1, “Poverty Measurement and Analysis,” and chapter 5, “Strengthening Statistical Systems.”

The gender objectives of the M&E system are to document and assess how PRS policies and interventions respond to the needs of both women and men. Three design issues for integrating a gender dimension into the PRS M&E systems are:

1. Ensuring that all of the information required for gender analysis is collected. This often requires simply collecting sex-disaggregated data (for example, on education, employment, income, time use, and consumption), rather than relying on household-level aggregate data. However, in some cases, different information must be collected on one or both sexes. Technical note I.2 provides a framework for identifying the required indicators.
2. Using gender-responsive data collection methods for gathering information that is difficult to obtain through conventional survey instruments. These methods may be required especially for sensitive topics such as domestic violence; where the male household head expects to provide information on all household members; or where women or girls are not able to speak freely.
3. Addressing the issue of available capacity for generating and collecting sex-disaggregated or gender-relevant data at the level of the national statistical offices and the sectoral agencies, because they may have very limited experience in gender-specific issues relating to data collection and analysis.

10.5.1 Integrating a gender dimension into the PRS outcome monitoring system

Monitoring in the PRSP context involves tracking the progress in achieving goals; for example, reductions in infant and maternal deaths, improvements in literacy rates and nutritional status of children, and reduction in the incidence of extreme poverty. Monitoring is carried out continuously, tracking changes in results over time and across groups, in areas such as inclusion and participation; access to and control of assets, resources, and services; and training and education outcomes for both men and women. (See chapter 3, “Monitoring and Evaluation.”)

The first steps in designing a gender outcome monitoring system are to agree on gender goals and targets and to identify and select the appropriate gender-relevant indicators (for guidelines on setting goals and targets, see section 3.2.2 of chapter 3). Box 10.9 contains a checklist of questions that could be asked to determine the extent to which critical gender goals and objectives have been met.

Integrating gender into poverty diagnosis

Step 1: Ensuring that gender is addressed across the four dimensions of poverty

Step 2: Documenting the experience of poverty for both women and men for all four dimensions

Step 3: Conducting gender analysis of the data gathered and integrating findings into poverty diagnosis

Using a gender-informed poverty analysis in defining priority public actions in the PRS

Step 4: Defining the policy implications of gender analysis in the country

Step 5: Identifying gender-responsive priorities for the PRS

Step 6: Integrating gender-responsive priorities into the policy responses and priority actions in the PRS

Integrating gender into monitoring and evaluation

Step 7: Integrating a gender dimension into outcome monitoring

Step 8: Integrating gender into the PRS evaluation strategy

Step 9: Building institutional capacity for gender-sensitive M&E

Box 10.9. Gender Checklist for Policy Implications of Gender Analysis

- 3 Has the different impact on men and women of public spending been analyzed (“incidence analysis”)? Do public spending priorities respond to the different constraints and opportunities of poor men and women? Have tools to improve the gender responsiveness of public spending, such as with gender and women’s budget initiatives, been used in developing strategic budget priorities and orientation?
- 3 Has there been an attempt to identify and minimize short-term tradeoffs between the market and the household economies or building on externalities?
- 3 Does the growth strategy consider the fact that men and women have different structural roles in economic production and that different sectoral growth paths make different demands on men’s and women’s labor, with different implications for the division of labor and income? Are growth policies targeted to the sectors where poor men and women earn their living, such as food crops in agriculture and the urban informal sector?
- 3 Are the needs and priorities of men and women integrated into the PRS priority actions, implementation plans, and performance indicators? To what extent have gender-specific targets, outputs, and performance criteria been integrated into the PRS and its implementation arrangements?
- 3 Does the selection of public interventions fully reflect the different priorities, constraints, and opportunities of both men and women, as identified in the participatory consultations and poverty diagnosis?

The system for monitoring the outcomes for gender is part of a feedback mechanism that provides information to improve program interventions and make them more effective. As such, it should strive to achieve the following:

- 3 Ensure that the gender effectiveness and quality of performance is monitored at each phase of the interventions.
- 3 Provide rapid feedback to the poverty reduction team and the sectoral leaders when problems arise.
- 3 Communicate the gender results of the M&E to project managers and policymakers so that actions can be taken in a timely way to correct problems or leverage what is going well.

Select sex-disaggregated and gender-specific indicators to reflect the poverty reduction action agenda and its outcomes for women and men

A practical and viable approach to monitoring for gender is to select a few critical goals and objectives from the PRS that have strong gender implications based on the gender analysis and priority selection. Assessing the PRS requires that performance be monitored and evaluated at the macroeconomic, sectoral, and project levels to ensure that it reflects the poverty reduction agenda. Consequently, indicators are needed to monitor progress and outcomes at each of these three levels. In some instances, the same indicators could be used at different levels.

By definition, gender indicators measure the situation of both women and men. Indicators that focus only on women are Women in Development (WID) measures, which do not allow for comparison between women and men.

Successful gender monitoring requires attention to the following issues in selecting and using indicators:

- 3 Have gender M&E indicators been identified based on the gender policy objectives?
- 3 Do the gender indicators reflect the poverty reduction action agenda?
- 3 Have gender indicators been developed in a participatory way?
- 3 Is an appropriate mix of quantitative and qualitative indicators being used?
- 3 Are the indicators chosen
 - Relevant?
 - Disaggregated by sex? (not always necessary)
 - Available?

Data requirements and availability: collect data that reflect the outcomes and impacts of the critical goals on women and men

Data collection methods are determined by the kinds of information and data needed to monitor change and progress. Optimum results are obtained when traditional approaches are complemented by participatory approaches to M&E. Data from several sources should be used to monitor the outcomes and evaluate the impacts of policy interventions. Collecting appropriate data that reflect gender outcomes and impacts involves careful consideration to setting up gender-responsive tools and methods.

There are no “gender data collection methods” per se; rather, it is the manner in which they are applied that makes them responsive to gender. All methods of data collection—whether quantitative or qualitative, participatory or not—can be gender responsive if their application

- takes into account the gender context, that is, the reality of the relations between women and men and their differences in social, economic, and political terms in a particular country or situation;
- disaggregates all data collected for individuals, including, for example, infant mortality rates, land property registration, and bus passengers, noting whether they are male or female; and
- makes efforts to reach both women and men, separately where necessary, to get their views and assess their priorities and needs.

Constraints on women’s participation in public life in many cultures make it difficult to obtain certain kinds of information on women. Consequently, standard data collection and analysis methods sometimes must be complemented by qualitative methods such as PRA and focus groups. Gender-responsive data collection tools and methods need to consider the following questions:

- Have gender-relevant data been collected? How or what methods were used? From what sources?
- What is the timeframe within which outcomes are expected? (For example, which outcomes can be observed after one year, three years, and so forth?) Similarly, what are the time periods over which changes can be observed for the identified gender indicators?
- Have partnerships to collect and analyze data been established with such entities as local women’s organizations, research institutions, and universities?

In many cases, sex-disaggregated data have been collected in surveys and other socioeconomic studies but have not been analyzed. The existence and quality of sex-disaggregated data should be assessed before commissioning special surveys.

In addition to simple sex disaggregation, it is also useful to compare the poverty characteristics of different kinds of households, such as female-headed households and polygamous households. Additional questions can be built into future surveys, or some questions can be administered to women as well as to men. In some cases, this simply involves ensuring that the data are broken down by sex and possibly age. Special surveys can be conducted either by adding a module to another survey or by conducting a stand-alone survey.

Technical note I.2 presents a list of gender performance indicators that can be used to monitor progress and outcomes for women and men, and gender differences in impacts at the macroeconomic, sectoral, project, and household levels. Technical note I.2 also identifies indicators that can be used to track short-term impacts, occurring within less than two years; medium-term impacts, occurring within two to five years; and long-term impacts, occurring over a period of five to 10 years. Many of these indicators are already proposed in the PRS framework presented in the Overview to this book, but most are not sex disaggregated. Technical note I.5 discusses the use of gender monitoring indicators at the project level and illustrates how this model was applied to monitoring and evaluating the gender impacts of a village travel and transport project in Tanzania.

10.5.2 Integrating a gender dimension into the design of the PRS evaluation strategy

Evaluation in the PRS context refers mainly to *impact evaluation*. An impact evaluation assesses the changes in individuals’ well being that can be attributed to a particular program or policy. Designing an evaluation strategy involves deciding what policies and programs should be evaluated, defining the

expected outcomes and their timeframe, selecting an evaluation design, and obtaining the data needed. (See chapter 3, “Monitoring and Evaluation.”)

A gender impact evaluation strategy is an important complement to the gender outcome monitoring system. This strategy evaluates by gender the outcomes and impacts of select policies and programs to determine the extent to which improvements in gender outcomes are due to specific public actions. The information obtained through such an evaluation can be valuable in determining whether to expand, modify, or eliminate a policy intervention.

In contrast to monitoring, a strategy for impact evaluation is necessarily selective and assesses outcomes and impacts of strategic relevance to the PRS at key points in time for causal attribution. The impact evaluation strategy involves deciding what to evaluate, choosing an evaluation design and methodology, determining the data requirements and obtaining the data, and analyzing the data and reporting the findings. (See section 3.3 in chapter 3, “Monitoring and Evaluation.”)

Deciding what to evaluate

In deciding what outcomes to evaluate, the gender impact evaluation strategy is guided by these central questions:

- How do we assess the gender impacts or benefits of the PRS policies and interventions?
- How can we be certain these impacts are the result of the program and not other independent changes that might be taking place? (See chapter 3, “Monitoring and Evaluation.”)

Measuring the impacts of policies and programs

A successful gender impact evaluation will assess the contribution of policy interventions to the success of the PRS gender priorities and goals. This requires analyzing and assessing the data for their gender outcomes and impacts and distributing and using the findings to improve the PRS. (See chapter 3, “Monitoring and Evaluation.”)

The assessment should be conducted at two levels:

- ***Separate assessment of each policy and program intervention.*** This will evaluate the extent to which both women and men were involved in selecting, designing, and implementing each policy and program. The assessment will also evaluate how well the intended objectives were achieved, whether the intervention is sustainable, and, where this was a pilot project, whether it could be replicated on a larger scale.
- ***Overall assessment of the extent to which the combined PRS interventions contributed to the gender objectives.*** Include a table listing all of the objectives and rating the level and effectiveness of the PRS contribution to each of these. An analysis could then be presented to explain differences in the degree of contribution to each objective, along with recommendations on policies or programs that might be considered for future stages of the PRS to address other objectives.

Based on these two levels of analysis, an assessment report and recommendations could be prepared for PRS management. This could summarize the overall contribution of the PRS to achieving the national gender development objectives and could include recommendations on the most effective ways to address national gender objectives in the next phases of the PRS.

Whenever feasible, it is advisable to complement conventional M&E with participatory approaches to cross-check the findings and foster local-level commitment to action. The rationale for this twofold approach is that gender considerations tend to be absent or minimal in traditional M&E. A participatory evaluation of an agricultural development program, for example, might complement an evaluation survey assessing the economic and technical performance of that program by revealing how it is perceived by program staff and by the end users—the women and men engaged in agricultural activities.

Determining data requirements and obtaining data

Using data from several sources to monitor the outcomes and evaluate the impacts of policy interventions is recommended. Triangulation in data sources makes it possible to complement, extend, and validate results from one method with those from another. Focus groups with women and men can be used to explain survey results about the constraints to their access to credit, for example, or their lack of use of mass transport. This is particularly useful in areas where women's and men's activities are not usually recorded, such as unpaid household work or subsistence farming.

Analyzing the collected data and obtaining results

Important questions to consider when analyzing the results include

- How will the gender impact of the PRS interventions be assessed—by whom and at what intervals in time?
- Were the sex-disaggregated and other gender-relevant data analyzed? How? By whom? At what intervals of time?
- What do the data reflect?
- Have there been policy or program and project impacts on women and men?
- Are there plans for follow-up gender-relevant surveys and studies?

Using gender outcome monitoring and impact evaluation results

Gender outcome monitoring and impact evaluation results can be disseminated and used to assess overall progress on gender in poverty reduction efforts and decide on future courses of action. Important questions to consider when distributing the findings include

- Have the results and findings been disseminated? How? When?
- Have the gender findings been used to continue or modify existing policy interventions, or to identify new gender-responsive policy options?
- Will gender-responsive follow-up surveys and studies be conducted?

10.5.3 Building institutional capacity for gender-responsive monitoring and evaluation

Building the gender analysis capacity of relevant agencies

Building the gender analysis capacity of relevant agencies will often be a key determinant of success in achieving gender goals and in monitoring and evaluating progress. It may be advisable to conduct an institutional assessment of agencies responsible for project planning and implementation to determine their capacity for gender analysis and gender M&E. This assessment could include questions such as

- Do the planning and implementing agencies have access to gender specialists, either on their staff or as consultants, to conduct gender M&E?
- Have staff members received gender sensitivity or gender analysis training? Training to conduct gender M&E?
- Is there an incentive structure that would encourage or permit staff to address gender, including conducting gender M&E?
- Have funds been approved for gender-related capacity building, including capacity for gender M&E? If so, have these funds been assigned?
- Have guidelines for gender-related activities, including gender M&E, been developed and implemented?
- What other activities have been incorporated for building country capacity for quantitative and qualitative gender evaluation to ensure the efficiency of poverty reduction measures?

- What proportion of the professional staff are women?
- Have targets for recruiting female professionals been implemented?

Promoting gender-balanced participation in monitoring and evaluation

Promoting participation of both women and men in gender M&E is critical because it helps build consensus on what the country gender goals are and on what outcomes to monitor and what impacts to evaluate, and it enhances the sustainability of outcome monitoring and impact evaluation systems. Participatory M&E make it possible to identify problems early in the project implementation cycle, and give communities and implementing agencies the flexibility to respond to changing scenarios that may affect program work, such as sudden floods, severe droughts, or dramatic changes in earnings from crops. (For further details, see chapter 3, “Monitoring and Evaluation,” and World Bank [1998]).

10.5.4 Recommended actions for PRS managers

When selecting indicators, tools, and methods to reflect gender outcomes and impacts, consider the following:

- Select a few critical goals, outcomes, and indicators from the PRS for monitoring and evaluating gender outcomes and impacts.
- Ensure that data are collected that reflect the outcomes and impacts for critical gender-related goals.
- Ensure that the design and analysis of M&E systems are based on a clearly articulated, gender-inclusive PRS model.
- In selecting a particular combination of goals and indicators to assess, consider how the information is to be used and by whom and assess these needs in light of budgetary and time constraints.
- Data collection methods are determined by the kinds of information and data needed to monitor change and progress. Optimum results are obtained when traditional and participatory approaches to M&E are complementary.
- Collecting new data on gender is not always necessary. Assess the availability of gender-responsive data before considering the need to collect new data.
- Gender M&E is frequently done by disaggregating the data already being collected and using other available sources of information.
- Use the checklist in box 10.10 to ensure that key issues are addressed.

Box 10.10. Gender Checklist for Monitoring and Evaluation

- Have the needs and opportunities for increasing women’s and men’s productivity and production, access to and control of resources, and access to and control of benefits been identified? What are they?
- Have the gender dimensions of policy interventions been identified for their potential impact? Do the policy interventions address women’s and men’s needs?
- Were different groups and organizations representing women’s and men’s interests consulted through the process of goal setting?
- Do the PRS performance indicators reflect gender concerns? If not, how might they do so? Were or will both women and men be involved in the participatory monitoring of these indicators?
- Are measures being taken to build the gender analysis capacity of planning and implementing agencies?

Glossary

DALYs. Disability-adjusted life years.

FHH. Female-headed households.

GAD. Gender and development. An approach to development that focuses on the economic, social, and political relationships between women and men. It examines how the social definition of these roles can constrain the development and welfare of both sexes and of the low-income population in general. This is contrasted with the Women in Development approach, which focuses on the analysis and removal of constraints to women's economic, social, and political participation.

GDI. Gender-related development index. A country-level index that compares women's and men's life expectancy, educational attainment, and income (UNDP 1995).

GEM. Gender Empowerment Measure. A country-level index. It concentrates on gender differences in income, access to jobs classified as professional, technical, administrative, and managerial, and the percentage of parliamentary seats held by women and men (UNDP 1995).

Gender analysis. Examines the access and control that men and women have over resources. This includes analyzing the sexual division of labor and the control women and men have over the inputs required for their labor and the outputs (benefits) of their labor. It also refers to a systematic way of determining men's and women's often differing development needs and preferences and the different impacts of development on women and men. It takes into account how class, race, ethnicity, or other factors interact with gender to produce discriminatory results.

Gender budget initiatives. See *gender/women's budgets*.

Gender dimensions of poverty. Differences in the ways that men and women experience poverty.

Gender- (or sex-) disaggregated data. Statistical information that differentiates between men and women; for example, "number of women in the labor force" instead of "number of people in the labor force." This allows one to see where there are gender gaps.

Gender division of labor. Refers to the allocation of different jobs or types of work to men and women, usually by tradition and custom.

Gender equality. An approach addressing the issues facing both men and women in sharing the benefits of development equally, which ensures against a disproportional burden of negative impacts.

Gender gap. The gap between men and women in such terms as how they benefit from education, employment, and services.

Gender goals and targets. Budget and operational targets that indicate how resources are to be allocated between men and women. This may also include quotas defining numbers of women who must be represented on planning or political bodies.

Gender indicators. These measure gender-related changes in society over time. They provide "direct evidence of the status of women, relative to some agreed normative standard or explicit reference group" (CIDA 1995).

Gender M&E. A management tool that provides policymakers, program evaluators, and implementation leaders with quick feedback on project effectiveness with regard to gender integration during implementation. In this participatory process, the perspectives and insights of all stakeholders—beneficiaries as well as project implementers—are considered. The stakeholders identify issues, conduct research, analyze findings, make recommendations, and take responsibility for necessary action.

Gender objectives. Objectives that clarify what gender problems will be addressed and what are the practical and strategic goals.

Gender strategy. Clear operational strategies that identify the incentives, budget, staff, training, and organizational strategies to achieve stated objectives.

Gender/women's budgets, gender-sensitive budgets. This refers to a variety of processes and tools that attempt to assess the impact of government budgets, mainly at the national level, on different groups of men and women, through recognizing the ways in which gender relations underpin society and the economy. Gender or women's budget initiatives are not separate budgets for women. They include analysis of gender-targeted allocations, such as special programs targeting women; they disaggregate by gender the impact of mainstream spending across all sectors and services; and they review equal opportunity policies and allocations within government services.

IMT. Intermediate means of transport. Types of transport, often nonmotorized, that are affordable by low-income groups and adapted to local terrain.

MHH. Male-headed households.

MMRs. Maternal mortality rates.

PPA. Participatory Poverty Assessment

Practical gender needs. These relate to women's traditional gender roles and responsibilities and are derived from their concrete life experiences.

Sensitivity of gender issues. Gender issues tend to be highly sensitive. In some countries there may be political resistance to recognizing differences of interest within the population, such as those related to gender or ethnicity, since official government policy emphasizes that all members of the population are citizens and are therefore equal. Specific sectors, such as reproductive health, may be particularly sensitive, and related recommendations may therefore not be well received by national authorities.

SNA. System of national accounts.

SSA. Sub-Saharan Africa.

Strategic gender needs. These generally address issues of equity and empowerment of women. The focus is on systematic factors that discriminate against women. This includes measuring the access of women, as a group compared with men, to resources and benefits, including laws and policies.

WID. Women in Development. An approach that focuses on the analysis and removal of constraints on women's economic, social, and political participation. This is frequently contrasted with gender and development approaches, which focus on the economic, social, and political relations between men and women.

Women's triple roles and responsibility. In most societies, low-income women have a triple role: reproductive, productive, and community-managing activities. These responsibilities include

- **Reproductive role.** Childbearing and childrearing responsibilities and domestic tasks performed by women. These include not only biological reproduction but also the care and maintenance of the work force (male partner and working children) and the future work force (infants and school-age children).
- **Productive role.** Work done by women and men for pay in cash or in kind. It includes market production with an exchange value and subsistence or home-based production with actual use value as well as potential exchange value.
- **Community-managing role.** Activities undertaken primarily by women at the community level, as an extension of their reproductive role, to ensure the provision and maintenance of scarce resources of collective consumption, such as water, health care, and education.

Guide to Web Resources

Related World Bank Web sites

Gender

<http://www.worldbank.org/gender/>

Poverty

<http://www.worldbank.org/poverty/index.htm>

Social development

<http://wbln0018.worldbank.org/essd/essd.nsf/e0a6beef25793a39852567f200651c5c/b01d3e9c4c0bc7eb8525682d00609d59?OpenDocument>

Education

<http://wbln0018.worldbank.org/HDNet/HD.nsf/SectorPages/Education?Opendocument>

Health

<http://wbln0018.worldbank.org/HDNet/HD.nsf/SectorPages/HNP?Opendocument>

Transport

<http://www.worldbank.org/html/fpd/transport/>

Rural development and agriculture

<http://wbln0018.worldbank.org/essd/essd.nsf/rural+development/portal>

Law and justice

<http://www1.worldbank.org/legal/>

Environment

<http://www.worldbank.org/environment/>

Social protection and labor

<http://wbln0018.worldbank.org/HDNet/HD.nsf/SectorPages/SP?Opendocument>

United Nations agencies

Women Watch (U.N. Internet gateway on the advancement and empowerment of women)

<http://www.un.org/womenwatch/about/index.html>

International Research and Training Institute for the Advancement of Women (INSTRAW)

<http://www.un.org/instraw/>

U.N. Division for the Advancement of Women

<http://www.un.org/womenwatch/daw/>

U.N. Development Fund for Women (UNIFEM)

<http://www.unifem.undp.org/>

United Nations Educational, Scientific, and Cultural Organization (UNESCO)

<http://www.unesco.org/women/index.htm>

U.N. Development Programme (UNDP)—Gender in Development home page

<http://www.undp.org/gender/>

Women and Habitat Programme

<http://www.unchs.org/unchs/english/women/womenbody.htm>

U.N. Population Fund (UNFPA)

<http://www.unfpa.org/tpd/gender/aboutgenderteam.htm>

U.N. Children's Fund (UNICEF)

<http://www.unicef.org/> (search facility)

U.N. High Commissioner for Refugees (UNHCR)

<http://www.unhcr.ch/issues/women/women.htm>

U.N. Economic Commission for Latin America and the Caribbean:

“Gender indicators for follow-up and evaluation of the Regional Programme of Action for the Women of Latin America and the Caribbean, 1995–2001, and the Beijing Platform for Action” (English version)

<http://www.eclac.org/English/research/women/indicators/genderind.htm>

“Indicadores de género para el seguimiento y la evaluación del Programa de Acción Regional para las Mujeres de América Latina y el Caribe, 1995-2001, y la Plataforma de Acción de Beijing” (Spanish version)

<http://www.eclac.org/espanol/investigacion/series/mujer/indicadores/indice.htm>

World Food Programme (WFP)

<http://www.wfp.org/genderweb/>

Food and Agriculture Organization (FAO)

<http://www.fao.org/Gender/gender.htm>

<http://www.fao.org/sd/seaga/default.htm>

FAO Socioeconomic and Gender Analysis Programme

<http://www.fao.org/sd/WPdirect/default.htm>

Women and Population section of Sustainable Development Dimensions, a service of the Sustainable Development (SD) Department of the FAO International Fund for Agricultural Development (IFAD)

<http://www.ifad.org/pub/other/!brocsch.pdf>

International Food Policy Research Institute (IFPRI)

<http://www.cgiar.org/ifpri/themes/mp17/gender/2gender.htm>

International Labour Organization (ILO) tools for mainstreaming gender concerns

<http://www.ilo.org/public/english/region/asro/mdtmanila/training/unit5/refsrurl.htm>

Multilateral organizations

Asian Development Bank (ADB)

http://www.adb.org/Work/Policies/Gender_Devt/

Commonwealth Secretariat

<http://www.thecommonwealth.org/>

<http://www.thecommonwealth.org/gender> (under construction)

Inter-American Development Bank (IDB)

<http://www.iadb.org/sds/wid/>

Pan-American Health Organization (PAHO)

<http://www.paho.org/english/hdp/hdwmuje.htm>

Bilateral organizations

U.S. Agency for International Development (USAID)

<http://www.genderreach.com/default2.htm>

Japan International Cooperation Agency (JICA)

<http://www.jica.go.jp/E-info/E-earth/E-wid/Index.html>

Nongovernmental organizations

Women, Ink.

<http://www.womenink.org/>

WomenAction

<http://www.womenaction.org/>

Self Employed Women's Association (SEWA)

<http://www.sewa.org/>

ENERGIA International Network on Gender and Sustainable Energy

<http://www.energia.org/>

WIDNET

<http://www.focusintl.com/widnet.htm>

InterAction

<http://www.interaction.org/caw/index.htm>

Asia Foundation Global Women in Politics Program

<http://www.asiafoundation.com/programs/prog-area-wome.html>

Save the Children

<http://www.savethechildren.org/women.html>

International Center for Research on Women (ICRW)

<http://www.icrw.org/>

International Forum for Rural Transport and Development

<http://www.gn.apc.org/ifrtd/nletter/nleng64.htm>

Centre for Population and Development Activities (CEDPA)

<http://www.cedpa.org/>

Academia

Women in International Development at the University of Illinois at Urbana-Champaign

<http://server.ips.uiuc.edu/ips/wid/index.html>

Women's Human Rights Resources at the University of Toronto Faculty of Law

<http://www.law-lib.utoronto.ca/diana/>

Briefings on Development and Gender (BRIDGE) at the Institute of Development Studies, University of Sussex

<http://www.ids.ac.uk/bridge/index.html>

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Chapter 11

Environment

*Jan Bojö, Julia Bucknall, Kirk Hamilton, Nalin Kishor,
Christiane Kraus, and Poonam Pillai*

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11.1 Introduction

In the context of a Poverty Reduction Strategy Paper (PRSP), environment and poverty are linked in two major ways: (1) poverty alleviation should not damage the environment of the poor, which would only substitute gains in one area for losses in another, and (2) improving environmental conditions can help reduce poverty. The latter link is the focus of this chapter.

Environmental conditions have major effects on the health, opportunity, and security of poor people. Environmental activities can also provide effective ways to empower the poor. The many links between environmental management and poverty alleviation provide the rationale for systematic mainstreaming of environment in PRSPs and their associated processes.

This chapter aims to help PRSP teams integrate environmental problems and opportunities in their work and consider potential environmental and natural resource interventions in their poverty reduction strategies. The scope of environmental concerns is quite broad. It includes water supply and wastewater disposal, solid waste removal, indoor and urban air pollution, and natural resource issues such as land degradation, deforestation, and loss of coastal ecosystems and fisheries. However, it is important that “environment” does not only bring restrictions and problems to mind. Better environmental management provides many opportunities to build sustainable livelihoods. Natural resources can be put to more productive use to alleviate income poverty.

This chapter has a multisectoral perspective. However, while analysis needs to be multisectoral, many of the resulting interventions can be implemented by individual agencies. These can be responsible for sectoral programs (health, infrastructure, public works, agriculture) and need not be only environmental institutions.

This chapter first suggests that teams working at the country or subnational level begin by analyzing the linkages between poverty and environment. Then desirable but realistic targets need to be set with a focus on the main problems. The next stage is to evaluate possible public actions for reaching those targets on the basis of their expected cost-effectiveness, institutional capacities, and lessons from past experience. Finally, a system for monitoring the outcomes of the interventions must be put in place. The results are fed back into the next-stage analysis, and so on.

Section 11.2 of this chapter provides an overview of the ways in which environmental conditions can contribute to different kinds of poverty. Section 11.2.1 on environmental health gives a working definition of environmental health and disability-adjusted life-year (DALY); sketches a developing country panorama of the overall burden of disease, showing the considerable significance of environmental factors; and makes a case for a multisectoral approach to environmental health.

Section 11.2.2 focuses on environment and economic opportunity and emphasizes that poor people tend to be highly dependent on natural resources for their livelihood. The extent of this dependence may not be revealed by traditional income analysis. Property rights, communal or private, formal or informal, lay the foundation for natural resource utilization. Incentives by way of regulated prices, taxes, and subsidies send important signals to resource users about economic opportunities. Natural resource utilization should be seen not only in the context of limiting access and exploitation, but also from the perspective of sustainable opportunities for poverty reduction.

Section 11.2.3 on environment and security highlights the very significant cost of damage inflicted by natural disasters and how poor people face a relatively higher degree of insecurity because of such disasters.

Section 11.2.4 on environment and empowerment argues that when communities are empowered, natural resources can serve as a foundation for economic opportunity on which social capital can be built. Income-generating schemes can be combined with measures that enhance the environment, but communities are often heterogeneous and may harbor large differences in interests and attitudes.

Sections 11.3 and 11.4 summarize an approach to mainstreaming of environment in PRSPs that has been developed within the World Bank. Section 11.3 outlines an approach to analyzing the links between environment and poverty in order to define priorities both between sectors and within the environmental

field. Section 11.3.1 deals with understanding the environmental contribution to poverty reduction. This section raises a set of issues that need to be considered when mapping out this relationship.

Section 11.3.2 is dedicated to choosing targets for improvement and selecting the most effective public actions and reviews the prime areas of intervention and cost-benefit as well as cost-effectiveness analysis of interventions.

Monitoring and evaluating outcomes is the topic of section 11.3.3. The approach taken is one of integration with the overall monitoring and evaluation (M&E) framework for the Poverty Reduction Strategy (PRS). However, careful attention must be paid to the selection of indicators to capture changes in the environmental conditions that most affect the poor. This section offers specific suggestions for the selection of indicators and gives examples of choices for environmental health and natural resources management.

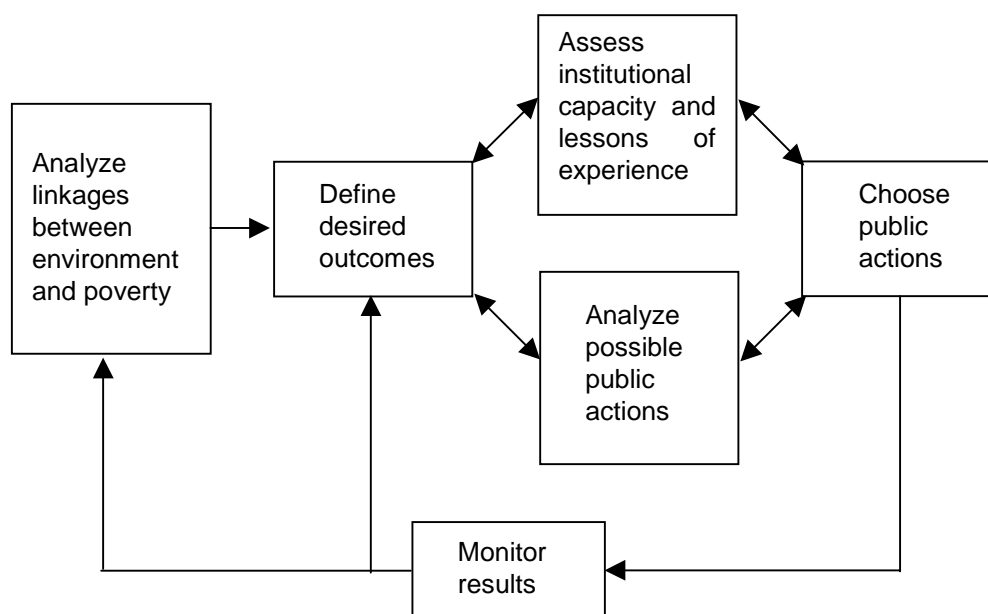
Section 11.4 presents good practice in mainstreaming environment from a review of 25 Interim Poverty Reduction Strategy Papers (I-PRSPs) and PRSPs. While many PRSPs give little attention to environmental matters and links to poverty, it is encouraging that the full PRSPs tend to score better in this respect. The references and technical notes to the chapter provide more details on particular topics.

The chapter therefore follows the basic stages of the approach embodied in the PRS initiative: developing a comprehensive understanding of poverty, choosing the most effective public actions to reduce poverty, and monitoring outcomes and impacts (see figure 11.1). By design, these stages cut across sectors and development themes in order to facilitate the socioeconomic and policy analyses that will guide public action aimed at reducing poverty.

We consider direct environmental contributions to poverty reduction rather than methods of ensuring that poverty reduction activities are environmentally sustainable. The latter are well elaborated elsewhere.¹

Some aspects of the broader environmental agenda—conservation of natural areas, biodiversity, preserving the global commons—may not be primarily targeted at poverty reduction, but can result in positive poverty side benefits. For example, several programs in southern Africa give local communities a stake in conserving wildlife by sharing tourist revenues. Costa Rica's Certifiable Tradable Offsets program provides revenue to smallholders in return for conserving forest cover, thereby sequestering carbon. The clearing of invading alien species in South Africa provides both environmental benefits and poverty alleviation at the same time.

Figure 11.1. Process for Preparing Environmental Sections of a Poverty Reduction Strategy



Conversely, many environmental interventions aimed at poverty outcomes will also yield benefits for the natural environment. Cleaner water, cleaner air, and better sanitation will not only reduce the burden of disease for the poor but will also produce a more enjoyable environment. Community-based forest management may serve to both increase incomes for the poor and provide environmental services. Actions to reduce the likelihood of natural disasters, such as institutional arrangements to preserve upland forest, also conserve natural areas.

In other instances, however, tradeoffs between the environment and livelihoods for the poor may be inevitable—for example, where natural areas are converted to agricultural production. The most difficult tradeoffs concern long-term versus short-term benefits. In many instances, exploiting a natural resource may have short-run poverty benefits, but these actions may entail long-run costs in loss of biodiversity or accumulation of greenhouse gases. A good environmental assessment, fed into a cost-benefit analysis, can underpin what is ultimately a political decision about the right tradeoff in a particular situation.

Market failures and policy distortions often bias exploitation decisions against consideration of environmental values. Poorly defined or enforced property rights can create an incentive for quick exploitation and disregard for external impacts. Subsidies of natural resource extraction encourage their use beyond what their full costs to society would warrant.² When local users do not manage local resources, the full benefits of sustainable management do not accrue to them. These are only some of the reasons why we cannot expect environment to take care of itself as an automatic result of economic development.

11.2 Setting the Stage

A broad definition of poverty extends beyond income or consumption to include inequality, health, education, and vulnerability. These dimensions of poverty in turn affect the elements of well-being: security, empowerment, and opportunity. The “Overview” to this book elaborates on these dimensions.

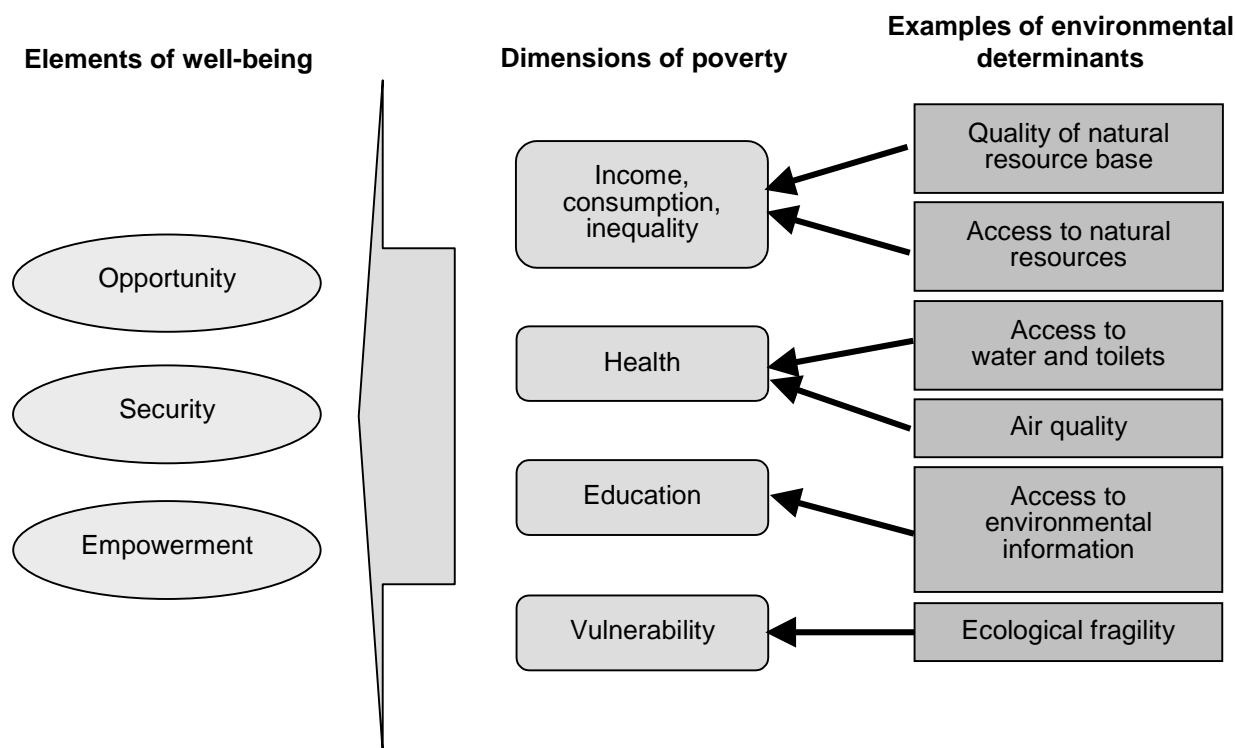
Figure 11.2 shows how opportunity, security, and empowerment relate to various dimensions of poverty. It also indicates typical environmental determinants of poverty. The dimensions of poverty and its determinants can fit into several of the groupings (for example, health affects people’s income and security). We focus on the dimensions of poverty that are most affected by the environmental agenda, namely, health, economic opportunity, security, and empowerment. In each country, these dimensions of poverty should be identified and grouped in a way that best accords with local conditions.

11.2.1 Environment and health

This section provides a working definition of environmental health and DALY; sketches a developing country panorama of the overall burden of disease, showing the considerable significance of environmental factors; and makes a case for a multisectoral approach to environmental health.³

Environmental health can be defined as all activities that prevent health risks through control of human exposure to (a) biological agents, such as bacteria, viruses, and parasites; (b) chemical agents, such as heavy metals, particulate matter, pesticides, and fertilizers; (c) disease vectors, such as mosquitoes and snails; and (d) physical and safety hazards, such as traffic accidents, fire, extremes of heat and cold, noise, and radiation (Lvovsky and others 1999). In comparison, the World Health Organization (WHO) does not include traffic accidents and insect vectors in its definition, but it does include deforestation and land degradation. (Listorti and Doumani 2001).

With such a broad panorama of concerns, the issue of setting priorities becomes critical. We need a measure for the magnitude of the problems as well as a tool to measure the level of improvement from interventions. The use of DALYs as a measure of the burden of disease has provided a consistent basis for systematic comparisons of the magnitude of health impacts and the cost-effectiveness of alternative interventions designed to improve health. Box 11.1 explains how DALYs are calculated.

Figure 11.2. Dimensions and Determinants of Poverty

Source: Adapted from Bucknall, Kraus, and Pillai (2001).

Table 11.1 gives a sense of the magnitude of the health effects of various environmental problems. The sum of all causes is less than 100 percent, as only DALYs related to environmental causes are considered. The impact of a poor environment on health is significant, particularly in Sub-Saharan Africa.

While countries differ considerably, poor water supply and sanitation stands out as the top global concern. The WHO estimates that 3.3 million people die every year from diarrheal diseases, and at any one time there are 1.5 million with parasitic worm infections stemming from human excreta and solid waste in the environment. They estimate that more than 3 billion people are without adequate means of disposing of excreta. That said, it should be noted that indoor air pollution—a problem that is much less highlighted—also stands out as a very significant source of poor health.

At the county level, it is possible to obtain a reasonable understanding of causal relationships between environmental conditions and health outcomes and the relative contribution of environmental conditions to health. Several recent studies have found the standard of water and sanitation to be closely related to child health (Jalan and Ravallion 2001). One study in India found that environmental causes were responsible for 20 percent of the burden of disease (about the same as malnutrition). Within that, water and sanitation are responsible for 11 percent of the total burden of disease, and indoor air pollution for 6 percent. (Hughes, Dunleavy, and Lvovsky 1999; see also chapter 18, “Health, Nutrition, and Population”).

There are complex interactions between health outcomes and factors such as water supply, as illustrated by box 11.2. For example, access to safe water may affect mothers’ choices about breastfeeding. If

Box 11.1. DALYs as a Measure of the Burden of Disease

DALYs are a standard measure of the burden of disease. They combine life-years lost because of premature death and fractions of years of healthy life lost as a result of illness or disability. A weighting function that incorporates discounting is used for years of life lost at each age to reflect the different social weights usually given to illness and premature mortality at different ages. The combination of discounting and age weights produces the pattern of DALY lost by a death at each age.

Source: Murray and Lopez (1996).

Table 11.1. Burden of Disease from Major Environmental Risks

<i>Environmental health group</i>	<i>Percent of all DALYs in each country group</i>							
	<i>Sub-Saharan Africa</i>	<i>India</i>	<i>Asia and Pacific</i>	<i>China</i>	<i>Middle East and North Africa</i>	<i>Latin America</i>	<i>Former socialist economies of Europe*</i>	<i>All least developed countries</i>
Water supply and sanitation	10	9	8	3.5	8	5.5	1.5	7
Vector diseases (malaria)	9	0.5	1.5	0	0.3	0	0	3
Indoor air pollution	5.5	6	5	3.5	1.7	0.5	0	4
Urban air pollution	1	2	2	4.5	3	3	3	2
Agro-industrial waste	1	1	1	1.5	1	2	2	1
All environmental causes	26.5	18.5	17.5	13	14	11	6.5	18

*Excluding Central Asia and Caucasus.

Source: Lvovsky and others (1999).

water is available, they may choose either not to breastfeed or to breastfeed for a shorter period of time. Hence, health interventions need to anticipate behavioral responses to changes in infrastructure and may need to combine such measures with a health education component.

11.2.2 Environment and economic opportunity

This section makes the following main points:

- Poor people tend to be highly dependent on natural resources for their livelihood. The extent of this dependence may not be revealed by traditional income analysis.
- Property rights, communal or private, formal or informal, lay the foundation for natural resource utilization.
- Incentives by way of regulated prices, taxes, and subsidies send important signals to resource users about economic opportunities and may determine sustainability.
- Natural resource utilization should be seen not only in the context of limiting access and exploitation, but also from the perspective of opportunities for sustainable economic opportunities.

Analysis of the relationships between the environment and economic opportunity fits well with the concept of sustainable livelihoods adopted by a number of development agencies. The U.K. Department for International Development (DFID) defines livelihood as comprising “the capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base” (DFID 1999, adapted from Chambers and Conway 1992).

Box 11.2. Working Across Sectors: Rural Water Supply and Sanitation

In the case of environmental health, it is particularly important to work cross-sectorally. For example, research has consistently shown that health benefits from improving drinking water are less pronounced than those from sanitation (Klees, Godinho, and Lawson-Doe 1999). Benefits from improving drinking water quality occur only when sanitation is improved and water quantity is optimal. Increases in water quantity do more to improve health than improvements in water quality because of the improved hygiene that goes along with it. Hygiene education is often required, though, before communities can realize the potential health benefits (Klees, Godinho, and Lawson-Doe 1999).

Hand washing is very important in reducing water-related diseases. A worldwide study of 144 water and sanitation interventions found that improved water and sanitation services were associated with a median reduction of 22 percent in diarrhea incidence and 65 percent in deaths from diarrhea. But improved excreta disposal and hand washing can reduce under-five mortality rates by 60 percent, cases of schistosomiasis by 77 percent, intestinal worms by 29 percent, and trachoma by 27–50 percent (Esrey and others 1991).

Environmental conditions contribute to people's economic opportunities in many ways, particularly in rural areas.⁴ The relationships are site specific and often difficult to quantify: the extent of soil erosion may have no immediate effect on people's well-being, or it may reduce their economic opportunity considerably. Institutions, policies, characteristics of the community, gender relations, and other factors will mediate the effects. Hence, detailed qualitative information is needed in addition to available quantitative studies and surveys to assess who are the poor, what is the character of poverty in a given context, and the extent to which environmental factors contribute to or detract from people's livelihoods.

The poor depend on natural resources—owned either by themselves or the community or that are open-access property—for farm and grazing land, wild food, fish, fuel, fodder, and other necessities. These resources may be the primary source of livelihood or they may supplement the family's daily needs or income. Cavendish's (1999) study from Zimbabwe illustrates these general statements with specific numbers. The study measured the nature and extent of "environmental income": livestock fodder, fuelwood, natural fertilizers, wild fruits, vegetables and insects, gold from panning, wood for carpentry, grasses for baskets, and so forth, which added up to about 100 items in total. Cavendish collected his data during two separate agricultural years in four villages in Zimbabwe. The number of households interviewed was close to 200 in 29 villages.

The graphs below (figures 11.3 and 11.4) show the level of dependence on environmental income. Two facts stand out: (1) the poorest are most dependent on environmental income in relative terms, but (2) the somewhat better-off use more natural resources in absolute terms. These findings pose a dilemma for policymakers: interventions to enhance natural resources management (NRM) are of great importance to the poor but may actually benefit the less poor unless carefully targeted. The findings also show that environmental pressure will not automatically diminish with greater prosperity. On the contrary, it would most likely lead to further investment in livestock that draws even more on the limited grazing resources of these villages.

Other empirical evidence reinforces the view that the poor are often dependent on common property resources (CPRs) for their livelihood. A survey of 82 villages in India found that the poor obtain 66–84 percent of their fodder from CPRs in some states. CPRs also provided 14–23 percent of the income of the poor and 137–196 days of employment per poor household (Jodha 1986). Since the poor often acquire a significant part of their income and consumption from natural resources, their ability to meet their daily needs is also affected when the quality of natural resources degrades.

Figure 11.3. Income Shares by Quintile and Major Income Source

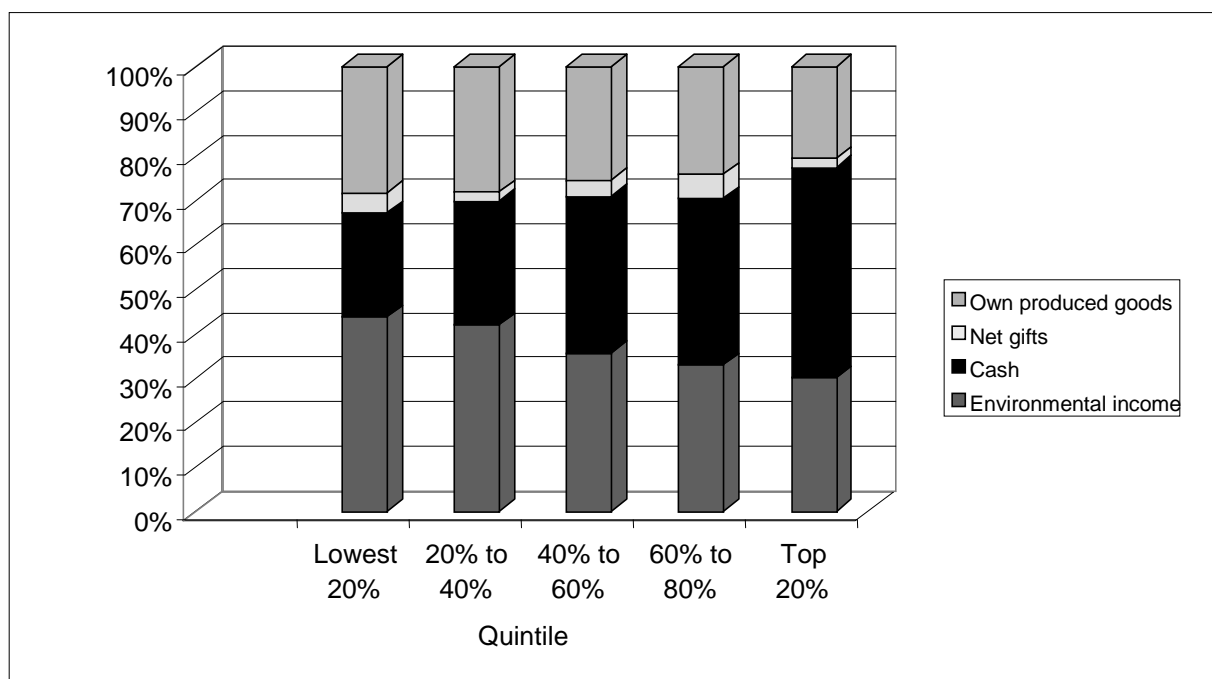
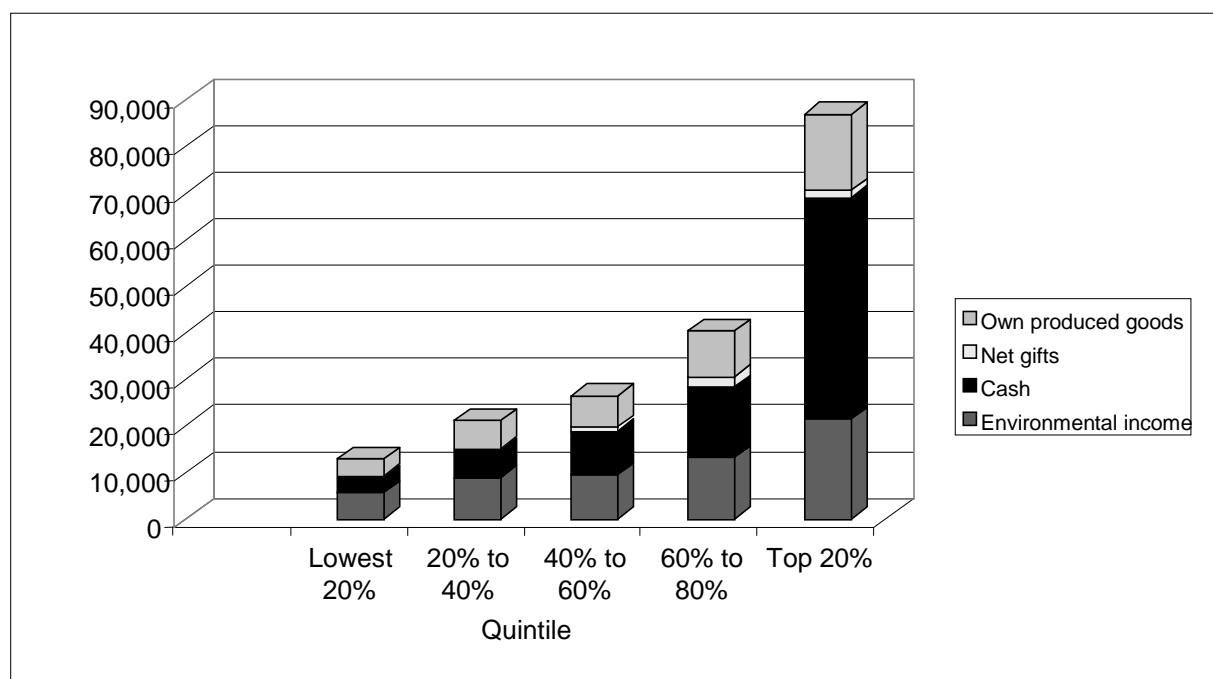


Figure 11.4. Income in Z\$ by Quintile and Major Income Source

Poor rural women in developing countries are disproportionately affected by the degradation of natural resources because they tend to be primarily involved in the collection of fuel, fodder, and water. Depending on the availability of biomass resources, collection of fuel and fodder may take between two and nine hours. In Lombok, Indonesia, and in some areas of Kenya, women spend seven hours each day cooking and collecting dead wood or agricultural residues as fuel (Aristanti 1997). They often have to walk longer distances and spend more time and energy to collect fuelwood as a result of deforestation. This reduces their time spent on income-generating activities, indirect income through crop production, and household responsibilities, and may also have a negative effect on health.

Prolonged searching for ever more scarce fuelwood eats up women's time, taking away time and energy from productive activities such as childcare. It can also have direct effects on their health. For example, a 1996–97 study involving over 1,000 fuelwood-carrying women in 10 locations across 12 districts in Uttaranchal, India, found that the proportion of miscarriages was 30 percent, five times higher than the average rate reported in the National Family Health Survey of 1992–93. During pregnancy, the women carry heavy loads of wood, manure, and grass, a factor contributing to the high rate of miscarriages (Dasgupta and Das 1998).⁵

Property rights that govern access to these resources play an important role in maintaining productivity and enabling the equitable use of natural resources. A country's PRSP needs to survey how property rights are distributed across the main types of natural assets: land, vegetation, and water. Formal title and full transferability is not necessarily required for good husbandry, but perceived security of use will influence how people make decisions about exploiting and investing in natural resources. Nor is privatization of property rights a guarantee of sound environmental stewardship; the owner may choose to deplete the resources and move elsewhere with profits if that is possible. Inequality in the distribution of property rights may also trap people in poverty. The legacy of colonialism and apartheid has left some countries with property rights that force poor people to exploit marginal lands.

The relationships between the natural resource conditions and the income or consumption of households are not straightforward. Sometimes poverty can force people to exploit natural resources unsustainably, for example, by forcing them to cultivate on steep slopes, which can lead to erosion and declining yields over time. But increasing income can also lead to overexploitation, for example, by allowing the poor to buy chain saws or bigger fishing boats. The relationships also vary over time. A community can see its income or consumption increase in the short term if it mines natural resources, for

example, by felling a mature forest. Over the longer term, however, those practices cannot be maintained. It is therefore helpful to build on a country-specific analysis of those links that are the most important given the income level, income distribution, and nature of natural resource exploitation.

The relationships between macroeconomic policy, structural reforms, and the environment are also complex. Changes in relative prices and rates of growth in the economy are likely to affect the environment through, for instance, changes in resource extraction or pollution emissions. Trade liberalization can also harm certain groups of poor people that depend on natural resources. For example, artisanal fishing communities can see fish stocks decline if liberalization brings export opportunities that increase commercial fishing activities. However, it can also open up new export markets for activities that are environmentally benign and lead to substitution of erosive annual food crops with perennial tree crops for export.⁶

One example of links between economic policies and natural resource degradation can be taken from Colombia. Heath and Binswanger (1996) found that public investment, the trade regime, credit policies, taxes, and subsidies all tended to favor large livestock farms in fertile valley bottoms. In contrast, most poor farmers were forced to carve out their living on steep slopes, resulting in deforestation and erosion. Poverty and environmental degradation went hand in hand, as enhanced profitability for large livestock farmers made the best land unaffordable to the poor. Heath and Binswanger concluded that the impact of policies is to “constrain the poor’s access to land and encourage environmental degradation.”

Environment represents not only a set of problems but also a set of opportunities. Nature-based tourism is a mainstream economic activity in many countries. The Kenya PRSP notes that foreign tourism constitutes the second largest source of foreign exchange, and most of that is based on the attraction of natural resources such as pristine beaches and exotic wildlife. For some local poor groups, even minimal tourism can bring in considerable resources. The Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) project in Zimbabwe, the Lupande project in Zambia, and the Herero Community Guards project in Namibia are projects that aim to provide local groups with an economic rationale for conservation.⁷

Christie and Compton (2001) notes that 80 percent of the world’s poor live in 12 countries, and that in 11 of these tourism is significant or growing. Of the 100 poorest countries, tourism is significant in almost one-half of the low-income countries and in virtually all the lower-middle-income countries. “Significance” is defined as accounting for more than 2 percent of gross domestic product or more than 5 percent of exports. Much of this tourism is dependent on an attractive natural environment. It also offers numerous job opportunities for people without much formal training.

11.2.3 Environment and security

This section highlights

- the significant cost of damage inflicted by natural disasters, and
- the manner in which poor people face a relatively higher degree of insecurity because of such disasters.

While all members of a community suffer from external shocks—financial, environmental, social, and others—the poor are often disproportionately affected because they have the least ability to cope. This section focuses on the vulnerability of the poor to severe environmental changes, a major issue for developing countries. In 1998 total losses from natural disasters in developing countries amounted to approximately US\$40 billion. In other words, these losses amounted to some 70 percent of net official development assistance. (Sharma and others 2000). Poor countries suffer more from environmental shocks than better-off countries. For example, in 1992 a cyclone hit Bangladesh and caused 100,000 deaths. The same year, Hurricane Andrew, a storm of similar intensity, hit the southeastern coast of the United States and caused 32 deaths.

Poor people are vulnerable to environmental shocks at both the macroeconomic and microeconomic levels. Macroeconomic-level shocks affect an entire area, a whole country, or a whole group of countries. Cyclones, earthquakes, droughts, and the like affect everyone and can be severe enough to cut several

points off a country's gross domestic product. Hurricane Mitch in 1998 is estimated to have caused total damages to Honduras's capital stock, valued at replacement cost, equivalent to one year's gross domestic product. Honduras's poverty rate also increased (Government of Honduras 2000). The poor have less ability than the nonpoor to cope with environmental shocks. They are often dependent on more marginal areas, possess fewer assets to sell that would enable them to smooth their consumption, have fewer options for gaining income elsewhere, and frequently receive less information about impending disasters or have capacity to respond to whatever information they do have.

Some evidence suggests that environmental shocks can be worse for the poor than even severe economic shocks. Analysis of the recent economic crisis in the Philippines, for example, found that the extreme weather associated with El Niño was responsible for a greater share of the overall increase in poverty (47–57 percent of the total impact on measures of incidence, depth, and severity of poverty) as compared to the labor market shock, which by itself accounted for 10–17 percent of the total poverty impact. The labor market shock reduced inequality, but the El Niño shock *increased* inequality. The ability of the poor to protect their consumption was more limited than that of the nonpoor (Datt and Hoogeveen 2000).

Microeconomic-level environmental shocks affect smaller numbers of people in both rural and urban areas. Because poor people tend to live in more marginal areas, their houses and land may be more prone to drought, flooding, landslides, subsidence, disease, and the like. Qualitative studies of poor people's perceptions of poverty show clearly the disruption, health damage, and economic cost of the effects of poor people's vulnerability to microeconomic-level environmental shocks. Women are often particularly vulnerable and most likely to bear the consequences of reduced food consumption, disease, and the need for rebuilding shelter.

Environmental disasters can affect both short- and long-term poverty. Disasters clearly exacerbate economic deprivation in the short term; they can also compromise a household's long-term economic well-being if survival requires the sale of assets, such as those the family had planned to use to finance their children's education.

Increasingly, environmental degradation and natural disasters cause their victims—many of whom are poor—to leave their homes in search of better conditions elsewhere. Environmental refugees pour into megacities, where they increase the number of poor people living on marginal and sometimes disaster-prone land. Global climate change is expected to increase the frequency of extreme climatic events.

11.2.4 Environment and empowerment

This section covers the following points:

- When communities are empowered, natural resources can serve as a platform of economic opportunity onto which social capital can be built.
- Income-generating schemes can be combined with measures that enhance the environment.
- Communities are often heterogeneous and may harbor considerable differences in interests and attitudes.

Environmental activities can contribute to the empowerment of local people. Local communities that are empowered to participate in decisionmaking on environmental resources can help themselves to maintain their livelihoods, gain equitable access to resources, and use these resources sustainably. A large-scale example of this is the Joint Forest Management Program in Andhra Pradesh, India, discussed in box 11.3.

Another example of empowerment in NRM is the Niger Household Energy Project, launched in 1989 with the aims of rationally managing the fuelwood supply around main urban centers to secure sustainable income for poor people and of protecting the environment, conserving fuelwood, and improving environmental health by introducing more efficient stoves and fuel substitution. The project introduced a differential tax on fuelwood: higher for unmanaged natural woodlands and lower for the

Box 11.3. Empowerment: Joint Forest Management in Andhra Pradesh, India

Since 1992 Andhra Pradesh has embarked on an ambitious program of joint forest management. As of March 1998, some 3,665 forest protection committees had been formed at the village level, with oversight of almost 900,000 hectares, of which some 170,000 hectares had been treated. This movement is said to engage about 650,000 people, and 150 nongovernmental organizations (NGOs) are associated with the implementation of joint forest management in Andhra Pradesh.

The World Bank is already involved in forest rehabilitation and conservation through the Andhra Pradesh Forestry Project, with a credit from the International Development Association (IDA) of US\$77.4 million. This project was launched in 1994 with the main objectives of supporting the regeneration and afforestation of degraded forests, plantation forestry, expansion of community forestry, and research and protected areas management. Since reconstruction in early 1997, it has achieved good results in terms of regeneration of degraded forests and joint forest management support.

Sources: World Bank Andhra Pradesh Forestry Project documents.

controlled areas under community management. At the heart of this project is empowerment of the poor, as villages are given management authority over local forests on a 60-year franchise from the government. The project staff notes that “ownership of the project by the people is essential for the project’s success.” The project also provides literacy and accounting training, and villagers have responsibility for settling any disputes concerning rights to forested areas. Thus social capital is built along with rising incomes and environmental protection (World Bank 1995).

Communities can be marked by social differences and relations of power and inequality around factors such as gender, race, caste, class, and so on. It is important to consider local capacity constraints in managerial capacity and not push reforms too far, too quickly. Any attempt to empower local communities and target public expenditures to them should take into consideration these relationships of inequality in addition to the interests of different segments of the community. The example from India in box 11.4 illustrates this point.

Forming a committee to manage common property resources is no guarantee of success. Some committees work and others do not. What makes a village committee successful? Stalker (2001) suggests that four factors are associated with success:

- **Transparency.** People in a community need to understand how decisions are made and whether other people in the program are sticking to the rules. Transparency comes from holding open meetings, sharing minutes of meetings, and publicly penalizing people who fail to follow the rules.
- **Participation.** A critical mass of community members must understand the potential benefits of the scheme and participate in setting project rules.
- **Inclusion.** Who participates and who benefits from the scheme is important. Committees should have conflict resolution mechanisms, divide the benefits to include different community groups, and allow different groups opportunities to influence decisionmaking.
- **Ownership.** The community must feel a sense of ownership of the resource, believing it is their resource to manage and maintain over the long term.

Box 11.4. Women’s Empowerment and Village Water Supply

In villages in the arid region of Vidarbha, Maharashtra, India, women and girls spend much of the day walking to fetch the water required for their household. The village recently formed women’s organizations (*mahila mandals*) that allowed them to share knowledge about the time they spent fetching water and about possible links between the quality of water and their health. Through these organizations, they realized that not only they and their neighbors had little access to safe water, but that the problem was pervasive in all 10 surrounding villages. This created strong community awareness. The women formed alliances with the female members of the local village council (*panchayat*), held protest marches, and performed street plays. One result of their efforts was to pressure the *panchayat* to repair malfunctioning tubewells and revive a running-water supply scheme. As a result of the women’s efforts, within six months 17 community wells were deepened in eight villages, and pipelines were laid for drinking water in two villages. The women also initiated programs for social forestry and rainwater harvesting to protect the environment. For the first time in the recent history of these villages, there was sufficient safe drinking water in seven villages during the summer months of 1997.

Source: Devasia (1998).

Decentralization and local empowerment are not a guarantees for environmental stewardship. Indeed, the opposite may result: devolution of power to the local level has increased pressure on forests in view of the income, employment, and revenue needs of local government and their constituents (World Bank 2000). Hence, it is important not to take a romantic view of community empowerment as the panacea for poverty alleviation and environmental protection. The approach to “joint” forest management in India is an attempt to balance the short-term and long-term needs (see box 11. 3).

Globalization and liberalization of markets have also increased incentives for exports of forest and other natural resource-based products. Hence, when tradeoffs between environmental conservation and poverty reduction are resolved locally, they may result in short-term exploitation. However, this will be mitigated by two factors: (1) local resource control also means that the fruits of sustainable management and reinvestment in natural resources will accrue locally, and (2) financial transfers from the outside can make a big difference as to how these tradeoffs are resolved, especially in critical ecosystem areas.

11.3 Environmental Contributions to the PRSP

This section sets out the relevance of the environment to the PRSP at three key stages: poverty diagnostics, choosing the most effective and efficient public actions to address the identified problems, and monitoring and evaluation.

11.3.1 Understanding poverty links

This section raises the issues that need to be considered when mapping out the relationship between poverty and environment. Teams should survey available information to get an idea of where environmental problems and poverty overlap. It will then be important to gain an understanding of particular problems in particular areas. This may involve reading existing case studies or commissioning small, rapid surveys of the most vulnerable areas. Technical note J.2 gives examples of tables outlining the links between environmental conditions and outcomes.

Suggestions as to the types of information necessary to consider the links between environment and poverty are listed below under the headings of health, economic opportunity, security, and empowerment. Much of this information may be available through analyses done for other sectors, but some may have to be collected in surveys targeted at the poor.

Environment and health

- ㊟ Prevalence of and deaths caused by diarrhea and vector-borne diseases
- ㊟ Prevalence of and deaths caused by acute respiratory infections
- ㊟ Coverage of safe water supply
- ㊟ Distribution of water sources
- ㊟ Average water use (liters per capita per day)
- ㊟ Water uses
- ㊟ Transport of water
- ㊟ Time spent collecting water
- ㊟ Those who collect water
- ㊟ Hand washing typical practices
- ㊟ Coverage of sanitation
- ㊟ Kind of toilets or latrines the community has
- ㊟ Use of coal, wood, or dung as primary fuel
- ㊟ Share of households using improved stoves or cleaner fuel
- ㊟ Coverage of urban solid waste collection

- Levels of particulate matter suspended in urban air
- Levels of airborne lead or lead in foodstuffs

Environment and economic opportunity

- Percentage of poor people who depend directly on natural resources for their livelihood and during times of crisis
- Influence of macroeconomic policies on local access to natural resources
- Distribution and type of property rights to natural resources
- Changes in natural resources
- Soil quality, vegetation, and the availability of game, fish, and other important sources of nutrition in nature
- Conflicts in use of natural resources
- Time spent collecting fuelwood and trend over time
- Relationship between population growth and resource degradation

Environment and security

- What is the frequency of hurricanes, cyclones, floods, landslides, and drought?
- How effective is the early warning or forecasting system?
- Does the country have effective emergency response systems?
- Do the poor live in the most vulnerable areas?
- What are the housing conditions of the poor?
- Do building codes exist, and are they enforced?
- Do formal or informal insurance schemes exist?
- In what form do people keep their savings?

Environment and empowerment⁸

- To what extent are local groups organized?
- What institutions do local communities use to manage resources?
- Do certain segments of the local community have a greater voice than others?
- To what extent are poor people aware of their rights and of policies and legislation?
- What are their sources of information?
- What are their links with local NGOs and government officials?
- Do environmental NGOs exist at a national level or local level?
- Do they focus on issues of concern to poor people, and are poor people involved?
- Are NGOs effective?

Collecting and analyzing information

The relationship between environmental degradation and poverty can never be completely characterized by the available data. Table J.1 in technical note J.4 gives examples of useful data sources. Particularly important are the data measured in Demographic and Health Surveys, which typically measure under-five mortality and access to water and sanitation in both rural and urban areas. Mapping these data into wealth quintiles provides important information on the distribution of environment-linked morbidity, helping to build the case for investments in environmental infrastructure for poor communities. In the longer run, it will be important to put in place the means to improve data collection to cover key priorities by, for example, adapting ongoing survey instruments, coordinating ongoing research, or

commissioning new studies. In addition, the health, nutrition, and poverty information sheets provide valuable information on many environmental features related to poverty (see chapter 18, “Health, Nutrition, and Population”).

The questions and relationships highlighted in this section are complex and vary by circumstances and over time. Therefore it would be wise to quantify when possible and rely on qualitative research methods in circumstances that are not amenable to quantitative data collection. The PRSP could then put in place systems to quantify the most important variables at later stages.

11.3.2 Choosing the most effective public actions

Once the PRSP team has gained a broad understanding of the most important environmental factors relating to poverty, they will want to consider the public actions that are likely to be most effective and cost-efficient in changing these environmental conditions. This section⁹ therefore reviews the prime areas of intervention and the different ways to analyze whether these should be undertaken.

Prime areas of intervention

Public action broadly comprises policy reform and public spending and taxation. Both categories of interventions are important, and specific country situations will guide the choice of one or the other. The objective of this stage in the poverty reduction strategy is to rank public policies and actions according to their likely benefits and costs.

The process will be iterative (see figure 11.1 above) and will depend on the scale of the problem, the cost of intervention, institutional capacity for implementation, and the resulting benefit. If, for example, the most important problem is one that public action can do little to affect, it may be better to focus more resources on a problem that is less important but easier to address. Public actions can involve both modifying existing interventions and developing new ones. Interventions may aim to tackle the following, a number of which are also covered in other chapters.

- ***Health damage*** related to the environment can be reduced by combining increased coverage of safe drinking water and latrines with education on sanitation, introducing fuel-efficient stoves to reduce indoor air pollution, encouraging fuel switching to reduce levels of particulates and lead in urban areas, and taking measures to reduce standing water where disease vectors breed.
- ***Increase economic opportunity*** through improved natural resource management by removing policies that encourage short-term “mining” of renewable natural resources, developing community-based watershed management programs to increase safe water supply, enhancing the supply of fuelwood and nontimber forest products, reducing land degradation, and providing security in access to natural resources.
- ***Reduce vulnerability*** to natural disasters by stabilizing land on slopes above crowded areas in cities prone to flooding, improving the natural hazard forecasting system, and ensuring that the information is available to poor groups and that they have the ability to respond to it. Policies to reduce vulnerability may also include emergency income transfers and access to insurance and microcredit (see chapter 17, “Social Protection”).
- ***Empower excluded groups*** by developing community-based interventions related to management of local natural resources, such as forests, grazing areas, water supply, sanitation, or soil management, including environmental information in school curricula so that people understand the relationships between their well-being and environmental conditions.

Assessing expected costs and benefits

There is an extensive literature on methodologies for calculating the costs and benefits of environmental changes. Although the quantification may be uncertain, cost-benefit analysis offers a systematic way to consider the best available information in a coherent format. It can therefore impose some rigor on the debate and pave the way for what ultimately must remain political decisions. Even the benefits of public

interventions to reduce vulnerability can be valued, in principle, by damage costs avoided (see, for example, Kramer, Sharma, and Munasinghe [1995] on the benefits of flood control).

Actions to reduce health damage can be valued by (a) gains in productivity among the affected population, (b) savings in medical cost, or (c) measuring the willingness to pay for the improvements among the affected population. Examples of this analysis can be found for water supply (Toma Enterprises Ltd. 1996; Whittington, Okorafor, and others 1993) for sanitation (Whittington, Lauria, and others 1993) for both water and sanitation (Hughes, Dunleavy, and Lvovsky 1999), and for air pollution abatement (Lvovsky, Hughes, and Maddison forthcoming).

Estimating the distributional consequences of interventions is more difficult, that is, exactly who wins and who losses.¹⁰ It is possible to allocate distribution of benefits and costs if the specific “weights” attached to these groups can be determined. In a PRSP context, impact of each intervention should ideally be evaluated: (a) the percentage of the benefits that accrue to the poor and (b) the value of the benefits to the poor relative to household income or consumption.¹¹

Cost-benefit analysis of public actions should take into account potential synergies among sectors. For example, better health outcomes may be achieved through public policy actions in several sectors, ranging from education and health (improving access to health facilities) to environment (improving water quality and sanitation and reducing outdoor and indoor air pollution).

In other cases, the most effective interventions may involve tradeoffs either within groups in a given community or between communities. For example, a rural livelihoods project based on charcoal production may increase household overall income but require that women walk farther to gain firewood. It is important to be aware of potential unintended consequences. Similarly, it is crucial to consider people’s well-being over the long term. These impacts can be weighted together by use of a discount rate. This can also be varied to reflect different preferences to determine how it changes the outcome of the analysis. That is one example of a sensitivity analysis, which should form part of any cost-benefit analysis.

Cost-efficiency analysis

Often a full assessment of the benefits of an intervention is not feasible, but giving consideration to cost-efficiency is possible and remains important. For example, for environmental health interventions, it may be difficult to agree on the value of saving a DALY but easier to agree on the importance of achieving that goal as efficiently as possible.

Assessments of the burden of disease provide a first step in establishing priorities. However, each problem should not simply be allocated resources according to its size. Within the categories of major problems, it becomes necessary to assess the cost-efficiency of interventions, that is, getting the most out of limited resources. Here, the DALY concept proves helpful again, as it allows comparison of the cost per DALY saved by different interventions. Table 11.2 provides some examples.

Although cost-efficiency will vary across countries and even locally, this type of comparison is useful to keep in mind when designing interventions. If it is not already available, the PRSP work could take the initiative for country-specific studies to allow such comparisons.

Table 11.2. Cost-Efficiency of Environmental Health Interventions

<i>Measure</i>	<i>US\$ per DALY saved</i>
Hygiene behavior change	20
Malaria control	35–75
Improved stoves (indoor air)	50–100
Improved sanitation	120
Improved quality of urban air	most > 1,000

Source: Adapted from Lvovsky and others (1999).

11.3.3 Monitoring outcomes and evaluating interventions

This section extends the general framework presented in chapter 3 to deal with monitoring and evaluation of interventions that are particularly relevant from a poverty-environment perspective. In particular, this section will discuss the choice of useful indicators.¹² To briefly recap the key terms: intermediate indicators can be either input indicators (the quantity and quality of resources used for an intervention) or output indicators (the quantity and quality of works, goods, and services produced as a result of the inputs); final indicators comprise outcome indicators (the quantity and quality of the results achieved through the use of outputs)¹³ and impact indicators (the long-term changes in living conditions among the beneficiaries).

A key question is how best to choose indicators. The points below offer some generic guidance for the selection of indicators, which are also applicable from an environmental perspective:¹⁴

- relevance for the objectives of the intervention;
- realistic collection or development costs;
- clear cause-and-effect links;
- high quality and reliability; and
- appropriate spatial and temporal scale.

A major area of intervention discussed in this chapter is environmental health. Obviously, the choice of indicators here must be guided by professional health specialists as well as statistical expertise. Some suggestions are provided here, focusing on the major illnesses affecting the poor: malaria, respiratory infections, and diarrhea. In the context of the PRSP, it would be important to collect the data per income group in, for instance, quintiles.

Table 11.3. Selected Environmental Health Indicators

<i>Environment-related illness</i>	<i>Intermediate indicator</i>	<i>Final indicators</i>
Malaria	<ul style="list-style-type: none"> ➤ Proportion of households having at least one treated bednet ➤ Percentage of health facilities reporting no disruption of stock of antimalarial drugs (as specified by national health policy) for more than one week during the previous three months 	<ul style="list-style-type: none"> ➤ Malaria death rate (probable and confirmed) among target groups (under-five and others) ➤ Number of malaria cases, severe and uncomplicated (probable and confirmed), among target groups ➤ Percentage of patients with malaria getting treatment at health-facility and community levels within 24 hours
Respiratory infections	<ul style="list-style-type: none"> ➤ Availability of ventilation in cooking area ➤ Children sleeping in cooking area ➤ Percentage of households using clean fuel and improved stoves 	<ul style="list-style-type: none"> ➤ Prevalence of acute and chronic respiratory infections ➤ Prevalence of chronic lung disease
Diarrhea	<ul style="list-style-type: none"> ➤ Access to safe water (private and public) ➤ Access to sanitation (private and public) ➤ Hours per day of piped water ➤ Quantity of water per capita per day ➤ Time taken and distance involved in collecting water ➤ Disposal practices of children's feces ➤ Percentage of child caregivers and food preparers with appropriate hand washing ➤ <i>E. coli</i> per 100 milliliters of water consumed by source ➤ Persons per room of housing 	<ul style="list-style-type: none"> ➤ Prevalence of diarrhea
Broad indicators	<ul style="list-style-type: none"> ➤ Public health expenditures 	<ul style="list-style-type: none"> ➤ Infant mortality rate ➤ Under-five mortality rate ➤ DALYs

Source: Adapted from Shyamsundar (2001).

Appropriate design of output, intermediate, and outcome indicators can help to guide specific interventions. For air pollution, for example: if reducing acute respiratory infections (ARIs) per person per year by x percent for poor people is the desired outcome, one possible intervention might be a clean fuels initiative for transportation. The outcome indicator in this case is clearly symptom days per person per year for the impoverished. Output indicators for the project would include such obvious items as total quantity supplied and shares of clean transport fuels in proportion to total transport fuel supply. Intermediate indicators could include concentrations of ozone and particulate matter (PM10) in urban centers, particularly in poor neighborhoods.

The role of each level of indicator is to provide signals about the effectiveness of the intervention. For example, if quantitative restrictions are the policy tool chosen to change the fuel mix, smuggling and black markets may offer a way around the restrictions, in which case the intermediate indicator (pollution concentrations) will not fall in line with policy implementation. Care is required in interpreting intermediate indicators, however. Perhaps pollution concentrations are not falling because of a sudden rise in the vehicle fleet, so that total fuel demand offsets the increase in average “cleanliness” of each unit of fuel. Any evidence that interventions are not having the desired effect on intermediate indicators may require further analysis and possibly even a redesign of interventions.

It is also possible, however, that the intermediate indicator (pollution concentration) does fall with policy implementation, but that the outcome indicator (ARI incidence among the poor) does not respond in kind. This is a signal that further analysis is required to increase the effectiveness of the intervention. The analysis may show, for instance, that the rich appropriate all the benefits of the intervention or that other sources of ARIs are on the increase. In the latter case, the difficult task of estimating what the situation would have been in the absence of the intervention (the counterfactual) may be required.

Box 11.5 discusses the intricacies of choosing indicators in the related area of water and sanitation. Further suggestions are given in technical note J.2, which deals with project-specific indicators.

Another major area of interventions discussed in this chapter concerns NRM. Such interventions aim to enhance economic opportunities, reduce vulnerability, and enhance security. Table 11.4 offers some suggestions for indicators.

In summary, M&E from an environmental perspective is best integrated closely with the overall framework for tracking the progress of the PRS. However, it does require specific attention to the inclusion of indicators that reflect the environmental conditions that are most important to the poor.

11.4 Mainstreaming of Environment in the Early Interim and Full PRSPs

This chapter argues that environment should be integrated into the PRSP because the quality of the environment is inextricably linked to the quality of life for poor people. Against this background, a review has been undertaken to assess the extent of environmental mainstreaming in the PRSPs. up to early 2001 A total of 25 Interim and full PRSPs in countries in Africa, Latin America, and Eastern Europe and Central Asia are reviewed (Bojö and Reddy 2001).

Box 11.5. Choosing Good Indicators: Water and Sanitation

Rural water and sanitation projects usually aim to improve human health. But a review of 144 studies attempting to measure the health impacts of water and sanitation interventions (Esrey and others 1990) concluded that only 42 were methodologically rigorous, and those reported vastly different results. Even if a project is successful in producing clean water, it may not protect people from pathogens, either because they are exposed through other sources or because they may not use the piped water as their only source of drinking water. Chinese villagers who know the importance of boiling water still drink from irrigation ditches during long days of hot field labor. A survey from Mali showed that people found the safe water “bland” and used it only in the dry season when they could not get the river water. Monitoring health benefits requires careful contextual and epidemiological work over a long period. It is often either beyond the capacity of or unaffordable for many agencies. Measuring time savings, however, is significantly easier. Households consistently rank time savings from water collection high on their priority lists, and we can value those time savings. Thus measuring time savings can be an inexpensive proxy indicator for the final indicators that we would ideally like to measure. Such data are often collected through the regular Living Standard Measurement Study surveys.

Table 11.4. Selected Indicators Related to NRM Interventions

<i>Poverty issue</i>	<i>Poverty–environment indicator</i>	<i>Natural resource problems</i>
Income and opportunity	<ul style="list-style-type: none"> ⌢ Time to collect water and fuelwood ⌢ Distance to collect water and fuelwood ⌢ Percentage of annual household consumption from CPRs ⌢ Percentage of annual household consumption from forest products and fisheries 	<ul style="list-style-type: none"> ⌢ Deforestation ⌢ Water scarcity ⌢ Overfishing ⌢ Lack of clear or enforced property rights
Insurance	<ul style="list-style-type: none"> ⌢ Percentage of household consumption from forest products and fisheries when crops fail 	<ul style="list-style-type: none"> ⌢ Deforestation ⌢ Land degradation ⌢ Overfishing
Vulnerability	<ul style="list-style-type: none"> ⌢ People affected by floods, hurricanes, cyclones per year ⌢ People affected by landslides per year ⌢ Number of deaths from natural disasters ⌢ Percentage of people living in areas prone to flooding, landslides, and so on ⌢ Percentage of farmers with land on slopes ⌢ Stunting before and after disasters 	<ul style="list-style-type: none"> ⌢ Natural disasters ⌢ Deforestation ⌢ Lack of information
Food security	<ul style="list-style-type: none"> ⌢ Percentage of farmers without access to cultivable land ⌢ Percentage of farmers without access to irrigation ⌢ Falling crop yield trends ⌢ Percentage of farmers who know about drought-resistant crops ⌢ Percentage of dried wells 	<ul style="list-style-type: none"> ⌢ Soil fertility loss ⌢ Waterlogging and salinization ⌢ Water scarcity

Source: Adapted from Shyamsundar (2001).

The rest of this section highlights what issues of environmental concerns and opportunities had been identified in the PRSPs; the to which poverty–environment causal links were analyzed; and environmental management responses and indicators put in place as part of the poverty reduction efforts. Consideration is given to how the design and documentation of the process has allowed for mainstreaming of environment in PRSPs.

11.4.1 Good practice

A major finding of the review is that good practice does exist, and the following are some of the good practices identified in the PRSPs.

Issues in focus

Under this heading, the description of environmental issues pertaining to land, water, air, and biodiversity is assessed.

The Kenya I-PRSP describes the environmental issues relating to land use and water and suggests strategies, monitoring indicators, and cost of implementation of the strategies relating to land use, water, and energy. The Kenya I-PRSP is also sensitive to loss of biodiversity.

Pollution resulting from the lack of environmental regulation is well illustrated by the Honduras PRSP, which notes that

a study in Tegucigalpa showed up to 8.96 gm/m³ of lead in the air and . . . high lead intoxication in the children attending public schools. The study also notes that contaminants in soil and water are responsible for a high index of diarrheic diseases in the capital of Tegucigalpa. Soil and water pollution is further compounded by solid waste dumping with low coverage of garbage collection services, poor waste management, and the lack of sanitary landfills. Respiratory diseases are also common, especially among children under five . . . partly caused by increasing number of cars and the presence of factories that are not subject to any kind of environmental regulations.

The Rwanda I-PRSP notes that the major portion of the energy consumed by poor people is in the form of fuelwood. Shortage of fuelwood imposes time and financial costs on poor households and makes it harder for children to attend school. Poor access to energy has also impeded the development of agro-processing and nonagricultural activities, compromising the prospect of economic diversification. In the water supply sector, access to potable water in rural areas fell from 64 percent in 1984 to 50 percent in 1996. One-third of the water supply infrastructure does not function, and poor households cannot afford the fees for drinking water.

Mauritania is a country severely affected by drought and desertification in the Sahel region:

With the exception of mining and fisheries, the country is under-endowed in directly exploitable natural resources. Vegetation and forest resources are sparse and water resources, both surface and underground, are either limited or difficult to reach. Due to limited water resources, the arable land potential of Mauritania is less than 0.5 million ha (< 1% of country's geographical area). In addition, 60% of the farms are less than 1 ha and lack secured tenure.

Poverty–environment links

Some of the issues examined by PRSPs and their perspective of poverty–environment links provide useful insights into policy analysis and implementation.

The PRSPs of Honduras, Burkina Faso, Mauritania, and Guinea present maps showing regional distribution of poverty, population, and natural resource attributes. The poverty and resource maps help in the assessment of spatial and temporal relationships between poverty and the resource base. They can also be used to track the effects of policy and management interventions relating to poverty reduction.

The Burkina Faso PRSP notes that climatic conditions and low agricultural productivity, related to degradation of soil and water resources, are major constraints to economic growth and contribute to massive poverty and severe food insecurity among rural inhabitants. Income from farming and livestock raising is highly dependent on rainfall, which varies considerably from year to year.

The Honduras I-PRSP presents a detailed assessment and quantification of vulnerability due to Hurricane Mitch. The PRSP notes that “Hurricane Mitch had a severe impact on living conditions in Honduras and this in turn affected poverty levels nationwide.”

The Kenya PRSP notes a concern of property rights related to natural resources, and it proposes to implement a land law to create an efficient and equitable system of land ownership. In the context of water, the PRSP notes “the incidence of violation of water rights, conflicts, and pollution have dramatically increased.”

On the theme of policies influencing NRM, the Ghana PRSP stresses benefits accrued in terms of policy and funding during the period of structural adjustment. Community water and sanitation and urban water supply benefited from the injection of capital as well as a new framework for management. In the urban water sector, the Ghana Water and Sewage Corporation has been restructured into a limited liability company. A program to increase tariffs in order to safeguard the financial viability of the utility

is under way and takes into account poor households' ability to pay. Policy changes are under way to encourage cocoa growers by raising producer prices, reducing the export tax, and allowing licensed buying companies to export a certain quota of the domestic production. Such measures will influence the tradeoff between cocoa bushes, a perennial tree crop that provides good ground cover, and alternative crops. Further study would be required to determine how this change in relative prices affects the environment.

Georgia's energy sector reform reflects the need for reassessing the responsiveness of market interventions on the poverty–environment impacts during the privatization process. After the collapse of the Soviet Union, Georgia did not have access to the cheap energy resources of the erstwhile centralized economy. Privatization of the electricity market raised the energy tariff by a factor of 2.4 to reach about one-fifth of the average monthly family income. Inability of the poor to use electricity also resulted in increased demand for fuelwood. The system of energy allowances to households adopted early in the reform was found to be inadequate and inefficient in comparison to the later system of targeted budgetary support to the poor to cover household electricity expenditure. Georgia's energy privatization experience shows the need for careful design of policy instruments to safeguard the poor as well as their environment.

Response systems

As expected, the response systems of countries vary depending on their socioeconomic conditions, environmental challenges, institutional framework, and previous measures undertaken. Good practice for investment and monitoring systems is summarized below.

The Kenya I-PRSP presents the institutional, regulatory, and legal framework for implementing the environmental impact assessment and environmental audit through creation of a national environment management authority, a national environment council, an environment tribunal, an environmental trust fund, and an environment information system, at a cost of more than US\$3 million. The Kenya PRSP also makes detailed proposals for restructuring forestry institutions and forest management. The proposals include a full forest inventory, new licensing procedures, improvement of wood recovery rates from 30 percent to 50 percent, promotion of farm-based wood production, involvement of 30 percent of women in forest-based activities, and collaborative agreements with rural communities, at a cost of about US\$10 million.

The Burkina Faso PRSP specifies a program of soil and water conservation designed to break the vicious circle of soil degradation, poverty, and food insecurity. It also refers to new legislation pertaining to environment, water resources, and mining. Testing ways to provide for more secure property rights to land under a national land management program is also related to environmental management. A cost assessment of programs relating to irrigation, measures to combat vulnerability, and projects for strengthening of institutional capacity is also presented.

Inspired by the disastrous Hurricane Mitch, the Honduras I-PRSP commits to “to manage risk and deal with disasters under a new legal and institutional framework.”

In Rwanda, there are still 250,000 households living in camps under plastic sheets, and more than 60,000 live in damaged housing. The government commits to a resettlement program to ensure that new settlements have access to such basic public services as water and sanitation.

Georgia's PRSP proposes privatization of land and water resources, promotion of a land market, creation of water user associations, and installment of a rural credit policy establishing guarantee funds and insurance against climatic hazards, as interventions aimed at improving soil and water resources management, restoring agricultural infrastructure, and ensuring adequate property rights and income sources to vulnerable groups.

Despite the livestock sector's potential for reducing poverty in Mauritania, it is seen as “poorly integrated and inadequately structured.” The government proposes to integrate the agriculture and livestock sectors, adopt a farming code to facilitate the opening of pasture and range lands, improve milk and meat production and processing, introduce environmentally friendly pasture and range management, promote

economic and environmental studies to support additional value added in the leather and hide industries, and establish research and extension programs for improving the livestock contribution to rural economy. To limit the impacts of climatic fluctuations on the food security and incomes of the poor, the Mauritania government intends to promote early warning systems and establish rapid response mechanisms. The plan includes a food security observatory and a national reserve stock, with a physical reserve of food products and a financial reserve enabling the managers to respond to a food crisis.

Process

While process design and documentation cannot be expected to specifically highlight the involvement of environmental constituencies, the more inclusive designs allow such voices to be heard. It is interesting to note that most of the countries that have been identified as providing good practice under this heading, such as Kenya, Rwanda, and Nicaragua, also score high on mainstreaming.

Notes

1. See the World Bank's set of 10 safeguard policies pertaining to environmental and social assessment, among other things.
2. Fisheries provide an illustration of this: the Food and Agriculture Organization of the United Nations (FAO) estimates that 44 percent of the main fish stocks are fully exploited, with no room expected for further expansion. About 16 percent are overfished, and there is an increasing likelihood that catches might decrease if remedial action is not undertaken. Another 6 percent appear to be depleted, with a resulting loss in total production, and 3 percent seem to be recovering slowly (FAO 1999). An important driving force behind overfishing is public subsidies to excessively large fishing fleets. Estimates of the size of these subsidies vary considerably but amount to many billions of dollars each year. In a study for the U.S. Department of Commerce in 1997, Milazzo estimated the subsidies range from US\$11 billion to US\$54 billion (quoted in Lutz 1998).
3. Cost-efficient choices for public health interventions are deferred to section 11.3.
4. See also chapter 15, "Rural Poverty."
5. See also chapter 10, "Gender."
6. A study of Munasinghe and Cruz (1995) contains a number of case studies that illustrate the links between economic policies and environmental impacts.
7. There is a large, and partially controversial, literature on CAMPFIRE. (See, for example, Africa Resources Trust and the Campfire Association [1996] for a presentation of the program concept, Muir and Bojö [1996] for a discussion about the cost and benefits across different districts, and Murombedzi [1999] for a critical analysis. For other project examples of wildlife management involving communities, see IIED [1994] and Roe and others [2000].)
8. See also chapter 7, "Participation."
9. See technical notes J.1, J.2, and J.3 for more examples.
10. See Squire and van der Tak (1975) and Helmers (1979).
11. Chapter 6, "Public Spending," provides a complementary perspective on the analysis of public spending.
12. See technical note J.5 for examples of project-specific indicators.
13. See Squire and van der Tak (1975) and Helmers (1979).
14. The list is adapted from Segnestam (1999).

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Overall relationship between poverty and environment

*Bojö, Jan, and Rama Chandra Reddy. 2001. "Poverty Reduction Strategies and Environment: A Review of 25 Interim and Full PRSPs." World Bank, Washington, D.C. Processed.

*Bucknall, Julia, Christiane Kraus, and Poonam Pillai. 2001. "Poverty and Environment." Background Paper for the World Bank's Environment Strategy. World Bank, Washington, D.C.

Ekbom, Anders, and Jan Bojö. 1999. "Poverty and Environment: Evidence of Links and Integration into the Country Assistance Strategy Process." Environment Group, Africa Region, World Bank, Washington, D.C.

The authors discuss various hypotheses regarding these linkages and consider the evidence and counterevidence for each. Their analysis suggests that environmental degradation indeed tends to exacerbate poverty. However, a review of empirical evidence suggests that the links between poverty and environment are very context specific. The paper also presents some good examples of joint poverty environment analyses in the World Bank's Country Assistance Strategies and Participatory Poverty Assessments.

Forsyth, Tim, Melissa Leach, and Ian Scoones. 1998. "Poverty and Environment: Priorities for Research and Policy." Paper prepared for the United Nations Development Programme (UNDP) and the European Commission, Sussex University, Institute for Development Studies, U.K.

This paper challenges the assumption that the only way to impede environmental degradation is to alleviate poverty. It also questions the assumption that the poor are forced to degrade landscapes in response to economic marginalization, population growth, and environmental degradation. On the contrary, the authors argue that the poor are often able to construct institutions so as to maintain natural resources sustainably. The paper draws on numerous case studies to demonstrate that expected patterns of downward spiral between poverty and environment were in fact misplaced. The authors show how local negotiation between different actors in rural and urban areas can lead to sustainable and equitable use of natural resources.

*Government of Honduras. 2000. "Interim Poverty Strategy Paper." Tegucigalpa, Honduras.

*Munasinghe, Mohan, and Wilfrido Cruz. 1995. "Economywide Policies and the Environment." World Bank Environment Paper No. 10. World Bank, Washington, D.C.

Parikh, Kirit S. 1998. "Poverty and Environment: Turning the Poor Into Agents of Environmental Regeneration." Social Development and Poverty Elimination Division, UNDP.

This paper focuses on including the poor in poverty reduction and environmental protection. The author argues that the poor depend on environmental and natural resources for a significant portion of their livelihoods. Hence, when natural resources degrade, their livelihoods are adversely affected. Often development projects have adversely affected the resources on which the poor depend, such as the flood control project in Bangladesh and deforestation in Brazil to promote cattle ranches. The author's thesis is that people can be agents of environmental regeneration, and innovative institutional arrangements can play a key catalytic role in this process.

*Segnestam, Lisa. 1999. "Environmental Performance Indicators: A Second Edition Note." Environment Department Paper No. 71. World Bank, Washington, D.C.

*Shyamsundar, Priya. 2001. "Poverty-Environment Indicators." Environment Department, World Bank, Washington, D.C. Processed.

Health and environment

Akbar, S., and K. Lvovsky. 2000. "Indoor Air Pollution: Energy and Health for the Poor." UNDP/World Bank Energy Sector Management Assistance Programme (ESMAP) Newsletter, no. 1, September. World Bank, Washington, D.C.

*Aristanti, C. 1997. "Gender, Biomass Energy and Health." *Wood Energy News* 12(1):8-10.

*Dasgupta, Jashodhara, and Abha Das. 1998. "Health Effects of Women's Excessive Work Burden in Deforested Rural Areas of Uttarkhand." Paper presented at the National Conference on Health and Environment, Center for Science and Environment, New Delhi.

Esrey, Steven A. 1996. "Water, Waste, Well-Being: A Multi-Country Study." *American Journal of Epidemiology* 143(6):608–23.

*Esrey, Steven A., James B. Potash, Leslie Roberts, and Clive Shiff. 1990. *Health Benefits from Improvements in Water Supply and Sanitation*. Water and Sanitation for Health (WASH) Project. WASH Technical Report No. 66. Prepared for the U.S. Agency for International Development under WASH FASR No. 035. Arlington, VA.

This report reviews studies published in the last 40 years on the relationship between water and sanitation and six diseases (diarrhea, ascariasis, trachoma, hookworm, schistosomiasis, and guinea worm). The study found many of the reviews to be methodologically flawed but widely differing results reported from those that followed sound methodologies. The study also found safe excreta disposal more effective at reducing the diseases than water supply. Safe water and sanitation more often reduced the severity of the diseases than the incidence. Improving the quality of drinking water was less important than safe excreta disposal and proper use of water for hygienic purposes.

*———. 1991. "Effects of Improved Water Supply and Sanitation on Ascariasis, Diarrhea, Dracunculiasis, Hookworm, Infectious Schistosomiasis and Trachoma." *Bulletin of WHO* 69(5):609–21.

*Hughes, Gordon, Meghan Dunleavy, and Kseniya Lvovsky. 1999. *The Health Benefits of Investments in Water and Sanitation: A Case Study of Andhra Pradesh, India*. Washington, D.C.: World Bank.

This study estimates the proportion of total burden of ill health in Andhra Pradesh that is attributable to environmental factors. It finds that diseases relating to water supply and sanitation are responsible for 11 percent of the total burden of disease, and those relating to indoor air pollution are responsible for a further 6 percent. The study evaluates the costs and health benefits of investing in water supply and sanitation and then subtracts the expected willingness to pay from the costs to produce net costs to the public purse. This allows policymakers a choice between different interventions aimed at reducing the total burden of disease related to poor water and sanitation.

*Jalan, Jyotsna, and Martin Ravallion. 2001. "Does Piped Water Reduce Diarrhea for Children in Rural India?" World Bank Policy Research Working Paper. Washington, D.C.

*Klees, Rita, Joana Godinho, and Mercy Lawson-Doe. 1999. "Sanitation, Health and Hygiene in World Bank Rural Water Supply and Sanitation Projects." Europe and Central Asia Region Studies Program, World Bank, Washington, D.C.

Lavy, Victor, John Strauss, Duncan Thomas, and Philippe de Vreder. 1996. "Quality of Health Care, Survival and Health Outcomes in Ghana." *Journal of Health Economics* 15(3):333–57.

The authors take data from the Living Standard Measurement Study survey and estimate the effects of health services and public infrastructure on the health of children in Ghana. They look at child survival and stunting (height for age and weight for height). They find that increases in the prices of basic foodstuffs, especially cassava and maize, have a major negative effect on child survival and stunting, particularly in rural areas. The effects on child survival are larger for girls than boys, indicating different intrahousehold allocations. They also find that the quality of water and sanitation facilities significantly affects child survival and malnutrition. They find the effects larger and more significant among older children. The effects are larger for children with families in which the heads of families and their spouses have low levels of education.

*Listorti, James, and Fadi Doumani. 2001. "Environmental Health: Bridging the Gaps." Discussion Paper No. 433. World Bank, Washington, D.C.

*Lvovsky, Kseniya, Gordon Hughes, David Maddison, Bart Ostro, and David Pearce. Forthcoming. "Air Pollution and the Social Costs of Fuels." World Bank Technical Paper, Washington, D.C.

This paper provides a model for assessing the likely health damages attributable to air pollution in an urban area. The model requires simple data on fuel use, types of sources, wind directions, and population patterns, and enables the user to estimate quickly the likely health costs of air pollution, its most important sources, the likely costs of reducing the pollution, and the expected benefits.

- *Lvovsky, Kseniya, Maureen Cropper, James Listorti, A. Edward Elmendorf, Candace Chandra, Julian Lampietti, Ronald Subida, and Meghan Dunleavy. 1999. "Environmental Health Background Paper to World Bank Environment Strategy." Draft. World Bank, Washington, D.C.

This paper gives an overview of the literature and current thinking on environmental health issues in developing countries. It includes estimates of the total burden of disease attributable to environment for different regions of the world. It then outlines typical environmental health interventions, best practices, and indicators.

- Murray, Christopher J. L., and Alan D. Lopez. 1996. *Global Health Statistics: A compendium of Incidence, Prevalence and Mortality Estimates for Over 200 Conditions*. Cambridge, Ma.: Harvard University Press.

- Songsore, J., and G. McGranahan. 1993. "Environment, Wealth and Health: Towards an Analysis of Intra-urban Differentials Within the Greater Accra Metropolitan Area, Ghana." *Environment and Urbanization* 5(2):10–34.

Economic opportunity and sustainable livelihoods

- *Cavendish, William. 1999. "Empirical Regularities in the Poverty-Environment Relationship of African Rural Households." Center for the Studies of African Economies. Working Paper Series 99–21. London.

- *Chambers, Robert, and Gordon Conway. 1992. "Sustainable Rural Livelihoods: Practical Concepts for the 21st Century." IDS Discussion Paper No. 296. Institute of Development Studies, University of Sussex, Brighton, U.K.

- *Christie, Ian T., and Doreen E. Compton. 2001. "Tourism in Africa." Africa Region Working Paper Series No. 12. World Bank, Washington, D.C.

- *DFID (Department for International Development). 1999. Sustainable Livelihoods Guidance Sheets. Available at http://www.livelihoods.org/info/guidance_sheets_pdfs/section1.pdf.

- *FAO (Food and Agriculture Organization of the United Nations). 1999. *The State of World Fisheries and Aquaculture 1998*. Rome: FAO.

- *Heath, J., and Binswanger, Hans. 1996. "Natural Resource Degradation Effects of Poverty and Population Growth Are Largely Policy Induced: The Case of Columbia." *Environment and Development Economics*. Vol. 1, part 1, 65–83.

- *Jodha, N. S. 1986. "Common Property Resources and Rural Poor in Dry Regions of India." *Economic and Political Weekly* 21(27):1169–81.

In his now classic study, Jodha quantifies the extent to which the rural poor benefit from common property resources (CPRs). His argument is that the decline of CPRs, in part a consequence of their privatization, results in the subsequent pauperization of the poor. The study, based on data from 80 villages in 21 districts in dry regions of seven states in India, shows that poor households ("poor" refers to landless laborers and small farmers with less than 2 hectares of dry land) are much more dependent on CPRs than larger farm households. For instance, while 95 percent of the poor households in Andhra Pradesh were dependent on CPRs for food items, only 10 percent of the larger farm households were dependent on CPRs for food. Furthermore, Jodha's study shows that income from CPRs accounts for a larger percentage of income for poor households than for better-off households.

- Kepe, Thembele. 1997. Environmental Entitlements in Mkambati: Livelihoods, Social Institutions, and Environmental Change on the Wild Coast of the Eastern Cape. Research Report No. 1. Sussex University, Institute for Development Studies and Program for Land and Agrarian Studies.

This case study calculates the importance of natural resources on the incomes of poor people.

- *Lutz, Ernst, ed. 1998. "Agriculture and the Environment: Perspectives on Sustainable Rural Development." A World Bank Symposium. World Bank, Washington, D.C.

- McDowell, Christopher, and Arjan de Haan. 1997. "Migration and Sustainable Livelihoods: A Critical Review of the Literature." IDS Working Paper 65. Sussex University, Institute of Development Studies.

Drawing on evidence from Ethiopia, Bangladesh, and Mali, the author argues that migration is more often the rule rather than the exception. The paper critiques theories of migration that focus only on macroeconomic or political factors to explain migration.

Scoones, Ian. 1998. "Sustainable Rural Livelihoods: A Framework for Analysis." IDS Working Paper No. 72. Sussex University, Institute of Development Studies.

This paper discusses the concept of sustainable livelihoods. The framework of sustainable livelihoods shows how within a particular (policy, historical, agro-ecological) context, certain combinations of livelihood resources or capital are used to follow different livelihood strategies. These strategies include agricultural intensification or extensification, livelihood diversification, and migration. The paper further discusses five indicators of sustainable livelihoods, poverty reduction being one of them.

*World Bank. 1995. "Rural Fuelwood Markets and Village Management of Natural Woodlands in Niger." Processed. Washington, D.C.

*World Bank. 2000. *A Review of the World Bank's 1991 Forest Strategy and Its Implementation*. Operations and Evaluation Department, Washington, D.C.

Vulnerability to natural disasters

Albala-Bertrand, J. M. 1993. *The Political Economy of Large Natural Disasters with Special Reference to Developing Countries*. Oxford: Clarendon Press.

Albala-Bertrand's study finds that the magnitude of the negative effect of disasters declines with development, although vulnerability increases during the transition period from simple to diversified economies. People most affected by natural disasters are those belonging to the poorest and most powerless social sectors in less developed countries.

Benson, C., and E. Clay. 1994. "The Impact of Drought on Sub-Saharan African Economies: A Preliminary Examination." World Bank Technical Paper No. 401. Washington, D.C.

This paper looks at economy-wide, macroeconomic impacts of droughts in Sub-Saharan Africa. The authors' empirical work suggests that the correlation between the level of economic development and the magnitude of the impact of a drought is not linear. The relationship turns out as one of an inverted U shape. Furthermore, the authors find that droughts exacerbate income inequalities.

*Datt, G., and H. Hoogeveen. 2000. "El Niño or El Peso? Crisis, Poverty and Income Distribution in the Philippines." Policy Research Working Paper No. 2466. World Bank, Washington, D.C.

Enarson, E., and B. Hearn Morrow. 1998. *The Gendered Terrain of Disasters*. Westport, Conn.: Praeger.

This collection brings together current knowledge about gender and disaster. Seventeen case studies are complemented by a survey of existing work, an assessment of the need for work on this topic, and a study on how neglect of gender issues has misdirected efforts of disaster prevention and relief. Poor families around the world suffer the greatest losses and have access to the least public or private recovery assets. Among the poor, women are most at risk when hazardous conditions become disastrous events.

Kreimer, A., and M. Munasinghe. 1990. *Managing Natural Disasters and the Environment: Selected Materials from the Colloquium on the Environment and Natural Disaster Management*. Environmental Policy and Research Division, Environment Department. World Bank: Washington, D.C.

This volume explores the relationship of environmental degradation and vulnerability to disasters and their combined effects on both natural and man-made habitats. It is organized around four themes: implications of strategic global, systemic, and survival issues; development from vulnerability to resilience; risk management; and the coordination of local, national, and international efforts to reduce vulnerability to disasters by prevention, mitigation, and recovery.

Mitchell, J. 1999. *Crucibles of Hazard: Mega-Cities and Disasters in Transition*. Tokyo and New York: United Nations University Press.

The study covers environmental risks in 10 of the world's major cities, some of which have already repeatedly experienced devastating earthquakes, storms, floods, and wildfires. The authors conclude that the natural disaster potential of the biggest cities is expanding at a pace that far exceeds the rate of urbanization.

*Sharma, Mahesh, Ian Burton, Maarten van Aalst, Maxx Dilley, and Gayatri Acharya. 2000. "Reducing Vulnerability to Environmental Variability." Background Paper for the World Bank's Environment Strategy. World Bank, Washington, D.C.

Twigg, J., and M. R. Bhatt, eds. 1998. *Understanding Vulnerability: South Asian Perspectives*. London: Intermediate Technology on behalf of Duryog Nivaran.

This book contains three case studies of South Asian people and areas vulnerable to natural and man-made hazards. E. Bhatt writes about poor women in the towns and countryside of the Indian state of Gujarat who face a wide range of natural and man-made hazards. The studies of Nepali villagers by N. Dahal reveal that they live under the permanent threat of mountain floods and landslides. S. Arachchi also looks at a village society in Sri Lanka's dry zone, which endures drought as a persistent hazard. The final essay by M. Bhatt discusses ways of understanding vulnerability by learning from vulnerable people.

Environment and empowerment

*Africa Resources Trust and the Campfire Association. 1996. Zimbabwe's CAMPFIRE: Empowering Rural Communities for Conservation and Development. Harare, Zimbabwe.

*Devasia, L. 1998. "Safe Drinking Water and Its Acquisition: Rural Women's Participation in Water Management in Maharashtra, India." *Water Resources Development* 14(4):537-46.

Feder, Gershon. 1987. "Land Ownership, Productivity and Farm Productivity: Evidence from Rural Thailand." *Journal of Development Studies* 24(1):16-30.

This classic study tests the impact of empowerment through ownership and titling on resource management. Feder finds that titled farmers invested more in their land and had a higher productivity than the untitled ones.

*IIED (International Institute for Environment and Development). 1994. *Whose Eden? An Overview of Community Approaches to Wildlife Management*. London: IIED.

Lynch, Owen J., and Kirk Talbott. 1995. *Balancing Acts: Community-Based Forest Management in Asia and the Pacific*. Washington, D.C.: World Resources Institute.

Forest lands in Nepa were turned over to the communities to develop management plans and administer them after approval. This has apparently been quite successful, leading to extensive regeneration and equitable sharing of benefits. Other communities are queuing up to get their own management plans approved.

Mahapatra, R. 2000. "A Quiet Revolution." *Down to Earth* 8(21):24.

*Muir, Kay, and Jan Bojö. 1996. "Economic Policy, Wildlife and Land Use in Zimbabwe." In Jan Bojö, ed., *The Economics of Wildlife: Case Studies from Ghana, Kenya, Namibia and Zimbabwe*. Washington, D.C.: World Bank.

*Murombedzi, J. C. 1999. "Devolution and Stewardship in Zimbabwe's Campfire Programme." *Journal of International Development* 11, 287-93.

*Roe, D., J. Mayers, M. Grieg-Gran, A. Kothari, C. Fabricius, and R. Hughes. 2000. *Evaluating Eden: Exploring the Myths and Realities of Community-Based Wildlife Management*. Evaluating Eden Series No. 8. IIED, London.

*Stalker, Linda. 2001. "Why Some Village Water and Sanitation Committees Are Better Than Others: A Study of Karnataka and Uttar Pradesh (India)." World Bank Water and Sanitation Program Field Note. Washington, D.C.

Analyzing costs and benefits of environmental interventions

*Bojö, Jan. 1992. "Cost-Benefit Analysis of Soil and Water Conservation Projects: A Review of 20 Empirical Studies." In K. Tato and H. Hurni, eds., *Soil Conservation for Survival*. Ankeny, Iowa: Soil and Water Conservation Society.

*Convery, Frank. 1991. "Applying Environmental Economics in Africa." World Bank Technical Paper No. 277. Africa Technical Series, World Bank, Washington, D.C.

- *Dixon, J. A., L. F. Scura, R. A. Carpenter, and P. B. Sherman 1986. *Economic Analysis of Environmental Impacts*. London: Earthscan.
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- *Helmerts, F. L. C. H. 1979. *Project Planning and Income Distribution*. Boston and London: Martinus Nijhoff Publishing.
- *Kramer, Randall, Narendra Sharma, and Mohan Munasinghe. 1995. "Valuing Tropical Forests: Methodology and Case Study of Madagascar." World Bank Environment Paper No. 13. Washington, D.C.
- *Lampietti, Julian A., and John A. Dixon. 1995. "To See the Forest for the Trees: A Guide to Non-Timber Forest Benefits." World Bank Environment Paper No. 13. Washington, D.C.
- *Lutz, Ernst, Stefano Pagiola, and Carlos Reich, eds. 1994. "Economic and Institutional Analysis of Soil Conservation Project in Central America and the Caribbean." World Bank Environment Paper No. 8. Washington, D.C.
- *Shiferaw, B, and S. Holden. 1999. "Soil Erosion and Smallholder's Conservation Decisions in the Highlands of Ethiopia." *World Development* 27(4):739–52.
- *Squire, Lyn, and H. G. van der Tak. 1975. *Economic Analysis of Projects*. Baltimore and London: The Johns Hopkins University Press.
- *Toma Enterprises Ltd. 1996. *Willingness to Pay for Water in Wellington and Tombo (Western Sierra Leone): Strategies for Cost Recovery*. Prepared for the Department of Lands, Housing and the Environment, Government of Sierra Leone. Freetown.
- *Whittington, Dale, Apia Okorafor, Augustine Okore, and Alexander McPhail. 1993. "Strategy for Cost Recovery in the Rural Water Sector: A Case Study of Nsukka District, Anambra State, Nigeria." *Water Resources Research* 26(9):1899–913.
- *Whittington, Dale, Donald T. Lauria, Albert M. Wright, Kyengoe Choe, Jeffrey A. Hughes, and Venkateswarlu Swarna. 1993. "Household Demand for Improved Sanitation Services: A Case Study of Kumasi, Ghana: A Contingent Valuation Study." *Water Resources Research* 29(6):1539–60.

Household survey analysis (see also chapter 1, "Poverty Measurement and Analysis")

- Grosh, Margaret E. 1997. "The Policymaking Uses of Multitopic Household Survey Data: A Primer." *World Bank Research Observer* 12(2):137–60.

This paper discusses the benefits and limitations of national survey data, reviews those topics suitable for policy analysis, illustrates the kinds of issues typically addressed through the Living Standard Measurement Study surveys, and examines how analysis of survey data can inform the decisionmaking process. Some examples discussed in the paper include benefits of the food stamp program in Jamaica, impact on the poor of an increase in taxes on petroleum products in Ghana, characteristics of poverty in Ecuador, streamlining food subsidies in Tunisia, and efficient provision of public services (roads, public transport, electricity, pipe-borne water, dispensary, and so forth) in Vietnam.

- Grosh, Margaret, and Paul Glewwe, eds. 1999. *Designing Household Survey Questionnaires for Developing Countries: Lessons from Ten Years of LSMS Experience*. Development Research Group, World Bank, Washington, D.C.

This book provides detailed advice on how to design a multi-topic household survey and set realistic objectives, identify tradeoffs, and design a survey that best meets those objectives. The book is divided into three parts: (1) The Overall Design of the Survey, (2) The Design of Modules and Questionnaires, and (3) General Methodological Issues. Chapter 14 covers environmental issues, stating that "to date, very few LSMS surveys have collected data that can be used to examine environmental issues." There are, however, lengthy submodules on water, sanitation, and fuel, and also contingent valuation models to measure household willingness to pay for improvements in rural and urban water quality, urban air quality, and urban sanitation.

Technical Notes and Case Studies
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Annex A

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Technical Note A.1 Measuring Poverty and Analyzing Changes in Poverty over Time

This note provides mathematical expressions for the most commonly used poverty measures and for their decomposition by sector or, more generally, by group. The note focuses on the first three poverty measures of the so-called FGT class (Foster, Greer, and Thorbecke 1984), namely, the headcount, the poverty gap, and the squared poverty gap.

A.1.1 Poverty measures

Poverty Headcount. This is the share of the population that is poor, that is, the proportion of the population for which consumption or income y is less than the poverty line z . Suppose we have a

population of size n in which q people are poor. Then the headcount index is defined as

$$H = \frac{q}{n}$$

Poverty Gap. The poverty gap, which is often considered as representing the depth of poverty, is the mean distance separating the population from the poverty line, with the nonpoor being given a distance of zero. The poverty gap is a measure of the poverty deficit of the entire population in which the notion of “poverty deficit” captures the resources that would be needed to lift all the poor out of poverty through perfectly targeted cash transfers. It is defined as follows:

$$PG = \frac{1}{n} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right)$$

where y_i is the income of individual i , and the sum is taken only on those individuals who are poor (in practice, we often work with household rather than individual income, but individual income can still be defined as being equal, say, to the per capita income of the household). The poverty gap can be written as being equal to the product of the income gap ratio and the headcount index of poverty, where the income gap ratio is itself defined as

$$PG = I * H, \text{ with } I = \frac{\sum_{i=1}^q y_i}{z} \text{ where } y_q = \frac{1}{q} \sum_{i=1}^q y_i \text{ is the average income of the poor.}$$

It must be emphasized that the income gap ratio I in itself is not a good measure of poverty. Assume that some households or individuals who are poor but close to the poverty line are improving their standards of living over time and, thereby, become nonpoor. The income gap ratio will increase because the mean distance separating the poor from the poverty line will increase (this happens because some of those who were less poor have emerged from poverty—so that those still in poverty are, on average, farther away from the poverty line), suggesting a deterioration in welfare, while nobody is worse off and some people are actually better off. Although the income gap ratio will increase, the poverty gap PG will decrease, because the headcount index of poverty will decrease, suggesting an improvement toward poverty reduction. The problem with the income gap ratio is that it is defined only on the population that is poor, while the poverty gap is defined over the population as a whole.

The poverty gap is a useful statistic to assess how many resources would be needed to eradicate poverty through cash transfers perfectly targeted to the poor. Assume, for example, that the poverty gap is equal to 0.20. This means that, on average, the cash transfer needed to lift each poor person out of poverty represents 20 percent of the poverty line. If the mean income in the country is equal to twice the poverty line, the cash transfer would represent 10 percent of the country's mean income. If the mean income of the nonpoor equals twice the poverty line, and if half the population is poor, it can be shown that the tax rate that would have to be imposed on the nonpoor to lift the poor out of poverty with perfectly targeted transfers again would be 20 percent. If the mean income of the nonpoor is equal to four times the poverty line, under the same assumption the necessary tax rate would be 10 percent. Such simple simulations can be used to communicate intuitively the meaning of the poverty gap. In practice, however, given that perfectly targeted cash transfers to eradicate poverty are neither feasible nor necessarily a good thing (high tax rates could stifle economic growth and, thereby, future poverty reduction), one must be careful with their use.

Squared Poverty Gap. This is often described as a measure of the severity of poverty. While the poverty gap takes into account the distance separating the poor from the poverty line, the squared poverty gap takes the square of that distance into account. When using the squared poverty gap, the poverty gap is weighted by itself, so as to give more weight to the very poor. In other words, the squared poverty gap takes into account the inequality among the poor. It is obtained as follows:

$$P2 = \frac{1}{n} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right)^2$$

The headcount, the poverty gap, and the squared poverty gap are the first three measures of the FGT class of poverty measures. The general formula for this class of poverty measures depends on a

parameter ζ , which takes a value of zero for the headcount, one for the poverty gap, and two for the squared poverty gap in the following expression:

$$P_{\zeta} = \frac{1}{n} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right)^{\zeta}$$

It is important to use the poverty gap or the squared poverty gap in addition to the headcount for evaluation purposes, since these measure different aspects of income poverty. Indeed, basing an evaluation on the headcount ratio would consider as more effective those policies that lift the richest of the poor (those close to the line) out of poverty. On the basis of the poverty gap PG and the squared poverty gap $P2$, on the other hand, the emphasis is put on helping those who are further away from the line, the poorest of the poor.

A.1.2 Decompositions for changes in poverty over time

Two main decompositions have been used in the literature to analyze changes in poverty over time. The first decomposition deals with shifts in poverty between sectors or groups (Ravallion and Huppi 1991). The second decomposition deals with the contribution of income growth and changes in inequality to changes in poverty (Datt and Ravallion 1992; Kakwani 1997).

Sectoral decomposition

The poverty measures of the FGT class are additive. This means that the poverty measure for the population as a whole is equal to the weighted sum of the poverty measures for the population subgroups, with the weights defined by the population shares of the subgroups. This additive property makes it feasible to analyze the contribution of various population subgroups to changes in overall poverty over time. Assume that households or individuals can be classified according to various sectors in the economy. These may be industrial sectors, geographic sectors (urban versus rural), or any other sectors that the analyst may suggest. The overall change in poverty over time can be decomposed into (a) changes in poverty within specific sectors, or intrasectoral changes; (b) changes in poverty due to changes in the population shares of sectors, or intersectoral changes; and (c) changes due to the possible correlation between intrasectoral and intersectoral changes, or interaction effect. Denote by P_{it} the poverty measure in sector i at time t ; there are m sectors ($i = 1, \dots, m$), with population share n_i in sector i , and two periods (1 and 2). Then, the overall change in poverty is equal to

$$\Delta P = \underbrace{\sum_{i=1}^m n_{i1} (P_{i2} - P_{i1})}_{\text{Intrasectoral}} + \underbrace{\sum_{i=1}^m P_{i1} (n_{i2} - n_{i1})}_{\text{Intersectoral}} + \underbrace{\sum_{i=1}^m (P_{i2} - P_{i1}) (n_{i2} - n_{i1})}_{\text{Interaction effect}}$$

Growth and inequality decomposition

Changes in poverty rates can also be decomposed into changes due to economic growth (or mean income) in the absence of changes in inequality (or income distribution), and changes in inequality in the absence of growth. Denoting by $P(\mu_t, L_t)$ the poverty measure corresponding to a mean income in period t of μ_t and a Lorenz curve L_t , the decomposition is

$$\Delta P = \underbrace{[P(\mu_2, L_{\phi}) - P(\mu_1, L_{\phi})]}_{\text{Growth impact}} + \underbrace{[P(\mu_{\phi}, L_2) - P(\mu_{\phi}, L_1)]}_{\text{Inequality impact}} + \underbrace{R}_{\text{Residual}}$$

The first component is the change in poverty that would have been observed if the Lorenz curve had remained unchanged, while the second component is the change that would have been observed if mean income had not changed. The last component is a residual.

Technical Note A.2 Estimating Poverty Lines: The Example of Bangladesh

As noted in the chapter's main text, to measure poverty one needs (a) an indicator of well-being or welfare such as per capita caloric intake or per capita expenditure, (b) a threshold (the poverty line) to which each individual or household's welfare can be compared, and (c) a poverty measure. Differences in poverty estimates can result from differences in the choice of the indicator, the threshold, or the poverty measure. Using an example from Bangladesh, this note focuses on differences in the choice of the indicator and the threshold. Specifically, the focus is on (a) the degree of representativeness of the indicator, meaning the extent to which the chosen indicator of welfare is able to capture the well-being of the households at a sufficiently broad level; and (b) the degree of consistency of the threshold (poverty line), meaning the extent to which the chosen threshold represents similar levels of well-being over time and across groups, ensuring that the poverty estimates can be used for valid comparisons of poverty over time and across groups.

Three main methods have been used for estimating poverty in Bangladesh. The methods differ in terms of their indicator of welfare and their approach to the threshold or poverty line: direct caloric intake, food energy intake, and cost of basic needs, as summarized in table A.1. The drawback of the direct caloric intake method is that its indicator is not representative, while the drawback of the food energy intake method is the lack of consistency of its threshold or poverty line. The cost of basic needs method can be thought to be both representative and consistent for comparisons over time and across groups, at least more so than the alternative methods.

The Bangladesh Bureau of Statistics (BBS) first relied on the direct caloric intake method to measure poverty, which considers as poor any household not meeting the nutritional requirement of 2,122 kilocalories per day and per person; that is, on the basis of the quantity of food consumed by each household, the BBS computed per capita caloric intakes and considered as poor any household whose intake was below 2,122 kilocalories per person on a daily basis. The difficulty with this method is that it equates poverty with malnutrition or a proxy thereof. If we consider poverty as a lack of command of basic goods and services, measuring poverty by caloric intake only is unlikely to represent adequately the state of deprivation of the poor.

The BBS also relied on the food energy intake method to compute poverty lines. The idea with this method is to find the value of per capita consumption at which a household can be expected to fulfill its caloric requirement; that is, the poverty line is defined by the level of per capita consumption at which people can be expected to meet this requirement. This represents a methodological improvement in terms of representativeness because the food energy intake method provides a monetary rather than purely nutritional concept of poverty. Yet the method suffers from major deficiencies in terms of consistency in that the poverty lines generated might not represent an identical level of welfare (specifically, an identical purchasing power in real terms) over time or across groups and, hence, poverty comparisons may not be valid.

To illustrate the weaknesses of the food energy intake method, imagine that following a decrease in their income, households change their consumption patterns to consume less expensive food. Although their level of welfare has decreased (and, hence, poverty must have increased), the researcher using the food energy intake method may well find that poverty has decreased. This is because in buying lower-

Table A.1. Strengths and Weaknesses of Alternative Methods for Poverty Measurement

	<i>Direct caloric intake</i>	<i>Food energy intake</i>	<i>Cost of Basic Needs</i>
Indicator	Caloric intake	Expenditure (or income)	Expenditure (or income)
Threshold	2,122 kilocalories/person-day	Expenditure level at which household members are expected to reach caloric intake threshold	Expenditure level at which household members are expected to meet basic needs (food and nonfood)
Measure	Headcount or other	Headcount or other	Headcount or other
Strengths and Weaknesses	Indicator not representative; threshold consistent (for monitoring caloric intake)	Indicator representative; threshold not consistent (for real expenditures)	Indicator representative; threshold consistent (for real expenditures)

Source: Wodon (1995).

quality food, households meet their caloric requirement at a lower expected level of per capita consumption expenditure and, hence, the estimated poverty line will be lower. This scenario is not hypothetical; in fact, the poverty line in urban areas computed by the BBS with the food energy intake method in 1988–89 was lower than that computed in 1985–86, although prices of most consumption items increased between the two years. Surely, the lower BBS poverty lines of 1988–89 did not represent the same standard of living as the poverty line of 1985–86.

Recently, the BBS has adopted the cost of basic needs method for measuring poverty. With this method, an absolute poverty line is defined as the value of consumption needed to satisfy minimum subsistence needs. Difficulties arise in specifying these needs as well as the most appropriate way of attaining them. For food consumption, nutritional requirements can be used as a guide, as is the case with the other methods. In practice, this is often restricted to caloric (and possibly protein) requirements, but even then there is the question of which food basket to choose in order to meet the requirements. Specifying minimum requirements for nonfood consumption is more difficult, and various methods have been proposed for dealing with nonfood basic needs. Another issue relates to the adjustments that must be made for differences in the cost of food and nonfood items between regions, and possibly over time, either when the survey has been carried over a relatively long period of time such as one year, or when one is using several surveys for poverty monitoring.

The first step consists of the definition of a bundle of food items meeting a given nutritional requirement (2,122 kilocalories per person and per day). Many food bundles can provide this requirement. The bundle used includes rice, wheat, pulses, milk, mustard oil, beef, fresh water fish, potatoes, other vegetables, sugar, and bananas. It could be argued that the use of a common food bundle for the whole country is inadequate because consumption patterns of households may vary across areas (for example, households in coastal areas may eat more fish). Households in different regions might substitute some goods for others if prices vary by area. Other difficulties, such as seasonality in food prices, potential omitted variables or selectivity bias in the choice of food items consumed, or errors of measurement in the database for the imputation of food produced and consumed at home, may lead to bias in the estimates of food prices. In the case of Bangladesh, these considerations are not considered too problematic, but in other countries adjustments may have to be made to the food bundle in various areas.

The second step consists of estimating the cost of the food bundle. Accordingly, prices by geographic area are computed for each component of the food bundle. There are different methods to compute these prices. A first method consists in taking the average prices paid by households in each region (where, for a given household, the prices of the various food items in the food bundle are obtained by dividing the reported food expenditure by the quantity consumed). Because the poor tend to buy goods of lower quality, they usually face, on average, lower prices than the nonpoor. Taking the regional average over all households, therefore, tends to overestimate prices faced and result in a higher poverty line and higher poverty measures. In addition, imagine a situation in which the welfare of the nonpoor increases over time while that of the poor does not change. Because the nonpoor will tend to buy goods of higher quality at higher prices, the poverty line will be higher, suggesting an increase in poverty. A second method consists of taking the average prices over the poor population only. A third method, used by the BBS, consists of using regressions to estimate the differences between regions in the prices paid by households for their food. Having estimated the cost of each food item j in each region k , and denoting these prices by P_{jk} , food poverty lines can be computed for each region k as $Z_{kf} = Q \sum_j P_{jk} F_j$, where F_j is the per capita quantity of food item j in the basic food bundle.

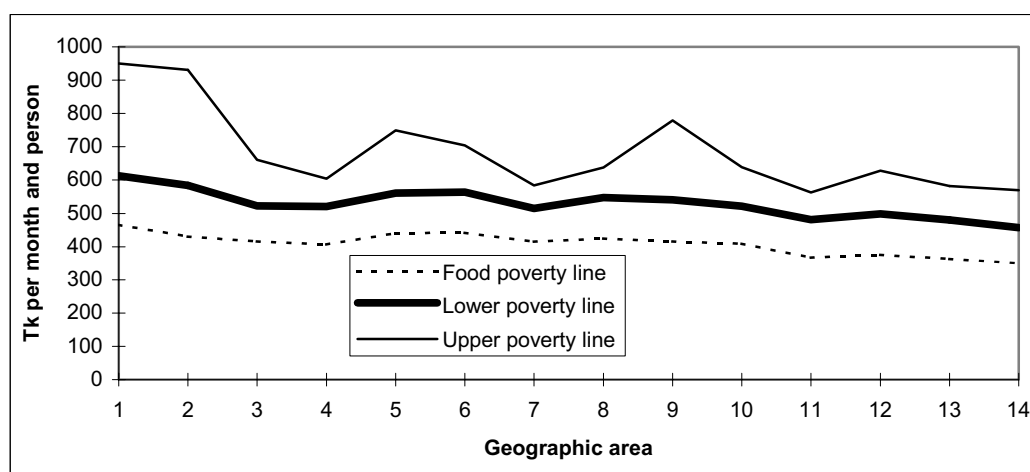
Once the food component of the poverty lines has been estimated, the third step is to estimate a reasonable allowance for nonfood consumption. Various methods can be used (Ravallion 1994). The BBS considered two methods. The first is based on computation of the amount of nonfood expenditures for the households (in geographic area k) whose total consumption equals the regional food poverty line Z_{kf} . The nonfood expenditures of the households in this first case must be necessities, since the households are giving up food expenditures considered necessary to buy nonfood items. In the second method, the share of the nonfood expenditures for the households whose food expenditure is equal to the food poverty line was computed. On average, in the second case, the households “near the poverty line” are able to meet their nutritional requirements, and the nonfood allowance computed this way will be more generous than that in the first case. Various techniques (both parametric and nonparametric) can be used to estimate the nonfood components of the regional poverty lines, but the details go beyond the scope of this technical note. The two estimates, specific to each region, can be denoted by ZL_{kn} and ZU_{kn} (k is the region, n stands for nonfood, and the subscripts L and U refer to the “lower” and “upper” allowances for nonfood consumption obtained, respectively, from the first and second

cases above). Then, the two overall poverty lines that include provisions for both food and nonfood basic needs are defined as $ZLk = Zkf + ZLkn$ and $ZUk = Zkf + ZUkn$, with ZLk being smaller than ZUk .

As mentioned in the main text, once computed, the regional and time adjustments can be used in two ways. Either one adjusts the indicator of consumption or income with a price deflator for each region and period and compares that indicator to a unique reference poverty line, or one keeps a different poverty line for each region or period to which the indicator of income or consumption is compared. The final results in terms of poverty comparisons will be the same, since these are simply two alternative ways to use the same adjustments in the poverty comparisons between regions and household groups, or over time.

Figure A.1 provides the results of the estimation of the poverty lines for the various regions for one of the survey years. The vertical axis provides the level of the poverty line in Taka per person and per month. The horizontal axis represents 14 different regions in the country. The food poverty line is the lowest one. The middle line represents the total poverty line with the lower nonfood allowance. The top line represents the total poverty line with the upper allowance for nonfood consumption. Clearly, there are large differences in the cost of living between areas. Not surprisingly, the area in the figure corresponding to 1, which represent the capital city of Dhaka, has the highest cost of living. Overall, there are large variations by city or area within urban and rural areas.

Figure A.1. Food: Lower and Upper Poverty Lines by Area



Source: Wodon (1997a).

Technical Note A.3 Estimating the Indicator of Well-Being: The Example of Consumption in Uganda

This note presents an example of the types of adjustments that one may have to make for the indicator of well-being (income or consumption) computed at the household level in order to better reflect the underlying level of welfare that one is trying to capture, and to make appropriate comparisons over time and between regions. The illustration is based on the Ugandan experience. Table A.2 reports the estimates of consumption per capita as calculated in the official survey reports (that is, before adjustments) as well as after adjustments. The adjustments made by the authors fall into three categories: adjustments for sampling design, for questionnaire design, and for prices.

A.3.1 Sampling

The authors used two surveys—the Integrated Household Survey (IHS) and the monitoring surveys (MS), both of which have a sampling frame based on the 1991 census and large samples (10,000 households in the IHS and 5,000 in each MS).

Table A.2. Mean Consumption per Capita before and after Adjustments
(*ush. per month*)

	<i>HIS</i> <i>92/93</i>	<i>MS-1</i> <i>93/94</i>	<i>MS-2</i> <i>94/95</i>	<i>MS-3</i> <i>95/96</i>	<i>MS-4</i> <i>97/98</i>
Before adjustments (official reports)	11574	13195	15221	17499	20540
1. Adjustment for geographic coverage	11786	13501	15388	17721	20747
2. Adjustment for public transport fares	11981	–	–	–	–
3. Adjustment for food consumed at home	12769	14748	16643	18568	21976
4. Adjustment for differences in regional prices	13187	15267	17064	18973	22139
5. Adjustment for inflation (1989 prices)	5452	5825	6058	6187	6353
6. Adjustment for reweighting MS-1	5452	5718	6058	6187	6353

– Not applicable.

Source: Appleton and others (1999).

- **Changes in geographic coverage.** Security problems led to the exclusion of a few districts (Kitgum, Gulu, Kasese, and Bundibugyo) from MS-4. To ensure comparability over time, the authors excluded the four districts from all calculations. These districts are relatively poor, so that their omission raises mean consumption per capita by 1.8 percent in the IHS and 2.3 percent in the MS-1 (adjustment number 1).
- **Seasonality.** The IHS was conducted throughout an entire year, but MS-1 and MS-2 were conducted only during certain months of the year. This is problematic, since food consumption is reported for a short recall period only and subject to seasonal variations. The authors chose not to adjust for seasonality because of data limitations and the assessment that an adjustment would not affect the main conclusions of the analysis.
- **Panel data.** The MSs have a panel element, with half the enumeration areas being revisited and, within those areas, half of the households being revisited. This led to a very high rate of attrition among households, and the panel structure was abandoned in MS-4. The authors compared the mean levels of per capita consumption in MS-2 and MS-3 among panel and nonpanel households and concluded that no adjustment was needed for attrition. After the Ugandan Statistics Department changed its system for weighting households to take into account the panel structure of the data, however, because this had not been done for the MS-1 survey, the authors amended the weights for this survey, which did alter consumption estimates, raising them in rural areas and lowering them in urban (adjustment number 6).

A.3.2 Questionnaire design

The MSs have similar questionnaires on consumption, while the IHS has more items. The way in which the data are recorded differs in both surveys, in terms of both what the interviewer must do and of the recall periods. In addition, the IHS has information on health and education expenditures at the individual level, while the MSs provide this information at the household level. To gauge the effects of these differences, the actual composition of expenditures was compared across surveys. The expenditures were similar across the IHS and MSs, but there was a discrepancy in the share of expenditures on transport and communications, reflecting a printing error. To adjust for this, the authors imputed expenditures for transportation using regional shares in the MS-1. Omission from the IHS of health expenditures for one district was dealt with in a similar manner. These adjustments raised the mean consumption figure for the IHS by 1.7 percent (adjustment number 2).

A.3.3 Prices

Three adjustments were made to obtain consumption estimates in constant prices.

- **Valuation of home food consumption.** Home food consumption expenditures were revalued to be at market prices. This was done using median unit values from the surveys separately for urban and rural areas in each of four regions (eight sets of prices were computed). The adjustment increased the value of home food consumption by around 30 percent (adjustment 3).

- **Regional variation in food prices.** Food prices are markedly higher in some areas than others, particularly urban areas. Median unit values for purchases of important food items were used to construct regional food price indexes for each survey. Nonfood prices, however, were assumed to be constant across the country. This may be problematic, since, as suggested in the previous technical note (figure A.1), variations in nonfood prices between regions (and over time) are typically even larger than variations in food prices (adjustment 4).
- **Inflation over time and within surveys.** The composite national consumer price index (CPI) was used as a price deflator for expenditures recorded in the MS, converting the data into 1989 prices. During the implementation of the IHS, prices increased substantially, so that at the end of the sampling period they were 30 percent higher than at the beginning. To take this into account, the IHS expenditures were deflated using monthly rather than yearly CPI data (adjustment 5).

Technical Note A.4 Poverty Maps and Their Use for Targeting

A poverty map is a geographic profile of poverty, indicating in which parts of a country poverty is concentrated. Such maps can play an important role in guiding the allocation of public spending to reduce poverty. A poverty map is most useful if it can be constructed at a fine level of geographic disaggregation. Unfortunately, accurate geographic disaggregation requires work with large datasets such as population censuses, which typically do not contain detailed income or spending information because collecting such data for the whole country is very expensive.

There are two ways of dealing with this problem. First, one can develop poverty maps on the basis of indexes of welfare constructed by combining information on variables such as access to water, electricity, sanitation, or educational level of the household head.

A second method consists of combining survey and census data. The idea is to develop simple models in which consumption or income is a function of such factors as housing, employment, household characteristics (such as size and composition), and educational variables (see technical note 8). The estimated parameters are then used in the census to predict household consumption. While consumption is not in the original census dataset, it is artificially added by using structural relationships derived from the survey. This approach can be pursued only if three data requirements are met. First, a household survey with consumption and other household characteristics must be available and should correspond roughly to the same period covered by the census. Second, unit record-level census data must be available for analysis. Third, a sufficient number of variables that are used to predict consumption must be available in the survey *and* in the census—it would not be possible otherwise to use the models based on the surveys to predict census consumption data.

The first step is to estimate a model of consumption or income using household survey data. As mentioned, the only variables that can be used to predict consumption or income are variables that are also available in the census. The second step is to apply the parameter estimates from the regressions to the census data. It is then possible to derive consumption or income estimates based on individual household characteristics in the census. These consumption or income data then allow the estimation of the probability of being poor of each household in the census dataset. Since the estimates are derived from an imperfect model, they will have a margin of error attached to them, and this has to be taken into account (see the heading entitled “Tests for the robustness of poverty comparisons” in the main text). While the accuracy of each household-level estimate may be low, at a more aggregate level these errors will tend to compensate each other, and regional or district estimates will be relatively accurate.

Ultimately, the optimal degree of disaggregation will depend on many factors. First, it will depend on the purpose for which the poverty map is built. Is it, for example, intended to identify government administrative areas so that the desired level of disaggregation is the same as the level of local government? Or is it intended to identify poor villages or neighborhoods within an administrative area so that community-level project interventions can be better targeted? Second, the choice of disaggregation level will depend on the extent to which the parameter estimates from a regression estimated at the regional level can be assumed to apply to subregional breakdowns. Indeed, the parameters have to be estimated at the level at which the household survey is representative (usually broad regions). Applying the parameters to all households in the census who belong to that region relied on the assumption that, within a region, the model of consumption or income is the same for all households regardless of the community in which they reside. Third, the desired degree of disaggregation will also depend on the availability of other sources of information on the poverty of individuals that might be available locally.

The most useful practical application to which this methodology can be devoted probably entails combining consumption-based poverty maps with other indicators of well-being, opportunity, and access for sectoral investment planning. For example, a map documenting, say, regional patterns of access to primary health care centers can be overlaid against a consumption- or income-based poverty map. The map can use other poverty statistics, such as the poverty gap. It might help policymakers decide which efforts to prioritize to expand access to primary health centers; health investment planning can prioritize the poorest areas with the lowest health coverage. Furthermore, a close correlation between, say, regional patterns of rural poverty and road access might also offer clues to possible causes of poverty. This type of exercise could be undertaken for a wide range of indicators: levels of health and education, ethnicity, access to infrastructure and other public services, or land quality and ecology.

See <http://www.worldbank.org/poverty/inequal/povmap/index.htm> for references on poverty maps; see Hentschel and others (2000) for an application.

Technical Note A.5 Stochastic Dominance Tests

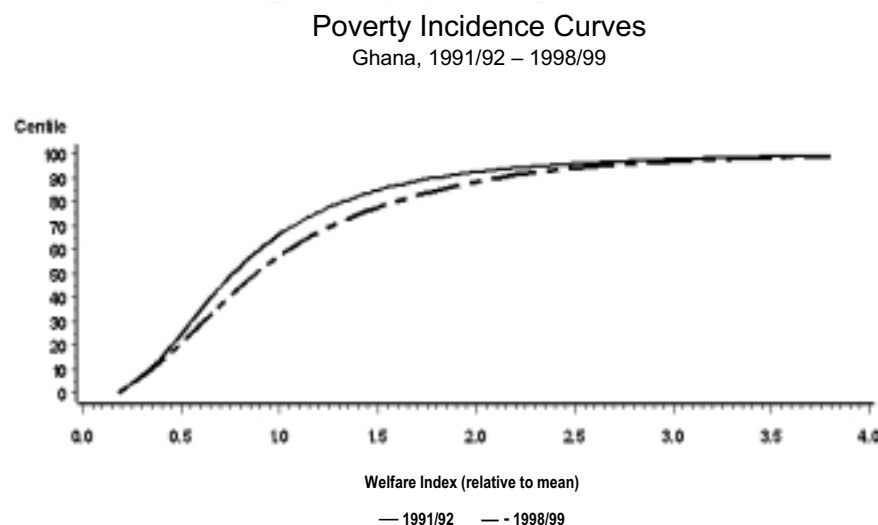
When comparing poverty measures over time or between groups, it is important to test the robustness of the observed changes in poverty indexes. Indeed, the observed changes might depend on the selected poverty line and, at the extreme, using two different poverty lines can suggest changes in opposite directions. Comparing poverty measures using stochastic dominance techniques can help in establishing the robustness of ordinal poverty rankings.

First-order statistical dominance involves comparing the cumulative distribution functions for the indicator of well-being (income or consumption) for each of the survey years, or for the various groups of households for which poverty comparisons are made. One distribution “dominates” another if the income distribution function for that year or that household group lies above that of the year or other group at all levels of income or consumption. If one finds that first-order dominance holds between two different years, or between two different groups, this implies that all FGT poverty measures, including the headcount, poverty gap, and squared poverty gap, in the first year or group are higher than in the other year or group for all poverty lines.

Second-order dominance tests involve analyzing “deficit” curves, or integrals of the cumulative income distribution functions, and similarly determine whether poverty has improved or worsened over time for all poverty measures of the order of the poverty gap or higher, such as the squared poverty gap. Still higher levels of dominance can be established, and multivariate stochastic dominance can be used in the context of multidimensional distributions of poverty.

Figure A.2 shows an example from Ghana, comparing the cumulative distribution functions (for first order stochastic dominance) of 1991/92 and 1998. The cumulative distribution for 1998 always lies below that for 1991/92, which implies that poverty has unambiguously fallen over this time period. If the two distributions had crossed, then poverty measures would have shown an increase for all the poverty lines in the range for which the second distribution is below the first, and a decrease for the others (see also Atkinson and Bourguignon 1982).

So-called sequential stochastic dominance tests have also been developed to check for the robustness of poverty comparisons to assumptions regarding differences in household needs according to household size apart from assumptions regarding the poverty lines (for recent applications, see, for example, Duclos and Makdissi and Makdissi and Wodon 2001).

Figure A.2. Cumulative Distribution Functions to Establish First-Order Dominance

Source: Ghana Living Standards Survey, round 3 and 4.

Technical Note A.6 Applying Poverty Measurement Tools to Nonmonetary Indicators

Although poverty has been traditionally measured in monetary terms, it has many other dimensions: lack of access to public services related to education, health, and infrastructure; deficient social relations; insecurity and vulnerability; and low self-confidence and powerlessness. In some cases, it is feasible to apply the tools that have been developed for poverty measurement to nonmonetary indicators of well-being. The requirement for being able to apply the tools of poverty measurement to nonmonetary indicators is that it must be feasible to compare the value of the nonmonetary indicator for a given individual or household to a threshold or “poverty line” under which it can be said that individuals or households are not able to meet their basic needs. The idea can be illustrated with the three examples described below.

- Health and nutrition poverty.** Morris, Flores, and Zúniga (2000) analyze the potential for targeting nutrition intervention programs in Honduras. The “nutrition poor” are defined as stunted children, that is, children who have a measure of height for age at least two standard deviations below international standards. The authors simulate a nutrition intervention reaching 20 percent of the children with a gain of half a standard deviation for beneficiaries, with different approaches for targeting the beneficiary children. The impact of the intervention is obtained by computing the incidence of stunting (the headcount for the nutrition poor) as well as the malnutrition gap and the quadratic malnutrition gap before and after the intervention. They find that the simulated program has the potential to substantially decrease the severity but not the incidence of stunting. Household targeting could reduce the malnutrition gap by more than 20 percent and the quadratic malnutrition gap by more than 30 percent, but it could be very expensive to implement. “Broad stroke” geographic targeting could reduce the same measures by 15 percent and 20 percent, respectively, and would be cheaper to implement.
- Educational poverty.** In the field of education, one can use, for instance, illiteracy among children in age of primary or secondary school as the characteristic identifying the educational poor. Alternatively, in countries where literacy is high among new cohorts of children, one can compare the actual number of years of education completed by each child to a “poverty line” equal to the expected number of years of education for a child of that age without repetition and dropout. The results of such an exercise for Panama suggest that 29 percent of all children at primary school age in urban areas are behind in their level of schooling in terms of age-for-grade versus 51 percent in rural areas. This figure is the equivalent of the headcount index for traditional poverty measurement. The headcount of educational poverty among children in age of secondary school is much higher, at 60 percent for urban areas and 89 percent in rural areas, because delays in completing

primary education carry on to the secondary cycle and some students do not pursue their studies beyond the primary cycle. When the number of years of education separating the children from what they should have achieved at their age under perfect schooling conditions is taken into account, one can compute poverty gaps and squared poverty gaps.

- **Energy or fuel poverty.** Many households in developing countries cannot satisfy their basic energy needs. Although fuel is not a dimension of well-being as such, it is an important input for a healthy life (through cooking and heating), for a better education (lighting), and for higher security. One could define “fuel poverty” as the inability of households to meet basic energy needs (in Guatemala, the energy required to run two 60-watt light bulbs and a 16-watt radio for 4 hours and 10 kilograms of fuelwood each day was taken as the basic need—equivalent to 5.9 kilowatt-hour every day). Table A.3 shows that households with access to electricity consume, on average, 3,804 kilowatts per hour per year and pay 0.52 Quetzales (Qz) per kilowatt hour on average. Meanwhile, households without access to electricity have a lower energy consumption (2,892 kilowatts per hour) and pay a higher price (1.35 Qz per kilowatts per hour). One-fourth of the population with access to electricity is fuel poor (headcount of 25.5 percent), as compared to one-half of the population without access (headcount of 50.9). Using estimates of the impact of access to electricity on the average price paid for energy, the authors estimate that if households without access were given access to electricity, the headcount among that group would be reduced to 36.5 percent.

Table A.3. Fuel Poverty with and without Access to Electricity in Guatemala (1998/99)

	<i>Households with access to electricity</i>	<i>Households without access to electricity Current situation</i>	<i>With access</i>
Net consumption (all energy sources, kilowatts per hour)	3804	2892	3967
Price per effective kilowatts per hour	0.52	1.35	0.98
Fuel poverty headcount (percentage)	25.5	50.9	36.5

Source: Foster, Tre, and Wodon 2001.

Technical Note A.7 Inequality Measures and Their Decompositions

Inequality measures have been introduced in the main text of the chapter. This technical note provides mathematical expressions for the three main measures: the Gini, Theil, and Atkinson indexes. Each index can be generalized in order to put more weight on selected parts of the distribution of income or consumption. As with poverty measures, some inequality measures can be decomposed, and this note presents decomposition formulas for the generalized entropy (GE) class, which includes the Theil index.

A.7.1 Inequality measures

The standard Gini index measures twice the surface between the Lorenz curve, which maps the cumulative income share on the vertical axis against the distribution of the population on the vertical axis, and the line of equal distribution (see section 1.3.1, figure 1.4, in the chapter’s main text). A large number of mathematical expressions have been proposed for the Gini index, but the easiest to manipulate is based on the covariance between the income Y of an individual or household and the F rank that the individual or household occupies in the distribution of income (this rank takes a value between 0 for the poorest and 1 for the richest). Denoting by \bar{y} , the mean income, the standard Gini index is defined as

$$Gini = 2 \operatorname{cov}(Y, F) / \bar{y}.$$

The Gini has attractive theoretical and statistical properties that other inequality measures do not, which explains why it is used by most researchers. For a review and discussion of these properties, see chapter 2, “Inequality and Social Welfare.” The extended Gini uses a parameter n to emphasize various parts of the distribution. The higher the weight, the more emphasis is placed on the bottom part of the distribution ($n = 2$ for the standard Gini index):

$$Gini(n) = \frac{-n \operatorname{cov}(y, [1 - F]^{n-1})}{\bar{y}}$$

Another family of inequality measures is the general entropy measure, defined as

$$GE(\zeta) = \frac{1}{\zeta^2} \frac{1}{4\zeta} \left(\frac{1}{n} \sum_{i=1}^n \frac{y_i}{\bar{y}} \right)^{\frac{1}{\zeta}} \left(\frac{1}{4} \right)^{\frac{1}{\zeta}}$$

$$\text{With } GE(0) = \frac{1}{n} \sum_{i=1}^n \log \frac{\bar{y}}{y_i}, \quad GE(1) = \frac{1}{n} \sum_{i=1}^n \frac{y_i}{\bar{y}} \log \frac{y_i}{\bar{y}} \quad \text{and} \quad GE(2) = \frac{1}{2n\bar{y}^2} \sum_{i=1}^n (y_i - \bar{y})^2$$

Measures from the GE class are sensitive to changes at the lower end of the distribution for ζ close to 0, equally sensitive to changes across the distribution for ζ equal to 1 (which is the Theil index), and sensitive to changes at the higher end of the distribution for higher values.

Atkinson proposed a third class of inequality measures. This class also has a weighting parameter κ (which measures aversion to inequality), and some of its theoretical properties are similar to those of the extended Gini index. The Atkinson class is defined as follows:

$$A_{\kappa} = 14 \left(\frac{1}{n} \sum_{i=1}^n \frac{y_i}{\bar{y}} \right)^{\frac{1}{14\kappa}} \left(\frac{1}{4} \right)^{\frac{1}{14\kappa}}$$

A.7.2 Decomposition of inequality measures: Illustrations for the GE class

Inequality is often decomposed by population groups to assess the contribution to total inequality of inequality within and between groups—for instance, within and between individuals in urban and rural areas. Inequality measures can also be decomposed according to consumption or income sources in order to identify which component contributes most to overall inequality. Finally, decompositions can be used to analyze changes in income inequality over time. Decompositions are provided for the GE class below. Chapter 2, “Inequality and Social Welfare,” includes a detailed discussion of applications of decompositions of the extended Gini class of inequality measures that have especially attractive properties for policy simulations.

A.7.3 Decompositions at one point in time

Total inequality I can be decomposed into a component of inequality between the population groups I_b and the remaining within-group inequality I_w . The decomposition by population subgroups of the GE class is defined as

$$I = I_w + I_b = \sum_{j=1}^k v_j^{\zeta} f_j^{14\zeta} GE(\zeta)_j + \frac{1}{\zeta^2} \frac{1}{4\zeta} \left(\sum_{j=1}^k \frac{f_j}{n} \frac{y_j}{\bar{y}} \right)^{\frac{1}{\zeta}} \left(\frac{1}{4} \right)^{\frac{1}{\zeta}}$$

where f_j is the population share of group j ($j = 1, 2, \dots, k$); v_j is the income share of group j ; and y_j is the average income in groups j .

Inequality measures can also be decomposed by source of consumption or income. The decomposition for the GE measure with $\zeta = 2$ is as

$$I = \sum_f S_f = \sum_f \psi_f \frac{\mu_f}{\mu} \sqrt{GE(2) \cdot GE(2)_f}$$

where S_f is the contribution of income source f ; ψ_f is the correlation between component f and total income; and μ_f/μ is the share of component f in total income. If S_f is large, then component f is an important source of inequality.

A.7.4 Decompositions for changes in inequality over time

Using subgroup decompositions, changes in inequality can be decomposed into (a) changes in the numbers of people in various groups or “allocation” effects, (b) changes in the relative incomes of various groups or “income” effects, and (c) changes in inequality within groups, or “pure inequality” effects. Because the arithmetic can be complex for some inequality measures, this decomposition is usually applied only to generalized entropy index $GE(0)$ as follows:

$$\div GE(0) = \underbrace{\frac{k}{j=1} \bar{f}_j \div GE(0)_j}_{\text{Pure inequality effects}} + \underbrace{\frac{k}{j=1} \overline{GE(0)}_j \div \bar{f}}_{\text{Allocation effects}} + \underbrace{\frac{k}{j=1} [\bar{\zeta}_j 4 \log(\bar{\zeta}_j)] \div \bar{f}_j}_{\text{Income effects}} + \underbrace{\frac{k}{j=1} (\bar{v}_j 4 \bar{f}_j) \div \log(\mu(y))_j}_{\text{Income effects}}$$

where \div is the difference operator; ζ_j is the mean income of group j relative to the overall mean (that is, $\zeta_j = \mu(y_j)/\mu(y)$), and the over-bar represents averages. The first term captures the pure inequality effects, the second and third terms, the allocation effects; and the fourth term, the income effects.

Using source decompositions, changes can be decomposed by income source. This allows seeing whether an income source f has a large influence on changes in total inequality over time. For the general entropy index with $\zeta = 2$, defining S_f as above, the decomposition is

$$\div GE(2) = \frac{\div S_f}{f}$$

Technical Note A.8 Using Linear Regressions for Analyzing the Determinants of Poverty

It has become a standard practice to analyze the determinants of poverty through categorical regressions such as probits and logits (see box 1.7 in the main text). When using such categorical regressions, it is assumed that the actual (per capita) income or consumption of households is not observed. We act as if we only know whether a household is poor or not, which is denoted by a categorical variable that takes the value of 1 if the household is poor, and 0 if the household is not poor. Under the hypothesis of a normal standard distribution for the error term, the model is estimated as a probit. If the error term is assumed to have a logistic distribution, the model is estimated as a logit. The main problem with categorical regressions is that the estimates are sensitive to specification errors. With probits, the parameters will be biased if the underlying distribution is not normal. More generally, the model does not make use of all the information available because it collapses income or expenditure into a binary variable. This does not mean that probit or logit regressions should never be used. Categorical regressions will typically have better predictive power for targeting, that is, for classifying households as poor or nonpoor (see technical note 9).

The alternative is to use the full information available for the dependant variable (indicator of well-being), and to run a regression of the log on the indicator (if the distribution is log normal.) Assume that w_i is the normalized indicator divided by the poverty line, so that $w_i = y_i/z$, where z is the poverty line and y_i is (per capita) income or consumption. A unitary value for w_i signifies that the household has its level of income or consumption exactly at the level of the poverty line. Denoting by X_i the vector of independent variables, the following regression can be estimated:

$$\text{Log } w_i = v'X_i + \kappa_i$$

From this regression, the probability of being poor can then be estimated as

$$\text{Prob}[\log w_i < 0 \mid X_i] = F[-(v'X_i)/\omega]$$

where ω is the standard deviation of the error terms and F is the cumulative density of the standard normal distribution.

Once regressions have been estimated to analyze the determinants of poverty, the coefficients on the variables (v) can inform on the various correlates of poverty and be used to simulate the impact of various policies. Figure A.3 presents an Excel Dialog Box that was prepared for Bolivia using the coefficients of

multivariate regressions on the determinants of the logarithm of per capita income. Apart from a constant, the independent variables in the regressions, which are done separately for urban and rural areas, include (a) the geographic location of the household according to Bolivia's main cities and departments in rural areas; (b) household-level variables, including the number of babies, children, and adults and their square; whether the household head is a woman; the age of the head and its square; the marital status of the head; the migration status of the head (since birth and/or in last five years); and whether the household head speaks one of the main indigenous languages; (c) characteristics of the household head, including his or her level of education; whether he or she is unemployed and searching for work, not working, and has a secondary occupation apart from his or her primary occupation; his or her sector of activity; his or her position; whether he or she works in the public and/or formal sector; the size of the firm in which he or she works; and whether he or she has been sick and for how long; and (d) the same set of characteristics for the spouse of the household head, when there is one. The Dialog Box can be used to run simple simulations of the impact of any one of these variables on per capita income and the probability of being poor or extremely poor, holding constant all other variables. For example, one can see what the impact of raising the educational level of the head of a given household has on income and poverty. The user can also test how the probability of being poor or extremely poor changes with the choice of the poverty line.

Figure A.3. Using Regression Estimates to Build Easy-to-Use Excel Software for Simulations

	Main Cities		Other Cities		Rural		Average
	1997	1999	1997	1999	1997	1999	1997-99
Per Capita Income	323.0	309.4	179.2	213.1	104.4	196.6	234.29
Headcount for Extreme Poverty	53.07	57.16	81.00	75.22	59.36	66.81	65.44
Headcount for Poverty	62.50	65.31	83.36	77.42	61.71	69.93	70.04

Source: Wodon 2001a.

Technical Note A.9 Using Categorical Regressions for Testing the Performance of Targeting Indicators

While categorical regressions should in most cases not be used to analyze the determinants of poverty, they can be used to measure the performance of alternative targeting indicators for social programs and transfers. This is an important issue because governments often use proxies for assessing the level of income or consumption of a household or individual in order to assess eligibility for programs benefits. Categorical regressions can help in choosing the best proxies for identifying the poor and the nonpoor, or more broadly for selecting beneficiaries. Receiving operating characteristics (ROC) analysis is one useful technique based on underlying logit regressions of the probability of being poor. It can be implemented easily with statistical packages such as STATA. The benefits of ROC analysis for selecting targeting indicators or proxies for income or consumption are discussed in Wodon (1997b).

To explain the principles behind ROC analysis, denote by P , P^+ , and P^- the number of the poor, the number of the poor classified as nonpoor, and the number of the poor classified as poor by a given

econometric model. Also denote by NP , NP^- , and NP^+ the number of the nonpoor, the number of the nonpoor classified as nonpoor, and the number of the nonpoor classified as poor. Sensitivity $SE = P^+ / (P^- + P^+) = P^+ / P$ is the fraction of poor households classified as poor. Specificity $SP = NP^- / (NP^- + NP^+) = NP^- / NP$ is the fraction of nonpoor households classified as nonpoor. The probability of errors of type I (identifying as poor a nonpoor household or individual) and type II (identifying as nonpoor a poor household or individual), as they are usually defined in economics, are captured by $(1 - SP)$ and $(1 - SE)$.

Table A.4. Terminology Used in ROC Analysis for Targeting Purposes

<i>Predicted status</i>	<i>Actual status</i>	
	<i>Nonpoor</i>	<i>Poor</i>
Nonpoor	$SP = NP^- / (NP^- + NP^+)$	$1 - SE = P^- / (P^- + P^+)$
Poor	$1 - SP = NP^+ / (NP^- + NP^+)$	$SE = P^+ / (P^- + P^+)$

Source: Wodon (1997b).

When using a statistical package and running a probit or logit regression for poverty, each observation is given an index value equal to the predicted right-hand side of the regression. This predicted value is used to classify the households as poor or nonpoor, with the computer typically using one-half as the cutoff point (those above the cutoff point are classified as poor). But this cutoff point can be changed. An ROC curve is a graph that plots SE as a function of $1 - SP$ for alternative values of the cutoff point. Figure A.4 shows a hypothetical ROC curve. The higher the ROC curve, the better the predictive power of the model used for making the predictions. A 45 degree line has no predictive power while a vertical line from the origin to the top of the box followed by a horizontal line until the upper-right corner has perfect predictive power. The area below an ROC curve provides a summary statistic of the predictive value of the underlying model used for targeting. An area of 0.5 corresponds to the 45 degree line that has no explanatory power. An area of 1 corresponds to perfect prediction.

If the ROC curve of one targeting indicator (or set of indicators) used to predict poverty lies above the ROC curves of all the alternatives, that indicator will typically be the best to target the poor for the class of social welfare functions based on the two types of errors that can be committed through targeting. If two ROC curves intersect, the choice of the best indicator will depend on the normative weights attached by the policymaker to the two types of errors.

ROC analysis was used, for example, by Estache and others (2001) to assess how well various indicators performed for identifying the poor in order to target electricity subsidies among households with a connection to the public electricity grid in Honduras. Table A.5 gives the results, providing the areas under the ROC curves for the various targeting indicators. The best results (that is, the largest areas under the ROC curve) are obtained using a combination of different characteristics. For single characteristics, electricity consumption has some predictive power, but less so than some other variables, such as the size or quality of the house.

Figure A.4. A Hypothetical ROC Curve

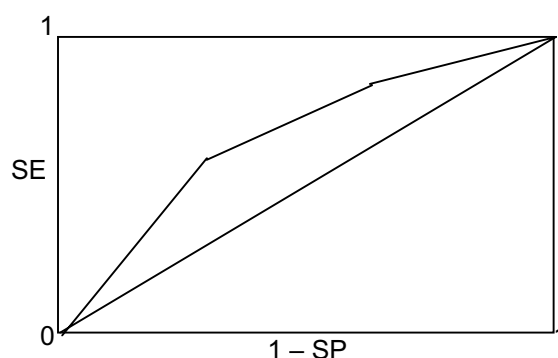


Table A.5. Areas Under ROC Curves for Alternative Targeting Indicators in Honduras

	<i>Performance in identifying the extreme poor (percentage)</i>	<i>Performance in identifying the poor (percentage)</i>
Socioeconomic status (multiple characteristics)	87	83
Demographics	72	71
Educational attainment	71	72
Employment status	69	66
Geographic location (department)	66	63
Housing characteristics (multiple characteristics)	82	81
Size of house	77	77
Quality of house	72	72
Access to electricity	68	69
Access to water and sanitation	61	58
Electricity consumption	70	73

Source: Estache and others 2001.

Of course, the choice of targeting mechanisms for programs and subsidies depends on several other factors, including administrative targeting costs and political economy considerations. A more detailed discussion of targeting issues is provided in chapter 6, “Public Spending.”

Technical Note A.10 Using Wage and Labor Force Participation Regressions

Similar to the analysis of correlates of poverty, regressions can be used to analyze the determinants of individual labor income. To analyze the impact of individual characteristics on labor income, and to measure among other things the impact of a better education on earnings, other types of regressions must be used. The standard approach consists of running a so-called Heckman model. Denote by $\log w_i$ the logarithm of the wage (or earnings) observed for individual i in the sample. The wage w_i is nonzero only if it is larger than the individual's reservation wage (otherwise, the individual chooses not to work). The difference between the individual's wage and reservation wage is denoted by ε_i^* . The individual's wage on the market is determined by geographic location (separate regressions are run for the urban and rural sectors), years of experience E , and years of schooling S . There may be other determinants of wages, but these are not observed. The difference between the individual's wage and his reservation wage is determined by the same characteristics, plus the number of babies B , children C , and adult family members A of the individual (and their square.) The Heckman model is written as

$$w_i = w_i^* \text{ if } \varepsilon_i^* > 0, \text{ and } 0 \text{ if } \varepsilon_i^* < 0$$

$$\log w_i^* = \zeta_w + \eta_{w1}E_i + \eta_{w2}E_i^2 + \eta_{w3}S_i + \eta_{w4}S_i^2 + \kappa_{wi}$$

$$\varepsilon_i^* = \zeta_\varepsilon + \eta_{\varepsilon1}E_i + \eta_{\varepsilon2}E_i^2 + \eta_{\varepsilon3}S_i + \eta_{\varepsilon4}S_i^2 + \eta_{\varepsilon5}B_i + \eta_{\varepsilon6}B_i^2 + \eta_{\varepsilon7}C_i + \eta_{\varepsilon8}C_i^2 + \eta_{\varepsilon9}A_i + \eta_{\varepsilon10}A_i^2 + \kappa_{\varepsilon i} = m_{\varepsilon i} + \kappa_{\varepsilon i}.$$

The expected value of κ_{wi} is not 0. Denoting by π and A , the standard normal density and cumulative density, and noting that ω_{ε} , the standard error of $\kappa_{\varepsilon i}$, is normalized to 1, we have the following:

$$E[\log w_i^* \mid \varepsilon_i^* > 0] = \zeta_w + \eta_{w1}E_i + \eta_{w2}E_i^2 + \eta_{w3}S_i + \eta_{w4}S_i^2 + \zeta\pi(m_{\varepsilon i})/A(m_{\varepsilon i})$$

$$E[\log w_i^* \mid \varepsilon_i^* < 0] = \zeta_w + \eta_{w1}E_i + \eta_{w2}E_i^2 + \eta_{w3}S_i + \eta_{w4}S_i^2 - \zeta\pi(m_{\varepsilon i})/[1 - A(m_{\varepsilon i})].$$

If ζ is statistically different from 0, the returns to education will differ between the employed and the unemployed, although the difference will typically be small. Simple approximations of the private returns to education (or more precisely, of the marginal impact of a better education on individual earnings) can be computed from the above wage regressions by taking the first derivative of the expected wage with respect to the number of years of schooling. Thus the “return” to education for year of schooling S is $\partial E[\log w_i^*]/\partial S = \eta_{w3} + 2\eta_{w4}S$ where ζ is 0. The returns are increasing (decreasing) with the number of years of schooling if the coefficient η_{w4} is positive (negative). These returns do not take into account the positive impact on the probability of working of education (that is, the fact that $\eta_{\varepsilon3}S_i + \eta_{\varepsilon4}S_i^2$

is typically positive). The returns also do not include estimates of the costs of schooling for parents and society, which reduce the returns, and of the indirect effects and externalities associated with education, which typically increase the returns from the point of view of both the society and the household. For more information on these techniques, see chapter 19, “Education.”

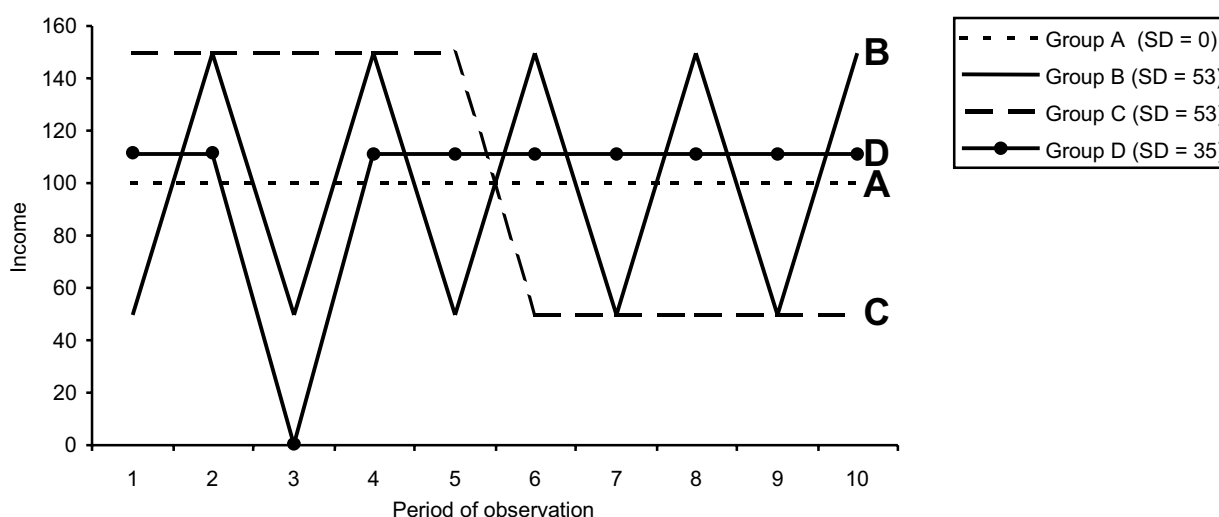
Technical Note A.11 Limitations of Income Vulnerability Analysis

As explained in the main chapter text, income vulnerability analysis based on standard deviations (SDs) and coefficients of variation can provide some information on the vulnerability of households, yet it has limitations. These can be illustrated with a simulation of various types of households. In figure A.5 below, each group has the same *average* income over the 10 periods (100), but the patterns of their income over time differ greatly. Clearly, Groups B, C, and D are more vulnerable than Group A. This is reflected in their higher SD.

Comparing Groups B and C shows that their SD is similar but their patterns are different. Imagine that B is a rural household with the fluctuations following peak and mean periods. Group C is an urban household that experiences the death of its main breadwinner in period 5, resulting in a permanent loss of income. Its vulnerability is different, but this is not reflected in the SD.

For Group D, imagine that the wage earner of the household has experienced an acute but temporary spell of illness, or a short time of unemployment, in period 3. If the household had stocks or buffers, it probably could have used these to maintain its consumption; but in the opposite case, it could have suffered irremediable losses during that one period, such as the death of a child from undernutrition or the stalled mental development of children. The SD indicates a lower vulnerability for this household than for Group B, which is not necessarily true.

Figure A.5. Comparison of Household Vulnerability



Source: Author's illustration.

Technical Note A.12 Beyond Poverty: Extreme Poverty and Social Exclusion

There is wide agreement that poverty is multidimensional. In order to go beyond the emphasis placed on income and consumption in analytical work on poverty, this note briefly introduces the concepts of extreme poverty and social exclusion, and how these concepts differ from monetary (that is, income or consumption-based) poverty as it has been traditionally defined.

A.12.1 Extreme poverty

While it is certainly feasible to define extreme poverty as a very low level of income or consumption, this note suggests another interpretation based on the grassroots work of nongovernmental organizations (NGOs). According to Wresinski (1987) (see also Wodon 2001b), three distinctions can be made between poverty and extreme poverty. First, extreme poverty results from a lack of various “basic securities” or assets in many areas of life (education, health, employment, and so on), rather than in the income or consumption space only. This lack of several basic securities may have a cumulative impact and lead to an insecurity affecting new dimensions in a poor person’s life. This can be analyzed through interaction effects. Second, extreme poverty tends to be associated with the persistence of this insecurity over possibly long periods of time. Third, the extreme poor are often unable to exercise their rights and assume their responsibilities, which has operational implications when conditions are imposed for participation in social programs.

- **Interaction effects.** Various factors or dimensions of poverty may reinforce each other (interaction effects) and prevent the very poor from emerging from extreme poverty. In other words, extreme poverty results not only from a lack of financial resources, but also from a lack of education, employment, housing, and health care, as well as civil and political rights. Beyond some threshold, the lack of many different basic securities has mutually reinforcing effects. The poor become extremely poor and are prisoners of a vicious circle.
- **Long-term dimension.** The time dimension associated with poverty has been discussed in section 1.4, “Vulnerability Measurement and Analysis.” Extreme poverty often persists through time and tends to be transmitted from one generation to the next. A common feature among the extreme poor is the permanence, or at least the recurrence, of their situation. One can think of extreme poverty as being persistent, or at least chronic. The longer the experience of poverty, the harder it is to emerge from extreme poverty. This is difficult to analyze through panel data, but it can be revealed through qualitative work, such as life histories (see technical note 13).
- **Rights and responsibilities.** The third reference in the Wresinski approach to extreme poverty deals with rights and responsibilities and rests on two articulations. The first articulation highlights, for each human right at a time, the existing link between the access to that right and the exercise of a corresponding responsibility. This link is broken when, because of lack of access to the right, the individuals or families in poverty cannot fulfill their corresponding responsibility. In turn, because they cannot demonstrate their ability to fulfill their responsibility, the poor are not in a position to claim their right. For example, a person who has been unemployed for a long period of time will have difficulty acquiring the credentials that would enable him or her to demonstrate the ability to work. The second articulation refers to the interdependence or indivisibility between various rights. For example, without access to one right, it is difficult to exercise other rights.

A.12.2 Rights and social exclusion

In a series of recent resolutions, various agencies of the United Nations system have suggested that extreme poverty may lead to violations of human rights in their indivisibility. Still, the use of the discourse of human rights to analyze poverty is not as well accepted as the quantitative tools described in the main text of this chapter. The reference to human rights is not meant to be dogmatic. Rather, it is meant to provide a framework for the discussion of some of the institutional issues related to poverty policies. In Freedden’s (1991) terms, a human right is a conceptual device that helps societies to assign a priority to certain human or social attributes regarded as essential to the adequate functioning of a human being. In other words, from a conceptual point of view, at least two requirements are needed for a basic security or need to be elevated to the status of human right. Human rights must be recognized as such by others than their most direct beneficiaries, and they must be essential to our functioning as human beings. These two requirements are linked to each other, since only key human attributes stand a chance to benefit from a consensus for their recognition as human rights by society.

Only society or the community as a whole can grant a right to someone. Conversely, the nonattribution of a right expresses a sanction, an exclusion, whether it is explicit or implicit, of some individuals. In a report on social exclusion and antipoverty strategies, the International Institute for Labour Studies (1996) argues that the concept of social exclusion provides an integrated and dynamic analytical perspective with which to analyze the relationships between well-being and rights. When the nonattribution of a right is explicit, the exclusion from the benefit of the protection granted by a right is operated

through institutional procedures. If the rules for the enjoyment and the exercise of human rights skim some beneficiaries, thereby ending in denials of rights for those who cannot comply with society's rules, institutional change may be needed in order to fight extreme poverty.

Rather than opposing the traditional concepts poverty with those of extreme poverty and social exclusion, and arguing that one set of concepts is more useful than the other, it is better to consider extreme poverty and social exclusion as complementary concepts to that of poverty. Material (consumption or income) poverty is then viewed as a particular form of deprivation, that is, the lack of command over goods and services. Social exclusion is broader than poverty in considering issues of social participation and rights realization, as well as processes. Extreme poverty is deeper than poverty in that it results from many handicaps faced by the very poor.

One important distinction between the concepts of poverty or extreme poverty and that of exclusion is that poverty and extreme poverty are states of well-being, while exclusion is a dynamic process whereby someone excludes someone else. Literally, to exclude means to banish, to send somebody away from a place where she had the right to stay before. By extension, to exclude means to deprive somebody from any right previously granted, or normally granted, to those recognized as full members of a given community or society. The strength of an analysis based on a social exclusion perspective is to put the issues together into a cohesive framework, that is, to allow the analyst to investigate the causes and processes involved in the persistence of poverty, often using both quantitative and qualitative techniques.

A social exclusion perspective can thus function as a flexible analytical framework aimed at understanding social disadvantage (Gacitua-Mario, Sojo, and Davis 2000; Gacitua-Mario and Wodon forthcoming). Beyond being goods-centered, the analysis of social exclusion is people-centered and institution-centered. The analysis of social exclusion also contains both an objective and subjective dimension, to the degree that it considers both the objective conditions of people's lives and their perceptions of being connected or disconnected from wider spheres of social, political, and cultural life. This perspective does not substitute for the traditional income- or consumption-based notion of poverty or other concepts dealing with vulnerability. It rather provides a framework for interrelating different levels of analysis (multidimensionality) and cumulative processes that maintain social groups social disadvantage or pull them into it. The perspective fully recognizes the importance of the traditional dimensions of poverty, such as the inability to generate a sufficient and stable income and to have access to quality social services in order to meet basic needs. However, it also incorporates other dimensions that belong to the relational/symbolic domain: the socio-organizational cultural and the political. The value added by a social exclusion perspective lies in the emphasis on dynamic processes in which both institutions and agents are involved. For institutions, this refers to the ways institutions, rules, and perceptions interact to generate or combat processes of social disadvantage (see also chapter 9, "Community-Driven Development").

Technical Note A.13 Qualitative and Participatory Assessments

The discussion in the preceding note naturally leads to qualitative and participatory research methods. Among these, so-called Participatory Poverty Assessments (PPAs) are tools for consulting the poor directly and systematically. Using PPAs can deepen the understanding of poverty, explain processes of impoverishment and household survey data, convey the priorities of the poor, and assist in analyzing poverty beyond the household unit. PPAs can capture dimensions of poverty that are not always addressed in household surveys. Experience has shown that poor people speak of poverty in different terms from those typically used in policy analysis. They may refer to such characteristics as vulnerability, physical and social isolation, lack of security and self-respect, powerlessness, and lack of dignity. In addition, past PPAs have offered insights into dimensions of poverty that had not been previously examined by household surveys, such as vulnerability, gender, crime and violence, and seasonality.

The types of qualitative data that are important for poverty reduction strategy design and monitoring include the following:

- poor people's priorities for improving their situation—desegregated by sex and by other important characteristics of the community;
- causality data—people's perceptions of causes and consequences of poverty;
- opportunities poor people see for improving their situation;
- constraints and barriers to improving their situation;
- locality differences—differences between districts and between rural and urban centers;

- perceptions on quality of service delivery, infrastructure, and governance at the local level; and
- identification of who are the poor.

PPAs use a variety of methods that combine visual techniques, such as mapping, matrices, and diagrams, with verbal techniques, such as open-ended interviews and discussion groups. The process of undertaking a PPA is different at the community and national levels. The community level involves undertaking the study with the locally led teams. The national-level study involves linking communities to a broader policy dialogue.

A.13.1 PPAs at the Community Level

Many PPAs use the participatory rural appraisal (PRA). The PRA offers tools such as mapping; diagrams of changes, trends, and linkages; matrices; and scoring. It is a locally led effort and requires a willingness to unlearn assumptions and conditioned responses. The PPA design will depend on the country context, research agenda, sample, and researchers' experience. Table A.6 describes characteristics of the average PPA.

PPAs and household surveys can inform each other, so the sequencing will be determined by the context in-country. If the PPA comes first, its results can help focus the research agenda for the quantitative survey and generate hypotheses. Conversely, the results of quantitative surveys can be used to identify the poorest geographic areas on which participatory research should focus or can be used to identify a specific set of issues that requires further understanding. Good practices often have iterative processes.

The Zambian PPA (see case examples below) illustrates how issues of measuring poverty, and analyzing the behavior of and impact of policies on the poor, can be addressed using qualitative techniques. In particular, issues in rural and urban areas and differences in attitude and behavior between men and women can be explored.

A.13.2 The Process at the National Level

Participatory policymaking links communities to a broader policy dialogue that includes a cross-section of stakeholders. In general, open political environments provide greater opportunities for building consensus on poverty issues. In Costa Rica, for example, where there is a tradition of bringing marginal groups into the political sphere, the government was eager to understand poverty better from the perspective of the poor and welcomed the PPA. See case examples (below) for illustrations.

Experience has shown that involving key policymakers from the beginning enhances ownership and commitment. Limited government support, or lack of government support, can hinder the impact of the PPA, especially if the research results run counter to the government's interest. Generating a more open

Table A.6. Design Features for Participatory Poverty Assessments

<i>Feature</i>	<i>Detail</i>
Cost	\$75–\$125,000
Number of communities selected for research	40–60 communities
Time spent on training	2 weeks
Time spent on field research	3–6 months
Time spent on analysis	2–3 months
Size research team (including team leaders and trainers)	10–20 people
Composition of research team	Country nationals, half men and half women, ability to speak local languages, representatives from various ethnic groups, and a cross-section of age groups
Typical agency conducting the field work	Government extension workers; local and international NGOs; academic institutions; independent consultants and firms
Donors who have contributed to government-led PPAs	Department for International Development, World Bank, Action Aid, Oxfam (U.K.), United Nations Development Program (UNDP), United Nations Children's Fund (UNICEF), Danish International Development Agency (DANIDA), Asian Development Bank

Source: From various resources developed by authors.

climate and starting with small-scale participation and PPAs can initially help make the process of participation less daunting. Where appropriate, the following measures can help increase the policy impact:

- Involve policymakers in the early planning of the PPA.
- Start with small-scale participation in constrained political environments.
- Bring key policymakers to the field to participate in the PPA research.
- After the results are presented, convene workshops with policymakers and local people.
- Negotiate high-level commitment to follow up the PPA and monitor the implementation of key recommendations.

A.13.3 Case Examples

PPA Highlights the Potential of Women's Groups in Kenya

The coping strategies of the poor, most of whom do not have access to credit, depend on diversifying their livelihoods and on the strength of their social networks and informal groups. Because their livelihoods are so diversified, no single employment program will reach the poor. The informal groups and associations, on the other hand, engage in a wide range of economic and social welfare activities. The PPA in Kenya highlighted the untapped potential of these groups to reach the poorer segments of society. The study estimated that at least 300,000 groups and associations exist in rural Kenya, including more than 23,000 registered women's groups. Every village was found to have from 5 to 17 different types of groups and more than one active or defunct women's group. The following are some of the findings that emerged about these women's groups:

- During discussions of coping strategies, women's self-help groups were mentioned frequently in every district, particularly by female-headed households.
- In addition to income generation, group objectives frequently included welfare activities: raising cash to pay school fees, meet hospital expenses, or help with transport costs to bring the dead back to the villages for burial.
- Most groups levied membership fees and monthly contributions.
- Although high fees excluded the poor, many groups targeted their activities specifically to assist the poor with food, school fees, and housing construction.
- Women's groups were often formed along clan or kinship lines and often had male members. Generally, they were supported by village men and the community at large.
- Based on the findings of the PPA, proposals to reach the poor by strengthening women's groups include legal registration so that groups are eligible for credit, technical and business management training of group members, and extension of microenterprise credit to groups.

Zambia's Participatory Poverty Assessment: Objectives and Method

The key goals of the PPA were to explore local concepts of poverty, vulnerability, and relative well-being in poor urban and rural communities; the poor's perceptions of the main concerns and problems and effective actions for poverty reduction; and local perceptions of key policy changes for economic reform. The PPA included a mix of qualitative techniques, such as unstructured and semistructured interviews, focus group interviews, wealth and well-being ranking, institutional diagrams (Venn diagrams), and seasonality diagramming. Ten research sites were selected to represent a variety of communities, including rural, urban, cultural or ethnic group, and so on. The issues and techniques are presented in table A.7.

A.13.4 Assessing existing qualitative data

Desk Review

A desk review is warranted if qualitative data sources cannot be readily identified and the data are not routinely used for poverty profiling and poverty reduction strategies. A desk review is not needed if it has already been performed in the past few years. The review would identify and summarize qualitative data from official poverty assessments, NGO reports, participatory research, and needs assessment processes. Such data would be assessed for timeliness, quality, coverage, and depth—that is, how well the data help policymakers to derive policy. Table A.8 shows criteria for judging the quality of existing qualitative data.

Table A.7. Issues Addressed and Qualitative Techniques Employed in the Zambian PPA

<i>Poverty Issue</i>	<i>Qualitative methods used</i>
Perceptions and indicators of wealth, well-being, poverty, vulnerability, powerlessness; local terminology and correspondence with such concepts; differences in perception by gender.	<ul style="list-style-type: none"> • Wealth and well-being ranking or grouping for criteria and indicators • Semistructured interviews • Social mapping
Perception of change over time in welfare, indicators, terms of trade	<ul style="list-style-type: none"> • Timelines (for migration, terms of trade, environment, and so on)
Access to (and use of) services such as health, education, credit; preferences, especially where choice between options is available; perceptions of services, including views (or awareness) of recent change; differing perceptions and values for men and women	<ul style="list-style-type: none"> • Institutional diagramming • Semistructured interviews • Trend analysis of services, for example, health, education, agricultural extension, marketing
Seasonal stress: food security, health, general livelihoods; income, spending, activity (by selected occupational groups)	<ul style="list-style-type: none"> • Seasonal calendar (health, food security, food intake, access to fuel, water, and so on) • Comparative seasonal calendars (good years, bad years, average years)
Assets of rural communities—access to services, common property resources, other natural resources	<ul style="list-style-type: none"> • Resource mapping • Focus groups • Institutional (Venn) diagramming
Assets of households	<ul style="list-style-type: none"> • Wealth ranking or grouping • Social mapping • Semistructured interviews
Coping strategies and fallback strategies in times of crisis	<ul style="list-style-type: none"> • Livelihood analysis • Semistructured interviews • Ranking exercises
Perception of consumption level in terms of food, clothing, and relation to well-being	<ul style="list-style-type: none"> • Well-being grouping/ranking • Social mapping • Semistructured interviews
Community-based support mechanisms for the rural poor (community safety nets)	
Local institutions of self-help and support for the urban poor (for example, market traders' association, trade associations, churches, and so on)	<ul style="list-style-type: none"> • Semistructured interviews • Institutional mapping
Role of community institutions in service and infrastructure provision	<ul style="list-style-type: none"> • Institutional mapping • Semistructured interviews
Long-term environmental trends, for example, declining soil fertility, declining rainfall	<ul style="list-style-type: none"> • Historical transects • Community timelines • Resource mapping at different points in time • Trend analysis
Responsibilities, obligations within households (support to children, provision of food, payment of school fees, and so on, by gender)	<ul style="list-style-type: none"> • Semistructured interviews • Decisionmaking matrix

Source: World Bank (1994b).

Table A.8. Criteria for Assessing Adequacy of Qualitative Data

<i>Criteria</i>	<i>Adequate requirement</i>
Age of data	<ul style="list-style-type: none"> • Collected in the past five years
Methodologies	<ul style="list-style-type: none"> • Participatory methods (PRA), focus groups better
Coverage and scope: <ul style="list-style-type: none"> • Geographic • Rural and urban • Groups consulted 	<ul style="list-style-type: none"> • All significant agro-ecological zones represented • Both • Both sexes, youth and elderly, other vulnerable groups, principal livelihood groups of the poor
Dimensions of poverty	<ul style="list-style-type: none"> • Dynamics (especially seasonality), causality, gender, age, livelihood • Identification of vulnerable groups

Table A.8. Criteria for Assessing Adequacy of Qualitative Data (continued)

<i>Criteria</i>	<i>Adequate requirement</i>
Perceptions of services, infrastructure and governance	<ul style="list-style-type: none"> • Explored
Information flows	<ul style="list-style-type: none"> • Awareness and understanding of poverty-related policies and programs
Priorities of the poor	<ul style="list-style-type: none"> • Opportunities and constraints improving quality of life, priorities for poverty reduction

Technical Note A.14 Use of Demographic and Health Surveys for Poverty Analysis

Although Demographic and Health Surveys typically have not been used for the analysis of well-being, they go far beyond collecting health information. For example, the surveys cover the following:

- (a) **Basic service access.** Source of water, how far to get to water, electricity access, type of toilet facilities, materials used for the floor, ownership of durable goods (for example, car, motorcycle, bicycle, radio).
- (b) **Education.** Highest formal education attained of all household members; reason why women stopped attending school; current school enrollment, but not by school type, of all household members.
- (c) **Occupation of adults.**
- (d) **Migration.** Residence of household.
- (e) **Health.** Infant mortality, fertility, contraception practices and family planning, health attendance during pregnancy, feeding practices, vaccination of children, child illnesses (below 5 years of age), knowledge about disease treatment, sickness and health center use of mothers and children, satisfaction with health service, cost of treatment; knowledge about age; female circumcision; height and weight of children.

The Demographic and Health Surveys do not contain household income or consumption, but “wealth” information can be used to allow derivation of a poverty profile. A household wealth indicator can be constructed using available information on durable goods, basic services, and so on. The indicator is then ranked to construct quintile distributions. There are currently several different methods to derive such a wealth indicator, but the profile tables constructed using the indicator can include the following:

- (a) Distribution of poverty (or, rather, low wealth), basic service access, education and health by region, since the survey is able to produce estimates for many regions
- (b) Profile of health outcomes, access to basic services, health and education by wealth quintile (this can also be done by sector—urban versus rural—and by gender)

This information provides a good base to see whether pockets of (wealth) poverty correlate with health and educational outcome indicators, whether the infrastructure and educational deficit in these areas is particularly high and, implicitly, what the geographic distribution of health and education spending is, since total enrollment and health user information can be derived. Comparing this to the distribution of the poor and to the population gives information on the

- geographic distribution of government spending and necessary reform; and
- potential focus, and locus, of interventions.

If different Demographic and Health Surveys exist over time, a potentially rich analysis can compare developments in time with the various indicators. Such comparisons could include how outcome indicators such as education and health evolved, whether backward regions caught up in basic service access and health and education spending, whether the distribution of poverty changed significantly, and whether incidence of education or health spending improved.

For further reference, see <http://www.worldbank.org/poverty/health/data/index.htm>; Filmer and Pritchett (1999); and Gwatkin and others (2000).

Annex B

Inequality and Social Welfare: Technical Notes

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Technical Note B.1 Gini Index of Inequality and Source Decomposition

To analyze the impact of various sources of income on inequality in per capita income, we use the source decomposition of the Gini index proposed by Lerman and Yitzhaki (1985; see also Garner [1993] for an application to inequality in consumption rather than income). Denote total per capita income by y , the cumulative distribution function for total per capita income by $F(y)$ (this takes a value of zero for the poorest household and one for the richest), and the mean total per capita income across all households by \bar{y} . The Gini index can be decomposed as follows:

$$G_y = 2 \text{cov}[y, F(y)]/\bar{y} = \sum_i S_i R_i G_i$$

where G_y is the Gini index for total income, G_i is the Gini index for income y_i from source i , S_i is the share of total income obtained from source i , and R_i is the Gini correlation between income from source i and total income. The Gini correlation is defined as $R_i = \text{cov}[y_i, F(y)]/\text{cov}(y_i, F(y_i))$, where $F(y_i)$ is the cumulative distribution function of per capita income from source i . The Gini correlation R_i can take values between -1 and 1. Income from sources such as income from capital that tend to be strongly and positively correlated with total income will have large positive Gini correlations. Income from sources such as transfers tend to have smaller, and possibly negative, Gini correlations. The overall (absolute) contribution of a source of income i to the inequality in total per capita income is thus $S_i R_i G_i$.

This decomposition provides a simple way to assess the impact on the inequality in total income of a marginal percentage change equal for all households in the income from a particular source. As shown in Stark, Taylor, and Yitzhaki (1986), the impact for all households of increasing the income from source i in such a way that y_i is multiplied by $(1 + e_i)$, where e_i tends to zero, is

$$\frac{\Delta G_y}{G_y} = S_i (R_i G_i - G_y) \Delta e_i$$

This equation can be rewritten to show that the percentage change in inequality due to a marginal percentage change in the income from source i is equal to that source's contribution to the Gini minus its contribution to total income. In other words, at the margin, what matters for evaluating the redistributive impact of income sources is not their Gini, but rather the product $R_i G_i$, which is called the pseudo Gini. Alternatively, denoting by $\eta_i = R_i G_i / G_y$ the so-called Gini income elasticity (GIE) for source i , the marginal impact of a percentage change in income from source i identical for all households on the Gini for total income in percentage terms is

$$\frac{\Delta G_y / \Delta e_i}{G_y} = \frac{S_i R_i G_i}{G_y} - S_i = S_i (\eta_i - 1)$$

Thus a percentage increase in the income from a source with a GIE η_i smaller (larger) than one will decrease (increase) the inequality in per capita income. The lower the GIE, the larger the redistributive impact. The GIE of income source i can be written as:

$$\eta_i = \frac{\text{cov}(x_i, F(y))}{\text{cov}(y, F(y))} \cdot \frac{1}{S_i}$$

where x_i is income source (or expenditure item) i per capita, y is income per capita, and S_i is the share of source i in income. The ratio of the covariances is an instrumental variable estimator of the slope of the Engel curve of source i with respect to income y , with $F(y)$ being the instrument. Hence, the ratio of the covariances can be interpreted as the slope (or the marginal propensity) of the Engel curve of x with respect to y . S_i is the average propensity so that the ratio of the two yield the income elasticity of the Engel curve. At the same time, the GIE is the income elasticity of the Gini with respect to an increase in income source i .

The same decomposition can be applied to per capita consumption and its sources, and the same decomposition can also be applied to the extended Gini that uses a parameter, v , to emphasize various parts of the distribution. The higher the weight, the more emphasis that is placed on the bottom part of the distribution ($v = 2$ for the standard Gini index):

$$G_y(v) = \frac{-v \operatorname{cov}(y, [1 - F(y)]^{v-1})}{\bar{y}}$$

Technical Note B.2 Decomposition of the GIE into Targeting and Allocation GIEs

A decomposition of the GIE proposed by Wodon and Yitzhaki (2001) can be used to differentiate between two properties of a program that can affect its impact on inequality: targeting and the allocation mechanism among participants (internal progressivity). The decomposition enables the analyst to assess whether the (lack of) performance of social programs and policies results from either the selection mechanism for participants or the allocation of benefits among program participants. To differentiate between targeting and internal progressivity, define z as the targeting instrument:

$$z = \begin{cases} \bar{x}_P & \text{if } h \in P \\ 0 & \text{if } h \notin P \end{cases}$$

That is, z is equal to the mean benefit among households' participants in the program, and it is zero for households that do not participate (one could substitute the average benefit by an indicator that is equal to one without affecting the results). The variable z is an indicator of targeting because it is only concerned with who is affected by the program rather than with the actual benefit received. Using this definition of z , we can rewrite the GIE as a product of two elasticities as follows:

$$\eta = \left(\frac{\operatorname{cov}(z, F(y))}{\operatorname{cov}(y, F(y))} \frac{\bar{y}}{\bar{z}} \right) \left(\frac{\operatorname{cov}(x, F(y))}{\operatorname{cov}(z, F(y))} \frac{\bar{z}}{\bar{x}} \right) = \eta_T \eta_A$$

The first term is related to the targeting of the program (targeting effect). The second term is the progressivity among participants (allocation effect). The distributional impact of a program depends on the product of its targeting and allocation elasticities. Good targeting, for example, can be offset by a bad allocation mechanism among program beneficiaries. This equation is useful to assess whether the (lack of) performance of a program is the result of its targeting or of the allocation of benefits among beneficiaries.

Technical Note B.3 Social Welfare Function, Growth, and Redistribution

To assess the effect of government programs on welfare per dollar spent in each program, following Yitzhaki (2000), we denote by \bar{y} the mean income in the population and by G_y the Gini index of income inequality. A common welfare function used in the literature is $W = \bar{y}(1 - G_y)$ (for example, Sen, 1976). The higher the mean income, the higher the level of social welfare; but the higher the inequality, the lower the aggregate level of welfare. This welfare function takes into account not only absolute but also relative deprivation (people assess their own level of welfare in part by comparing themselves with others). Using the implicit distributional weights embodied in this welfare function, we can derive the marginal gains from additional investments in government programs. If \bar{x} denotes the mean benefit of a social program x across the whole population, and if η is the Gini income elasticity of that program

(defined below), increasing at the margin the funds allocated to the program by multiplying the outlays by $1 + \Delta$ for all program participants, with Δ small, will result in a marginal social welfare gain equal to

$$\Delta W = (\Delta \bar{x})(1 - \eta G_y).$$

This equation makes it clear that considerations related to both growth (as represented by the mean marginal benefit $\Delta \bar{x}$) and distribution (as represented by the Gini income elasticity η times the Gini index G) must be taken into account in program evaluations.

Annex C

Monitoring and Evaluation: Technical Notes and Case Studies

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Technical Note C.1 Major Types of Evaluation

Evaluation is a systematic examination of the relevance, operation, and outcomes of programs and policies, compared to a set of explicit or implicit standards, intended to improve public actions. Different types of evaluation address different evaluation questions. These questions can be broadly classified in three categories:

- **Process** questions aim to understand how the program or a specific component of it are being implemented as originally designed.
- **Outcome** questions seek to assess whether the situation of individuals or households in terms of key outcomes (knowledge, behavior, well-being, and so on) has changed, and the extent to which the program is responsible for the observed changes. Outcomes may change for a number of reasons, many of which may be independent of the program. Attribution questions ask whether observed changes were caused by the program or whether they would have occurred anyway.
- Questions about **reasons** aim to explore the reasons behind the observed process and outcomes; they ask how and why results were what they were.

These questions can be roughly matched by three major types of evaluation: process evaluation, outcome evaluation, and theory-based evaluation. Each type of evaluation in turn has a menu of possible evaluation designs and data collection methods. Evaluation designs are bundles of techniques that can be used in different combinations to answer different evaluation questions. Evaluation designs specify the units of analysis (for example, households, individuals, facilities, communities, and so on) and how they are going to be selected (opportunistically or using systematic sampling strategies); which kind of comparisons will be made (for example, no comparison, comparison across time or space, comparison of different groups, and so on); and the timing of the data collection (for example, before and after the program, immediately after the program only, during program implementation, and so forth).

Process evaluations assess how effectively a public action is being implemented; they focus on aspects such as who is participating, what activities are being offered, what actions have been taken, and what staff practices and client responses are. A process evaluation may be conducted when problems such as delays, cost overruns, or beneficiary dissatisfaction have been detected by the monitoring system, or may be carried out regularly as an early-warning system. Process evaluations tend to rely on less formal evaluation designs and modes of inquiry such as self-evaluation and expert judgment.

Outcome evaluations assess what happened to individuals (or other units of analysis) after policy or program implementation; they focus on intervention outcomes such as whether people are healthier, better educated, or less vulnerable to adverse shocks. Evaluation designs for outcome evaluations vary along a continuum of levels of complexity. At one end of the spectrum are outcome evaluations that simply assess whether program participants experienced any changes in key welfare indicators—these are basically monitoring exercises. Evaluation designs and data collection and analysis methods at this end of the spectrum tend to be relatively simple and quick to yield results, but they leave room for differing interpretations of how much of a change can be attributed to a particular intervention. This type of evaluation generally looks only at the group of program participants; there is no comparison with people or communities that did not participate in the program nor any effort to isolate program or policy effects from other events occurring simultaneously. The evaluation can look at outcomes either after the intervention has been in operation for a while or is completed, or before and after the intervention. Data collection and analysis methods can be quantitative, such as service delivery surveys; qualitative, such as key informant interviews or focus groups; or participatory, such as rapid appraisal methods.

At the other end of the spectrum are evaluations that address attribution questions using special—often complex—techniques to disentangle the net gains from interventions (see technical notes C.2 and C.3). These evaluations are usually referred to as impact evaluations. Impact evaluations assess the extent to which public actions have produced their intended effects and the extent to which changes in individuals' well-being can be attributed to a particular program or policy. They estimate the magnitude of the effects of a program or policy and assign causation. Such a causal analysis is essential for understanding the relative role of alternative program interventions in reducing poverty and thus for designing appropriate poverty reduction strategies.

Theory-based evaluations examine the links between inputs, activities, and outcomes and aim to determine whether a breakdown has occurred—and if so, where, why, and how. They present an explicit or implicit theory about how and why a public action would work as a series of microsteps and analyze them sequentially to track the unfolding of assumptions. By following the sequence of steps, this type of evaluation can determine if and where the process from program inputs to outcomes failed.

Technical Note C.2 Impact Evaluation Designs

Experimental or randomized designs involve gathering a set of individuals (or other units of analysis) equally eligible and willing to participate in the program and dividing them into two groups: those who receive the intervention (treatment group) and those from whom the intervention is withheld (control group). For example, in some social funds, economically feasible projects submitted by communities are randomly selected to receive funding during the first phase of the project (treatment group), while the rest, scheduled to receive funding at a later stage, can be used as control group. Since program participants are selected randomly, any difference from nonprogram participants is due to chance. For this reason, experimental designs are usually regarded as the most reliable method and the one yielding results that are easiest to interpret. In practice, however, this type of evaluation design can be difficult to implement, not least because it is difficult to withhold benefits from equally eligible individuals (see case study C.7).

Quasi-experimental design is another option. When randomization is not feasible, a comparison group can be constructed. The two methods for constructing a comparison group are matching and reflexive comparisons. *Matching* consists of selecting nonparticipants comparable in essential characteristics to participants, on the basis of either a few characteristics or a number of them, using statistical techniques. For example, the evaluation of Trabajar, a public works program in Argentina, constructed a comparison group by matching program participants to nonparticipants on the basis of several socioeconomic characteristics, including schooling, gender, housing, subjective perceptions of welfare, and membership in political parties (see case study C.4). Evaluations using matching methods are often easier and cheaper to implement than experimental designs, but the results are less reliable and interpreting them is more difficult.

Another type of quasi-experimental design is called **reflexive comparison**. In a reflexive comparison, the counterfactual is constructed on the basis of the situation of program participants before the program. Thus, program participants are compared to themselves before and after the intervention and function as both treatment and comparison group. This type of design is particularly useful in evaluations of full-coverage interventions such as nationwide policies and programs in which the entire population participates and there is no scope for a control group (see case study C.5). There is, however, a major drawback with this method: the situation of program participants before and after the intervention may change owing to reasons independent of the program. For example, participants in a training program may have improved employment prospects after the program. While this improvement may be the result of the program, it may also be due to the fact that the economy is recovering from a past crisis and employment is growing again. Unless they are carefully done, reflexive comparisons may not be able to distinguish between the program and other external effects, thus compromising the reliability of results.

Nonexperimental designs can be used when it is not possible to select a control group or a comparison group. Program participants can be compared to nonparticipants using statistical methods to account for differences between the two groups. Using regression analysis, it is possible to “control” for the age, income, gender, and other characteristics of the participants. As with quasi-experimental methods, this evaluation design is relatively cheap and easy to implement, but the interpretation of results is not straightforward and results may be less reliable.

Technical Note C.3 Impact Evaluation Methods for Policies and Full-Coverage Programs

When policies or programs affect the whole population, it is generally not possible to identify or construct a control group, and assessing whether such interventions caused changes in outcomes is considerably more difficult. Several methods can be employed.

Computable general equilibrium models (CGEs) attempt to contrast outcomes in the observed and counterfactual situations through computer simulations. These models seek to trace the operation of the real economy and are generally based on detailed social accounting matrices built on data from national accounts, household expenditure surveys, and other survey data. CGE models simulate the counterfactual, though the strength of the model is entirely dependent on the quality of the underlying data and the validity of the assumptions. This can be problematic, as databases are often incomplete and many of the parameters needed cannot be estimated by formal econometric methods. CGE models are also very time consuming, cumbersome, and expensive to develop.

“With and without” comparisons compare the behavior of key variables in a sample of program countries or regions to their behavior in nonprogram countries (a comparison group). Thus this method uses the experiences of the nonprogram countries as a proxy for what would otherwise have happened in the program countries. An important limitation of this approach is that it assumes that only the adoption of a particular policy or program distinguishes program countries or regions from nonprogram areas and that external factors either affect both groups equally or their impact can be identified separately from that of the intervention.

Statistical control methods consist of regressions that control for the differences in initial conditions and policies undertaken in program and nonprogram countries or regions. The approach identifies the differences between program and nonprogram areas in the preprogram period and then controls for these differences statistically to identify the isolated effects of the programs in the postreform period.

Source: Baker, Judy. 2000. *Evaluating the Poverty Impact of Projects: A Handbook for Practitioners*. Directions in Development. Washington, D.C.: World Bank.

Technical Note C.4 Types of Data Sources for Impact Evaluation

Longitudinal or panel datasets include information on the same individuals (or other units of analysis) for at least two different points in time, one before the intervention (the baseline) and another afterward. Panel datasets are highly valued for program evaluation, but they can be expensive and require substantial institutional capacity (see case study C.5 and chapter 1, “Poverty Measurement and Analysis”).

Cross-section data collect information from different people at different points in time. Evaluations using cross-section data usually cost less than studies using information from more than one point in time but, since it is often difficult to tell whether changes were due to the intervention or to other factors, the results tend to be less reliable, except for experimental designs (see case study C.4).

Time-series data gather information on key outcome measurements at periodic intervals both before and after the program. They allow the examination of changes in trends pre- and postprogram. However, many data points before and after the program are required for rigorous analysis. Time series are used primarily to evaluate policies and programs with full or national coverage.

Case Studies

Case studies C.1 and C.2 provide examples of national poverty monitoring systems, whereas case study C.3 presents an example of the use of citizen feedback surveys as a tool for civil society participation in assessing public sector performance. Case studies C.4 to C.7 (adapted from Judy Baker [2000], *Evaluating the Poverty Impact of Projects: A Handbook for Practitioners*, World Bank, Washington, D.C.) exemplify impact evaluations of projects and programs across different sectors. They illustrate a wide range of approaches in evaluation design, use of data, policy relevance of results, and associated impact on evaluation capacity building (see table C.1). Each study includes a discussion on the relative strengths and weaknesses of each evaluation.

Case Study C.1 Monitoring the Progress of the Poverty Eradication Action Plan in Uganda¹

C.1.1. Introduction

In 1995, the government of Uganda embarked on the formulation of the Poverty Eradication Action Plan (PEAP) to ensure that poverty reduction was the focus of its overall growth and development strategy. This plan was developed through a consultative process involving representatives from the government and civil society as well as donor organizations. The overarching goal of the PEAP is to eradicate mass poverty—reducing the proportion of the population living in absolute poverty from 56 percent (1992) to 10 percent and cutting the proportion of people living in relative poverty from more than 85 percent to 30 percent by 2017.

Additional goals were agreed on in four areas—macroeconomics, governance, income generation, and human development—and expanded into a set of strategic objectives (see box C.1). Primary health care, primary education, agricultural extension, and rural feeder roads were identified as initial priority poverty areas for resource allocation. Goal setting and the choice of strategic objectives and priority areas have been dynamic processes, frequently revised in light of new information, such as the Uganda Participatory Poverty Assessment (UPPA) conducted in 1998 and 1999, and feedback from the poverty monitoring system.

C.1.2. Poverty monitoring system

Progress in achieving the goals is being assessed through continuous poverty monitoring. This started as an ad hoc activity and has evolved gradually toward a decentralized, participatory monitoring system with a clearer delineation of roles and responsibilities, including mechanisms for collaboration across institutions.

Box C.1. Poverty Eradication Action Plan Goals, Uganda

Overarching goal: To reduce the proportion of the population living in absolute poverty from 56 percent to 10 percent and to cut the proportion of people living in relative poverty from more than percent to 30 percent by 2017.

Goal #1: Implementation of macroeconomic policies that provide an enabling environment for poverty reduction

- Maintain a stable exchange rate and one that makes the export sector competitive
- Maintain low levels of inflation that facilitate savings mobilization and long-term planning
- Promote private sector investment in rural areas
- Reduce anti-export bias of trade policy to improve prospects for exports
- Promote broad-based economic growth
- Reduce external indebtedness to sustainable levels
- Reduce poverty disparities among districts
- Improve women's economic and political empowerment
- Broaden tax base
- Refocus public expenditure to be directly linked to poverty eradication

Goal #2: Creation of an institutional framework that promotes poverty reduction through broad participation, transparency, and accountability

- Enhance the effective and efficient delivery of public services while fostering transparency and accountability
- Promote the growth of the private sector by enhancing local and foreign investments
- Strengthen the machinery for keeping law and order and administering justice while improving poor people's access to legal services
- Enhance the observance of human rights and freedom and democratic governance
- Promote community participation in the planning and delivery of services

Goal #3: Expansion of the income opportunities of the poor

- Provide an efficient road network
- Transform and modernize agricultural production
- Ensure security of land tenure, adequate accessibility to land, and its efficient use, while preserving the environment
- Support development of rural markets: infrastructure, market information, and standards
- Provide financial services to the poor through promotion of the growth of micro-financial institutions and rural village banks
- Enhance labor productivity, giving priority to employment of women, reduction of the exploitation of child labor, and safeguarding of the rights of employees
- Create an enabling environment for the development of micro- and small-scale enterprises

Goal #4: Improvement of the quality of life and the human capital of the poor

- Meet the constitutional provision of basic health care to all, improving the delivery of health services to the entire population on a cost-effective basis
- Provide safe drinking water to the entire population within easy reach, while improving the cost-effectiveness of water provision
- Achieve universal primary education and improve the quality of education
- Promote access to basic education for vulnerable children (for instance, the homeless and street children)
- Promote the acquisition, use, and retention of functional literacy by all the people of Uganda

The system consists of three core institutions:

- The Uganda Bureau of Statistics (UBoS), which collects, analyzes, and publishes data from household surveys.
- The Statistics Departments in line ministries, which collect and analyze sectoral data from management information systems.
- The Poverty Monitoring Unit, whose main function is to link data producers and policymakers. It collects poverty data from different sources including UBoS, line ministries, and other organizations and institutions outside the government; analyzes the data; disseminates results, and discusses poverty trends and outlooks with government representatives and bodies. In the future, the unit will expand to include policy analysis for poverty reduction in its mandate. The unit sits in the Ministry of Finance, Planning, and Economic Development, which is key for influencing policy.

					ization		compari- sons	mental variables		
Education										
School autonomy reform	Nicaragua	Panel survey and qualitative assessments	Students, parents, teachers, directors	Test scores, degree of local decisionmaking	No	Yes	Yes	No	Yes	Qualitative-quantitative mix
Dropout intervention	Philippines	Baseline and post intervention survey	Students, classrooms, teachers	Test scores and drop-out status	Yes	No	Yes	Yes	No	Cost/benefit analysis; capacity building
Labor Programs										
Trabajar program	Argentina	Household survey, census, administrative records, social assessments	Workers, households	Income, targeting, costs	No	Yes	No	Yes	Yes	Judicious use of existing data sources, innovative analytic techniques
Agriculture										
National extension project	Kenya	Panel data, beneficiary assessments	Households, farms	Farm productivity and efficiency	No	No	Yes	No	No	Policy-relevance of results

Source: Adapted from Baker, Judy. 2000. *Evaluating the Poverty Impact of Projects: A Handbook for Practitioners*. Directions in Development. Washington, D.C.: World Bank.

In addition, other institutions such as nongovernmental organizations (NGOs), academic institutions, research centers, and donors play important, but not yet systematic, roles in collecting and analyzing additional data. Policymakers are also a key part of the system as the main users of monitoring results (primarily at the central level, although it has been recognized that locally collected statistics must also be used in local decisionmaking).

The system is undergoing a major revision aimed at:

- 3 Increasing participation, that is, promoting greater involvement in monitoring activities at the local level and collaboration among the UBoS, the Poverty Monitoring Unit, NGOs, and line ministries in collection, analysis, and dissemination of data. Linkages between the districts and central bodies collating statistics are also being revised.
- 3 Developing capacity, particularly for monitoring at local (district) levels, and for data analysis and dissemination at central levels, in order to decrease the lag time between data collection and analysis/dissemination.
- 3 Defining institutional roles, that is, setting clearly defined roles and responsibilities, including mechanisms of collaboration.
- 3 Harmonizing progress reporting, that is, defining a common format for sectoral and poverty programs progress reporting.

One of the options under consideration to address some of these issues is the establishment of a field organization for the UBoS. The field organization would be responsible for controlling the flow of information to and from headquarters; backstopping the development of district statistics; recruitment, training, and supervision of field staff; scheduling of fieldwork; actual data collection and data entry; and carrying out all other functions associated with fieldwork. Six statistical zones would be established. Each zone would have a zonal office with a small number of permanent staff (zonal supervisor, statistical assistant, and data entry operator) plus field supervisors and enumerators that would be recruited on a temporary basis.

The Ministry of Finance, Planning, and Economic Development prepared a Poverty Monitoring and Evaluation Strategy in October 2001 to discuss some of these issues and possible solutions.

Indicators

The selection of indicators has been an iterative process. Originally, indicators were selected based on the work of thematic groups to monitor progress in a number of areas: income poverty, health status, education, environment, infrastructure, governance, employment, and access to information, markets and credit. The first list of indicators was perceived as too long, incomplete in some areas, and not focused on priorities. As part of the Medium-Term Expenditure Framework (MTEF), the Poverty Working Group, composed of government officials and representatives from civil society and donor organizations, refined the list of indicators (see table C.2). This list will be further refined to ensure continued consistency with the revised PEAP. Nearly all indicators are currently monitored nationally; a subset is monitored at the district and/or regional level. Educational data are the only data that are disaggregated by sex. This is a major limitation for a complete poverty analysis and is expected to be addressed in the future.

Although some progress has been made in aligning the indicators with the goals of the PEAP, there are still areas for improvement. Several indicators are defined in terms of number of cases. Actual numbers are important, but in many cases percentages and ratios can make indicators more useful. For example, the proportion of health units with essential drugs is a more informative indicator than just the number of units. Another problem is that some indicators are not unambiguous measures of progress—that is, it is not possible to determine whether the situation has improved or not based on that indicator. For example, an increase in household expenditures in education is not an unequivocal indication of improvement. Households may be spending more on education because they consume more or because they have to pay more and may, in fact, be consuming less. Finally, the list does not distinguish between final and intermediate indicators, a distinction that would be useful when judging overall progress.

Table C.2. Revised List of Monitoring Indicators, Uganda

<i>Indicators</i>	<i>Intended level of disaggregation</i>
INCOME POVERTY	
Proportion of population below the poverty line	National, regional, district
Number of people in absolute poverty	National, regional
Household share of food expenditure	National, regional
Proportion of population living under thatched roofs	National, regional
Dependency ratio	National, regional, district
Gini coefficient	National, rural/urban
Consumption per capita of poorest 20 percent	National, regional, district
Per capita GDP	National
Savings/GDP ratio	National
Revenue per capita per district	District
Security and vulnerability	
Proportion of households affected by theft or civil disturbance	National, regional
Number of people internally displaced	National, regional
Number of civilian deaths resulting from insurgency	National, regional
Number of criminal cases reported	National, regional
Proportion of households experiencing major income shocks last year	National, regional
Refugees and displaced persons as proportion of district population	District
Proportion of households under economic distress selling assets	National
Road network	
Road length opened	National
Road length upgraded	National
Proportion of districts with more than 50 percent of roads in poor condition	National, district
Proportion of area not serviced by roads	National, district
Land	
Incidence of poverty by land ownership and tenure	National, district
Agriculture	
Adoption rate of modern farming methods	National, district
Yield rates	National, district
Percentage of farmers growing food security crops	National, district
Markets	
Availability of markets by type	National, district
Accessibility of markets	National, district
Volume of goods and services handled at a given market	National, district
Proportion of households where the sale price of the main agricultural product is less than 50% of the urban market price	National, district
Labor productivity and employment	
Unemployment rate	National, district
Vocational training enrollment	National, district
Average hours worked per day	National, district
Rural credit	
Growth in microfinance portfolio	National, district
Proportion of population accessing microcredit	National, district
Growth in savings	National, district
Credit management (effective use)	National, district
Availability of microfinance services	National, urban/rural

Table C.2. Revised List of Monitoring Indicators, Uganda (continued)

<i>Indicators</i>	<i>Intended level of disaggregation</i>
QUALITY OF LIFE	
Health Indicators	
Incidence of disease	National, district
Immunization coverage	National, district
Proportion of population within 5 km. of the nearest health unit	National, district
Per capita household expenditure on health	National, district
Number of health units with essential drugs	National, district
Number of districts with more than 1,000 people per trained health personal	National, district
Antenatal care coverage	National, district
Water and Sanitation	
Proportion of population within .5 km of safe water by region	National, district rural/urban
Proportion of population with good, sanitary latrines	National, rural/urban
Safe waste disposal	National
Education indicators	
Net primary enrollment ratio	National, district, gender
Proportion of primary school pupils completing more than four years of education	National, district, gender
Pupil-trained teacher ratio	National, district, gender
Distance to schools	National, district, gender
Pupil-classroom ratio	National, district, gender
Pupil-textbook ratio	National, district, gender
Per capita household expenditure on education	National, district, gender
ENVIRONMENT	
Level of compliance with environmental standards	All National
Corrective actions by the National Environmental Management Agency	
Proportion of the population practicing sustainable land use methods	
Budgetary allocations to environmental programs by local governments	
Proportion of gazetted land in districts	
GOVERNANCE AND ACCOUNTABILITY	
Level of awareness among the population about rights/entitlements	National
Proportion of reported cases cleared	National
Number of people on remand beyond the specified period by law	National
Number of backlogged court cases	National
Corruption cases raised at different levels	National
Successful programs in poverty eradication	National, district
Number of corruption/embezzlement and abuse-of-office cases resulting in conviction	National

Data collection

Main data sources for monitoring include household surveys, management information systems, and qualitative studies.

Household surveys are centrally planned and implemented by UBoS with limited consultation or participation at the district level. The role of districts is under review, with the objective of building local capacity and promoting rapid access to district-specific information that districts can use for planning, implementing, and monitoring their programs and policies. UBoS and the Ministry of Local Government are working on a system to involve the District Planning Units in data collection to ensure that relevant statistics and qualitative information are used to monitor performance at the district level. Such a system would complement the household data collection system that is managed centrally. Household surveys for poverty monitoring include:

Integrated Household Surveys (IHS), which collect data on household characteristics; housing characteristics; household income and expenditures; assets, loans, and savings; agricultural production; and the health and nutritional status of children. The IHS conducted in 1992 provided baseline information on 10,000 households throughout the country. The survey questionnaire was revised based on insights from

the Uganda Participatory Poverty Assessment and now includes questions on topics such as household security. The revised survey—the Uganda National Household Survey—was conducted in 2001/2002 and a new round is planned for 2003/2004.

Monitoring Surveys, which collect information similar to that collected by the IHS but use a smaller sample of 5,000 households and a shorter questionnaire (which does include a consumption module). They have been conducted annually from 1992–93 to 1997.

Demographic and Health Surveys (DHS) collect information on maternal and child health, immunization, health care access, major disease incidence, and so forth. Baseline data were provided by the 1995 DHS and a follow-up survey was conducted in 2001.

Also, the Population Census of 2002 will provide updated information on the demographic structure of the population: age, marital status, ethnicity, religion, household size, dependency ratios, and so forth. Other surveys, such as the Public Expenditure Tracking Survey (see chapter 6, “Public Spending”) and the National Service Delivery Survey, have provided useful information but have not yet become part of the regular monitoring system. The National Service Delivery Survey collects information on usage of and satisfaction with public services. This survey was piloted in 1996 and conducted nationwide in 1999 (currently by the Ministry of Public Services but in the future by the Bureau of Statistics). A survey of health facilities was recently completed.²

Management information systems (MIS) collect sectoral information on outputs, access to services, and, to a limited extent, quality of services. For example, in the health sector, the MIS gathers information on the number of health facilities by type, public or private management bed capacity; facilities offering essential services; staffing; and major causes of morbidity. For education, the Ministry of Education and Sports conducts an annual education census collecting district-level information on enrollment of pupils, number of teachers, teaching/learning materials, facilities, and finances.

A number of problems with the MIS data have been identified. First, information is incomplete. By 1996, for example, the education census had a response rate of 60 percent from government-assisted institutions and 30 percent from private schools. Second, data are not reliable. In the education sector, reliance on head teachers to provide school data is problematic—student numbers are often inflated in order to obtain larger grants. Random checks that have been implemented reveal enrollment overreporting. In the health sector, diagnostic tools, staff capacity, and communication infrastructure are limited in many areas—especially remote rural areas—so that gross underreporting of disease incidence occurs. Third, there is an issue of timeliness; the arrival of data from districts is slow, and data analysis, compilation, and reporting at the center are delayed. The Education Statistics Abstracts, for example, are usually produced 1.5 years after data collection. So the data are not used for service provision and planning.

One reason identified for the poor performance of MISs is their high level of centralization. Districts are required to collect information without being involved as stakeholders in the monitoring process. Hence they have few incentives to ensure the timely collection of reliable data. Efforts to correct this situation comprise activities at the district level and at the sector level with central line ministries. District-level activities include implementation of the District Resource Information System (DRIS). DRIS is the second phase of an earlier attempt to collect data on social services and relevant infrastructure from all districts (the District Resource Endowment Profile Study, or DREPS). It establishes a direct link between districts and UBoS and focuses on a larger number of variables, including administration, service delivery, and infrastructure.

As for *qualitative studies*, the Uganda Participatory Poverty Assessment Project (UPPAP) is the main source of qualitative data for PEAP monitoring. It is a three-year project aimed at incorporating the perceptions of poor people into the local and national dialogue for poverty reduction and providing a deeper understanding of trends emerging from quantitative data. Field work for the latest participatory poverty assessment was conducted in late 2001. The UPPAP is a partnership of the government, donors, the nine district authorities in which the project operates, and Oxfam, the implementing agency.³ Within the government, the UPPAP is situated in the Ministry of Finance, Planning, and Economic Development under the Poverty Monitoring and Analysis Unit.

Agriculture and governance are two areas in which additional work is needed. Despite the large proportion of poor people engaged in agricultural activities, agriculture data are not readily available. The Program on Modernization of Agriculture, a central element of the third pillar of the PEAP, does not define indicators, and the District Resource Information System does not include agriculture data. Likewise, there is little usable information on governance issues except in the National Integrity Survey

and reports from the Human Rights Commission. A wealth of data has been collected by the Inspectorate General of Governance, but because this organization is understaffed, no summary statistics are available. Indicators for the PEAP in this area have not been defined.

Data analysis, dissemination, and feedback

Data analysis is conducted mostly at the central level by UBoS. At the district level, data analysis is limited. A few districts have started their own monitoring systems under the Local Government Development Project, the main objective of which is to strengthen participatory planning and the development of budgeting and monitoring systems at the district level; the project has recently been extended from the original 5 to 9 districts to a further 30.

A Poverty Status Report is produced every two years by the Poverty Monitoring Unit to assess progress and challenges in the implementation of the PEAP. It provides an overview of progress toward the PEAP goals as well as the status of poverty eradication actions, including budget allocations. This information sets the basis for identifying gaps, key challenges, and priority areas. The next report is planned for 2003.

Reports are disseminated at the national and district levels and are used in the revision of the PEAP, the MTEF, and sector reviews. The Poverty Monitoring Unit and the Poverty Working Group (PWG) ensure that the monitoring results are used in policymaking and budget allocation processes. Specifically, the PWG, which includes government officials and representatives of NGOs and academia, ensures that the data collected from the poverty monitoring system are taken into consideration and acted on by the relevant sector working group in the MTEF and budget processes. The PWG also makes recommendations on the overall budget allocation of resources for poverty reduction as well as on other budget policies that affect the poor. Despite these efforts, the performance of public expenditures is still mostly measured in terms of inputs and activities rather than contributions to poverty reduction. Progress toward goals still plays a limited role in the sectoral budget allocation process. An incentive system linking resource allocation and performance assessment to contributions to PEAP outcomes needs to be developed.

C.1.3 Statistical capacity building

The activities of the poverty monitoring system are supported by a major program to upgrade Uganda's statistical systems. The main goal of the program is to build national capacity to collect, process, store, and disseminate statistical information for poverty monitoring and evaluation at both the national and district levels. The program focuses on strengthening the capacity of UBoS to deliver a core statistical program that allows regular and timely monitoring of national development goals. It establishes a new information technology infrastructure for an integrated information management system. This system is designed to ensure that all data collected directly by UBoS or received by UBoS as secondary data from other sources are centrally stored in a common format that facilitates open access to the data by users, whether in hard copy or electronic form. The Central Depository of Data holds all the data in a cleaned format ready for use, thus guaranteeing that all tables and analysis are based on the same data source. The system also incorporates macroeconomic data and output tables, which are then used as input sources of reports, newsletters, or for electronic dissemination.

Another area of emphasis is upgrading UBoS's household survey capabilities. The main activities include a three-year Integrated Household Survey Strategy and program and the establishment of a core field force of mobile teams. These teams will be used both to conduct UBoS surveys and to serve as a pool of technical support for districts planning their own surveys. UBoS will conduct a pilot study on a simple indicators monitoring survey that could be carried out by district governments to meet their information needs.

The program also supports the repeated administration of an annual National Service Delivery Survey. This survey uses a small questionnaire and a large sample (approximately 20,000 households) so as to be able to disaggregate results at the district level. It incorporates a number of features of the Core Welfare Indicators Questionnaire, including the use of optical mark recognition to speed up the data entry process. The survey will be progressively mainstreamed and taken over by UBoS. Future rounds of the survey will be supplemented with focus groups interviews.

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Case Study C.2 Proposed Plan to Monitor the Poverty Reduction Strategy in Tanzania

C.2.1 Introduction

The Poverty Reduction Strategy in Tanzania builds upon earlier strategies to address poverty and enhance human development. It consolidates previous medium- and long-term strategies such as Vision 2025, the 1997 National Poverty Eradication Strategy, and the Tanzania Assistance Strategy and lays out a plan focused on three broad goals:

- reducing income poverty;
- improving the quality of life and social well-being; and
- achieving and sustaining an environment conducive to development.

Preparation of the PRS has been characterized by broad-based participation of stakeholders. Throughout the process, the views of grassroots stakeholders—including local governments, local communities, and civil society—were gathered through zonal workshops. The draft targets, priorities, and actions were also discussed at a national workshop, which included central and regional government officials, private sector organizations, the donor community, and the media.

C.2.2 Monitoring the Poverty Reduction Strategy

The Poverty Reduction Strategy Paper (PRSP) presented a tentative plan to monitor and evaluate the strategy. This plan has been refined since the launch of the PRS and will continue to evolve as new lessons emerge during implementation. This case study highlights three aspects of the Tanzanian experience: selection of indicators, data sources, and the planned institutional framework for monitoring and evaluating the PRS. Other activities, such as participatory studies, reporting of results, and advocacy work, are not highlighted here.

Selection of indicators

The monitoring and evaluation (M&E) system includes a set of final and intermediate indicators. Final indicators were selected from a wider list of poverty and welfare indicators resulting from a consultative process; these will be used to monitor progress toward the main goals of the strategy. Intermediate indicators will be used to monitor implementation of the strategy in terms of resources allocated and the goods and services generated through key policy actions. In recognition of the difficulty of measuring some final indicators at frequent intervals, the monitoring system also includes a set of proxy indicators that can be monitored on an annual basis. For example, one objective of the PRS is to reduce income poverty. Thus it is important to monitor at regular intervals the proportion of the population living below the poverty line. However, in the case of Tanzania, as in many other countries, collecting income or expenditure data at frequent intervals is not feasible, so it was decided to include indicators of ownership of household assets and construction materials of dwelling units—that can be monitored annually—as proxy indicators for income poverty.

As shown in table C.3, the proposed indicators fall in four areas broadly in line with the objectives of the PRS: income poverty, quality of life and social well-being (health, education, vulnerability, and social well-being), macroeconomic stability, and governance. The adequacy of indicators in terms of relevance, clarity, reliability, timely availability, and balanced mix between final and intermediate indicators varies greatly across areas.

The PRS chooses an appropriate country-specific final indicator for income poverty, the incidence of income poverty measured on the basis of the national poverty line, and a more ambitious target than under the Millennium Development Goals: halving the incidence of poverty by 2010 instead of 2015. The incidence of poverty will be disaggregated by rural and urban areas. While still largely a rural phenomenon, income poverty is increasingly becoming an urban problem. As mentioned, since income poverty is not measured every year, proxy indicators have been identified; a survey module is being developed to collect this information on a yearly basis. The intermediate indicators chosen are relevant in the Tanzanian context and should also be available annually for PRS review. There is a good mix of intermediate and final indicators.

Health, survival, and nutrition indicators capture the overarching goal of raising life expectancy to 52 years by 2010. However, some intermediate indicators could be defined better to be more informative. For example, implementation of the malaria control program and implementation of the integrated management of childhood illness program are not well defined, unless they refer to specific lists of indicators contained in other documents, such as sector or program monitoring plans. If they do not refer to indicators specified elsewhere, they should be defined more clearly; for example, the indicator on the implementation of the malaria control program could be rephrased as the proportion of primary and secondary health care facilities with a regular supply of first- and second-line antimalarial drugs. Likewise, the percentage of primary and secondary health care facilities with personnel trained in Integrated Management of Childhood Illness (IMCI) is a better indicator than whether or not the IMCI program has been implemented. Timeliness may be an issue with some of the final and a few intermediate indicators (for example, breastfeeding practices), since the main data source for these indicators will be the Demographic and Health Survey that is expected to be conducted during the implementation period of the PRS.

Education indicators and targets are relevant to the goal of eradicating illiteracy by 2010: raise gross primary enrollment to 85 percent, increase the transition rate from primary to secondary school from 15 to 21 percent, reduce the dropout rate in primary school from 6.6 to 3 percent, and raise net primary school enrolment from 57 to 70 percent. Most of the final indicators are clearly defined, except for gender equity, which could be measured with respect to gross enrollment rates, net enrollment rates, illiteracy rates, or some other indicator. The list of intermediate indicators appears incomplete: indicators of outputs from public expenditures, such as pupil-teacher ratio, textbook availability, percentage of classrooms rehabilitated, and average travel time to school, could supply information useful for understanding trends in final indicators. Education indicators are likely to be available at frequent intervals, since they are obtained from routine data collection systems of the Ministry of Education. Enrollment data will be validated with information from the 2002 census.

Vulnerability indicators are less well developed. They do reflect the policy actions that will be implemented in this area but they monitor activities rather than results; no "final indicator" is included. More specific intermediate indicators would also need to be developed. For example, the percentage of farmers in drought-prone areas switching to drought-resistant crops may be a better indicator than whether or not the production of drought-resistant crops has been promoted. Likewise, a measure of use of the database on vulnerable groups could be a more useful indicator than whether or not such a database has been developed.

Social well-being indicators also reflect the difficulty of specifying measurable indicators. A multiplicity of issues is addressed under this heading. These indicators try to capture progress in the devolution of responsibilities for key services to local authorities; access to justice, efficiency, and transparency of the administrative system; and the level of participation of all stakeholders in the PRS process, but they will give only a very partial picture of progress on these issues. This is an area where goals, indicators, and targets would need to be developed further.

Macroeconomic and governance indicators aim to measure the extent to which an environment conducive to development has been achieved. Specifically, on the macroeconomic side, the PRS aims to attain an inflation rate broadly in line with the anticipated inflation of Tanzania's main trading partners. This goal complements the objective of reaching a 6 percent gross domestic product (GDP) annual growth

Table C.3. Proposed Indicators for Monitoring the PRSP, Tanzania

<i>Objectives</i>	<i>Final indicators</i>	<i>Intermediate indicators</i>
1. Reducing income poverty	<ul style="list-style-type: none"> ➤ Poverty incidence ➤ Ownership of household assets (proxy indicator) ➤ Type of construction materials of dwelling units; e.g., floors, walls, and roofing (proxy indicator) 	<ul style="list-style-type: none"> ➤ Real GDP growth ➤ Investment (physical and human) ➤ Investment productivity ➤ Growth in value added of agriculture ➤ Development of private sector strategy ➤ Seasonal production of key food and cash crops ➤ Kilometers of rehabilitated rural roads ➤ Actual and budgetary allocation for rural roads ➤ Actual and budgetary allocation for agricultural extension
2. Improving quality of life and social well-being		
A. Health, survival and nutrition	<ul style="list-style-type: none"> ➤ Infant and under-five mortality rates ➤ Percentage of children under two years immunized against measles and DPT ➤ Seropositive rate in pregnant women ➤ Maternal mortality ➤ Life expectancy ➤ Malaria-related fatality rate for children under five ➤ Burden of disease/morbidity ➤ Proportion of households with access to safe drinking water ➤ Stunting prevalence ➤ Wasting prevalence 	<ul style="list-style-type: none"> ➤ Proportion of districts with active HIV/AIDS awareness campaigns ➤ Percentage of births attended by trained personnel ➤ Child-feeding practices ➤ Implementation of malaria control program ➤ Implementation of Integrated Management of Childhood Illness program ➤ Actual and budgetary allocation for primary health care ➤ Actual and budgetary allocation for HIV/AIDS ➤ Actual and budgetary allocation for water and sanitation
B. Education	<ul style="list-style-type: none"> ➤ Illiteracy rate ➤ Gender equality in primary and secondary education ➤ Proportion of school-age children successfully completing primary education ➤ Net primary school enrollment rate ➤ Gross enrollment rate ➤ Dropout rate ➤ Transition rate from primary to secondary school ➤ Proportion of students in grade seven passing at specified mark in standard examination 	<ul style="list-style-type: none"> ➤ Actual and budgetary allocation for basic education
C. Vulnerability	<ul style="list-style-type: none"> ➤ Capacity built in all communities needing safety nets programs 	<ul style="list-style-type: none"> ➤ Database for the vulnerable groups established ➤ Production of drought-resistant crops in all drought-prone areas promoted ➤ Community-managed irrigation schemes promoted in all potential irrigation areas
D. Social well-being	<ul style="list-style-type: none"> ➤ Poverty Reduction Strategy fully implemented 	<ul style="list-style-type: none"> ➤ Local government reform program fully implemented ➤ Ratio of decided to filed court cases ➤ Average time taken to settle commercial disputes ➤ Ratio of actual Court of Appeal sessions to planned sessions ➤ Number of PRS workshops held, attendance, and composition of committees ➤ Dissemination of reports

Table C.3. Proposed Indicators for Monitoring the PRSP, Tanzania (continued)

<i>Objectives</i>	<i>Final indicators</i>	<i>Intermediate indicators</i>
3. Achieve and sustain an environment conducive to development		
A. Macroeconomic stability	<ul style="list-style-type: none"> ➤ Inflation rate 	<ul style="list-style-type: none"> ➤ Fiscal balance ➤ Gross official international reserves ➤ Exchange rate ➤ Current account balance
B. Governance	<ul style="list-style-type: none"> ➤ Number of budgetary votes managed through Integrated Financial Management Information Systems (IFMs) ➤ Expenditure commitments and arrears recorded through IFMs ➤ Spread and magnitude of corruption ➤ Integrity and transparency in the accounting system ➤ A governance system that is efficiently and effectively decentralized ➤ Strengthened professional effectiveness and cost-effectiveness of the public service system ➤ Improved public service capacity, motivation, and performance ➤ Improved budget management at central and lower levels 	<ul style="list-style-type: none"> ➤ IFM rolled out to all ministries and sub-treasuries ➤ Specific anticorruption action plans developed and approved for the Ministries of Agriculture and Cooperatives, Education and Culture; Health; and Water; and the CSD based on the National Anticorruption Strategy ➤ Performance improvement modules developed and approved for priority sectors ➤ Timely preparation of budgets at all levels. ➤ Institutional pluralism in the delivery of public services

over the next three years; this would set the basis for achieving the medium- and long-term poverty reduction goals. The proposed intermediate and final macroeconomic indicators will provide relevant information for monitoring the progress on the stability goal at frequent intervals.

On the governance side, the main goals are to improve the performance of the public sector, including the delivery of public services; minimize resource leakage; and promote accountability. The proposed indicators to monitor these goals are in general not well developed. Unlike in other areas, not all the items listed under "final indicators" are indicators; for example, "a governance system that is efficiently and effectively decentralized" is an objective, not an indicator of decentralization. Several other items are not measurable indicators. For example, "spread and magnitude of corruption" does not identify how corruption would be measured. Indicators relevant to Tanzania should be identified. Monitoring gender issues is an integral part of the PRS monitoring system. Health and education indicators such as infant and under-five mortality rates, immunization rates, enrollment rates, and transition rates from primary to secondary education will be disaggregated by gender. In addition, the monitoring system includes gender-specific indicators such as the seropositive rate in pregnant women, maternal mortality, and the percentage of births attended by trained personnel.

Health and education indicators will also be disaggregated by rural and urban areas and by administrative regions. This is very important given the large geographical variations in social conditions within the country. For example, infant mortality and under-five mortality rates are three times higher in the most deprived region than in the least deprived.

One of the main challenges is to select a manageable number of indicators that provides relevant and sufficient information for assessing the progress of the PRS. In the case of Tanzania, this has been an iterative process. The monitoring system started with approximately 111 aggregate indicators at the national level; currently, it includes around 70. The process of refining the list of indicators will continue as government officials and their counterparts learn which are the most useful indicators and which ones are missing from the list.

Data sources

Calculating reliable baseline figures for the indicators selected was challenging in some cases because recent data were not available. The most recent consumption data to estimate the incidence of poverty come from the 1991–92 Household Budget Survey (HBS). A baseline estimate for 2000 and tentative targets were set by extrapolating the 1991–92 survey results on the basis of population estimates derived

Table C.4. Sources of Information for Monitoring, Tanzania

<i>Indicator type</i>	<i>Baseline source</i>	<i>Follow-up frequency and data source</i>
Poverty headcount	Preliminary estimates: 1991–92 Household Budget Survey (HBS) Update: 2000–01 HBS	No additional HBS have been planned during PRSP implementation period
Proxy income indicators for income poverty	2000–01 HBS 2002 census	Annual poverty monitoring surveys will measure proxy indicators for income
Macroeconomic indicators	National Accounts and the Economic Survey prepared by National Bureau of Statistics and the Planning Commission	Annual updates from same sources
Rural infrastructure	Road sector reports prepared by the Ministry of Works and the Ministry of Regional and Local Government	Same source, frequency not specified
Health	1999 Tanzania Reproductive and Child Health Survey (Interim DHS)	2002 census DHS (expected to be held during the implementation period of this PRSP) Health Information System (for annual updates of immunization coverage)
Proportion of districts with an active AIDS awareness campaign	National AIDS Control Programme	Same as baseline, frequency not specified
Nutritional status of children	1999 Tanzania Reproductive and Child Health Survey (new estimate from next DHS)	Community-level monitoring and routine monitoring at health centers Annual poverty monitoring surveys may also include an anthropometric module
Education indicators	Routine data collection system of the Ministry of Education School Mapping	Annual monitoring using administrative data. The 2002 census will provide a cross-check on the administrative data for enrollment
Resource allocation	PER, MTEF, and Annual Budget processes	Same source; quarterly review meetings

from the listing done for the 2000–01 HBS, but there are methodological problems with these estimates, and they will be revised based on the results of the 2000–01 HBS.

Other major sources of baseline data include the 1999 Tanzania Reproductive and Child Health Survey (TRCHS) for health and nutrition indicators; administrative data for education indicators; and the National Accounts and the Economic Survey for macroeconomic indicators (see table C.4). Data from the 2002 census and the 2000–01 HBS will help validate the reliability of administrative data for school enrollment and update the mortality figures from the 1999 TRCHS. This is an important check, since the TRCHS is an interim DHS using a relatively smaller sample than the full survey does. Most indicators will be monitored annually, except for the poverty headcount and some health and nutrition indicators. As mentioned earlier, the poverty headcount would be substituted by a set of proxy income indicators with baselines calculated on the basis of the 2000–01 HBS and the 2002 census, and may be tracked through an annual poverty monitoring survey. The decision was made not to conduct a specific poverty monitoring survey every year, but rather to develop a special module containing the proxy income indicators, to be included in whatever household survey is to be undertaken in a given year. Health and nutrition indicators will be monitored at least once within the three-year period depending on when the results of the next DHS become available.

Planned institutional arrangements for monitoring and evaluation

The proposed institutional framework for monitoring the PRS is the result of broad consultations among different stakeholders. First, proposals were put forward at a stakeholder meeting that included representatives of government, civil society, NGOs, the private sector, and academic and research institutions. These proposals were discussed at a subsequent meeting attended by officials from multilateral and bilateral organizations, the Ministry of Finance, the Planning Commission, and the National Bureau of Statistics. The meeting was organized by the Vice-President's Office in its role as coordinator of the PRSP preparation. A Poverty Monitoring Master Plan was agreed to in November 2001.

The envisioned apex of the M&E system is the National Poverty Monitoring Steering Committee (NPMSC). Its role is to provide overall guidance on PRS monitoring and ensure that feedback from the monitoring system is incorporated into national policymaking. The committee includes representatives of the government, private sector, NGOs, and civil society. The Poverty Eradication Division in the Vice-President's Office serve as its secretariat.

As illustrated in figure C.1, the NPMSC is assisted in its task by four working groups, coordinated by the Poverty Eradication Division.

The Surveys and Censuses Working Group, led by the National Bureau of Statistics, is responsible for conducting large household surveys and the census, and for coordinating data storage activities through the Socio-Economic Database initiative.

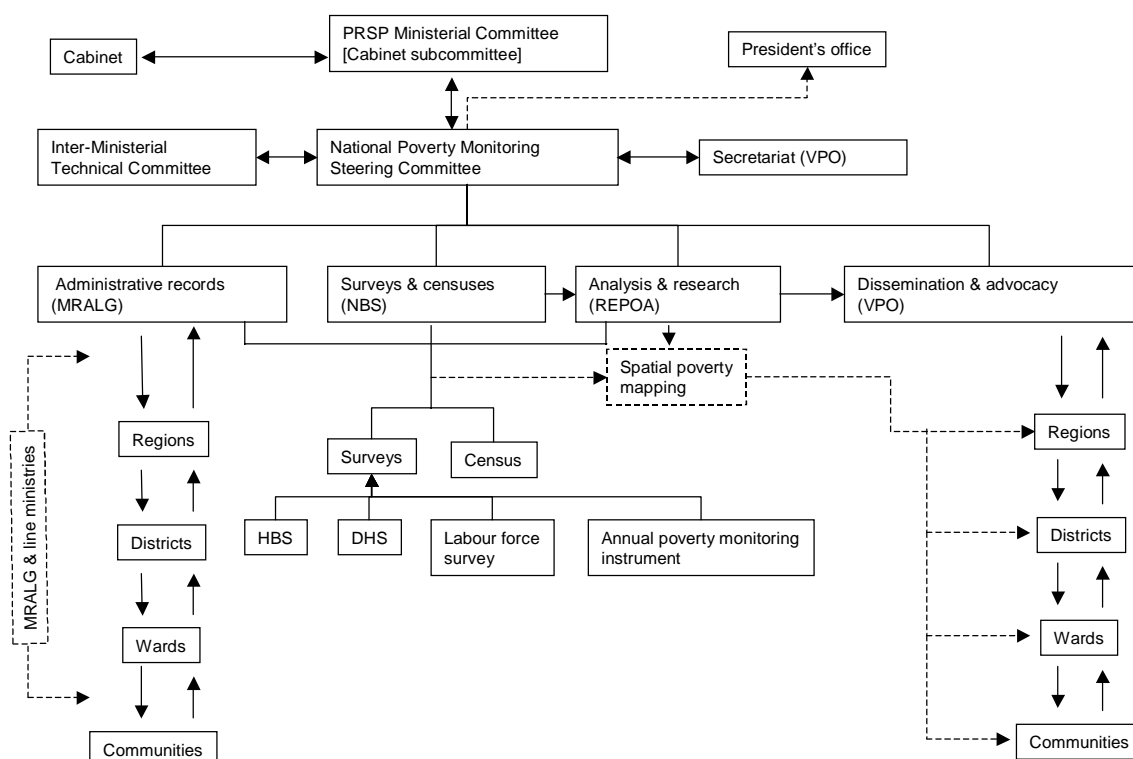
The Routine Data Working Group, led by the Ministry of Regional Administration and Local Government (MRALG), is responsible for coordinating and managing sectoral data collection from line ministries as well as data collected through the administrative systems of decentralized government units.

The Research and Analysis Working Group, led by the President's Planning Commission and the Research on Poverty Alleviation (REPOA) Group, is responsible for coordinating special studies and initiatives such as spatial poverty mapping.

The Dissemination, Sensitization and Advocacy Working Group, led by the Vice-President's Office, is in charge of coordinating dissemination activities at all levels and ensuring that the views of local governments are reflected in the monitoring system.

The National Poverty Monitoring Steering Committee is expected to play a key role as a link between policymakers and the monitoring system, liaising with the PRSP Ministerial Committee through the Vice-President's Office. This committee, which includes several ministers and the governor of the Bank of Tanzania, was formed to guide the PRSP preparation process and implementation. It is supported by the Inter-Ministerial Technical Committee, which is coordinated by the Ministry of Finance and comprises officials from the Vice President's Office, the Prime Minister's Office, the Planning Commission, the Bank of Tanzania, and several line ministries.

Figure C.1. Institutional Framework for PRSP Monitoring, Tanzania



The proposed institutional framework for PRS monitoring and evaluation could provide a good link between data producers and users, but it also poses a number of challenges. First, the MRALG and the National Bureau of Statistics must have strong institutional capacities to fulfill their coordination roles successfully. Second, the role of the Ministry of Finance (MOF) as coordinator of public expenditure tracking is not clearly captured in the current framework. It would be important to establish coordination mechanisms between the MOF and the MRALG, which is in charge of coordinating all administrative data for monitoring. Third, full implementation of the local government reform now under way is necessary to ensure an adequate flow of administrative data from different government levels. This reform will hopefully clarify the division of responsibilities in managing information systems between the MRALG and line ministries such as Education and Health, which at present remains unclear. Further delays in implementing the reform may result in duplication of efforts or missing information. Finally, the proposed institutional framework lays out a fairly clear structure for monitoring and evaluation at the national level, but arrangements at the regional and district levels are less clear. To the extent that decentralization efforts devolve decisionmaking power to local level governments, it is essential that a structure for monitoring and evaluation at the local level be in place. Overall, it is important that the incentives for collecting, analyzing, and reporting information that is accurate and timely be consistent at all levels of the monitoring system.

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Case Study C.3 Citizen Feedback Surveys as a Tool for Civil Society Participation in Assessing Public Sector Performance: The Case of Bangalore in India

In Bangalore, India, an NGO has conducted citizen feedback surveys focused on services provided by the municipal government, such as water, electricity, garbage collection, and hospitals. Citizens are asked whether they are satisfied with these public services, which aspects are most or least satisfactory, whether government staff are helpful, and whether bribes have to be paid to officials to obtain these services.

The objectives of the survey are:

- to generate citizen feedback on public services and give each municipal agency an overall grade on its performance;
- to identify which specific services are delivered well or poorly;
- to identify the breadth and depth of corruption;
- to catalyze citizens to be more proactive;
- to provide a diagnostic tool for the municipal departments so that their senior managers can better understand their agencies' performance and identify aspects of the services where performance can be improved; and
- to encourage and prod public agencies to be more client-oriented and transparent.

The Bangalore surveys have ranked all municipal government agencies on the basis of the level of citizen satisfaction with their delivery of services. Hospitals and banks received high ratings; the city development authority—with the highest levels of reported corruption—received the lowest rating.

The results of the surveys have been widely published, with lively press coverage. Workshops have been held to provide the findings to citizens' groups and other NGOs. Although the findings were not news to them, they provided hard evidence and allowed specific problem areas to be pinpointed. The findings have also stimulated citizen participation and the formation of residents' groups.

The NGO that conducted the surveys gave detailed reports to the heads of all government service agencies. Most agency heads and senior officials were lukewarm about the findings, but some responded well, such as the head of the city development authority, who subsequently initiated a partnership approach with citizens' groups and NGOs. This led to innovations in service delivery and a new system for airing client grievances. With the NGOs' help, training programs for officials and a partnership group to disseminate information and act as a watchdog were set up.

Similar surveys have now been conducted for other cities in India, including Madras, Mumbai, Calcutta, and Pune. This has enabled comparisons for a number of cities to be published.

Source: Adapted from MacKay, Keith, and Sulley Gariba (eds.). 2000. *The Role of Civil Society in Assessing Public Sector Performance in Ghana: Proceedings of a Workshop*. Evaluation Capacity Development, Operations Evaluation Department, World Bank, Washington, D.C.

Case Study C.4 Evaluating the Gains to the Poor from Workfare: Argentina's Trabajar Program

C.4.1 Introduction

Argentina's Trabajar program aims to reduce poverty by simultaneously generating employment opportunities for the poor and improving social infrastructure in poor communities. The program offers relatively low wages in order to attract only poor, unemployed workers as participants, who would "self-select" to participate. (For more information on this and other public works programs see chapter 17, "Social Protection.") The infrastructure projects that participants work on are proposed by local governments and NGOs, which must cover the nonwage costs of the project. Projects are approved at the regional level according to central government guidelines.

The program has evolved over time, incorporating lessons learned. Trabajar I, a pilot program, was introduced in 1996 in response to an economic crisis and unemployment rates of more than 17 percent. Trabajar II was launched in 1997 as an expanded and reformed version of the pilot program, and Trabajar III began in 1998. Trabajar II included a number of reforms designed to improve project targeting: the central government's budget allocation criteria gave increased weight to provincial poverty and unemployment indicators and to project proposals from poor areas; at the local level, efforts were made to strengthen the capacity of provincial offices to help poor areas mount projects and to raise the quality of the infrastructure built under the program.

C.4.2. Evaluation design

The evaluation effort began during the preparation of Trabajar II. The aim of the evaluation was to determine whether or not the program was achieving its goals and to indicate areas where reforms could increase its effectiveness. The evaluation consisted of a number of separate components that assessed: a) the net income gains that accrued to program participants; b) the allocation of program resources across regions (targeting); c) the quality of the infrastructure projects financed. In addition, the study looked at the role of the community and NGOs in project outcome.

Two of the evaluation components demonstrate best practice techniques. The first component of the Trabajar evaluation, the assessment of net income gains, improved upon conventional assessments of workfare programs, which typically measure participants' income gains as simply their *gross* wages earned, by estimating *net* income gains. Drawing upon new and existing household survey data and using recent advances in matched comparison techniques, the study accounted for forgone income (income given up by participants in joining the Trabajar program), which resulted in a more accurate, lower estimate of the net income gains to participants.

The second component, the study of targeting outcomes, introduced a new technique for evaluating targeting (the allocation of program funding) when the incidence of public spending at the local level is unobserved.

The overall evaluation design also presented a best practice mix of components and research techniques—from quantitative analysis to engineering site visits to social assessment—which provided an integrated stream of results in a timely manner.

C.4.3. Data collection and analysis techniques

The assessment of net income gains to program participants drew on two data sources, a national living standards survey (Encuesta de Desarrollo Social, or EDS) and a survey of Trabajar participants conducted specifically for the purposes of evaluation.⁵ These surveys were conducted in August and September of 1997 by the national statistical office, using the same questionnaire and interview teams. The sample for the EDS survey covered 85 percent of the national population, omitting some rural areas and very small

communities. The sample for the Trabajar participant survey was drawn from a random sample of Trabajar II projects located within the EDS sample; it generated data for 2,802 current program participants (total Trabajar II participants between May 1997 and January 1998 numbered 65,321).

To generate the matching control group from the EDS survey, the study used a technique called propensity scoring. An ideal match would be two individuals, one in the participant sample and one in the control group, for whom all of the variables (x) predicting program participation are identical. The standard problem in matching is that this is impractical given the large number of variables contained in (x). However, matches can be calculated on each individual's propensity score, which is simply the probability of participating conditional on (x).⁶ Data on incomes in the matching control group of nonparticipants allowed the estimation of the income forgone by Trabajar II participants. Net income arising from program participation was then calculated as total program wages minus forgone income.

The targeting analysis remarkably did not entail any special data collection. It drew on data from the ministry's project office on funding allocations by geographic department. It also drew on a poverty index for each department, calculated from the 1991 census as the proportion of households with "Unmet Basic Needs".⁷ To analyze targeting incidence, data on public spending by geographic area—in this case, department—were regressed on corresponding geographic poverty rates. The resulting coefficient consistently estimated a "targeting differential" given by the difference between the program's average allocations to the poor and nonpoor. This national targeting differential could then be decomposed into components due to the central government's targeting mechanism (funding allocations across departments) and to targeting done at the provincial level.

The analysis of the quality of infrastructure consisted of a two-stage cost-benefit analysis of Trabajar infrastructure projects. In the first stage a sample of 50 completed Trabajar I projects were given an overall quality rating based on indicators in six categories: technical, institutional, environmental, socioeconomic, supervision, and operations and maintenance, and cost-benefit analyses were performed where appropriate (not for schools or health centers). In the second stage, a follow-up study of 120 Trabajar II projects was conducted a year later, tracking the impact of reforms on infrastructure quality.

Social assessments were conducted during project preparation for both Trabajar I and Trabajar II. They provided feedback on project implementation issues such as the role of NGOs, the availability of technical assistance in project preparation and construction, and the selection of beneficiaries. They were carried out by sociologists and included focus groups and interviews.

C.4.4. Results

Program Impact. Taking account of forgone income is important to getting an accurate picture of workfare program benefits. Program participants could not afford to be unemployed in the absence of the program; hence some income is forgone through program participation. Forgone income is estimated by observing the incomes of nonparticipants "matched" to those of program participants. Matching-method estimates show that ignoring foregone incomes greatly overstates the average gains from the program, which were estimated to be about half the wages received through the program. The evaluation also revealed that the distribution of gains was decidedly pro-poor, with 80 percent of program participants being among the poorest 20 percent of the population, even after reducing income gains by the amount of the forgone income. Female participation in the program is low (15 percent), but net income gains are virtually identical for male and female Trabajar participants.

Targeting Performance. Performance improved markedly as a result of Trabajar II reforms. There was a seven-fold increase in the implicit allocation of resources to poor households between Trabajar I and Trabajar II. One-third of this improvement resulted from better targeting at the central level and two-thirds from improved targeting at the provincial level. There were, however, significant differences in targeting outcomes among provinces. A department with 40 percent of its people classified as poor could expect to receive anywhere from zero to five times the mean departmental allocation, depending upon which province it belonged to. Furthermore, targeting performance tended to be worse in the poorest provinces.

Infrastructure Project Quality. Quality was found to be adequate, but Trabajar II reforms, disappointingly, did not result in significant improvements. Part of the reason was the sharp expansion of the program, which made it difficult to meet some of the operational standards that had been specified ex ante. However, Trabajar II infrastructure projects were better at meeting the priority needs of the

community. The social assessment uncovered a need for better technical assistance to NGOs and rural municipalities, as well as greater publicity and transparency of information about the Trabajar program.

C.4.5. Policy implications

The evaluation results provided clear evidence that Trabajar program participants come largely from among the poor. Self-selection of participants obtained by offering low wages is a strategy that works in Argentina, and participants experience income gains as a result of participation (although the net gains are lower than the gross wage, because of forgone income). The program does not seem to discriminate against female participants. Trabajar II reforms have successfully enhanced geographic targeting outcomes; the program is now more successful at directing funds to poor areas. However, performance varies and is persistently weak in a few provinces that merit further attention. Finally, disappointing results on infrastructure project quality have generated efforts by the project team to enhance operating procedures: insisting on more site visits for evaluation and supervision, penalizing agencies with poor performance at project completion, and strengthening the evaluation manual.

C.4.6 Evaluation costs and administration

Costs. The cost of carrying out the Trabajar survey for the study of net income gains and data processing was approximately \$350,000. The two cost-benefit evaluations of subproject quality cost roughly \$10,000 each, as did the social assessments, bringing total expenditures on the evaluation to an estimated \$390,000.

Administration. The evaluation was implemented jointly by World Bank staff and the Argentinean project team. Throughout its different stages, the evaluation effort required coordination with several local government agencies, including the statistical agency, the Ministry of Labor (including field offices), and the policy analysis division of the Ministry for Social Development.

C.4.7. Lessons learned and future work

Importance of accounting for forgone income in assessing the gains to workfare. Forgone income represents about half of the gross wages earned by workfare program participants in Argentina. The results suggest that conventional assessment methods (using only gross wages) substantially overestimate income gains, and hence also overestimate how poor participants would be in absence of the program.

Usefulness of propensity score matching methods. Propensity scores allow reliable matches to be drawn between a participant and a nonparticipant (control group) sample.

Judicious use of existing national data sources. Often, existing data sources such as the national census or household surveys can provide valuable input to evaluation efforts. Drawing on existing sources reduces the need for costly special-purpose data collection. Innovative evaluation techniques can compensate for missing data, as the assessment of Trabajar's geographic targeting outcomes aptly illustrates.

Broad range of evaluation components. The Trabajar evaluation design illustrates an effective mix of evaluation tools and techniques. Survey data analysis, site visits, and social assessments were all used to generate a wide range of results that provided valuable input into the project's effectiveness and pinpointed areas for reform.

Timeliness of results. Many of the evaluation components were designed explicitly with the project cycle in mind and timed to generate results during project preparation stages so that results could be used effectively to inform future design. Several components now generate data regularly in a continuous process of project monitoring.

Future work. Three studies are planned: the matched comparison research technique will be applied again to assess the impact of the program participation on labor market activity; infrastructure project quality will be reassessed; and a qualitative research component will investigate program operations and procedures.

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Case Study C.5 Evaluating Kenya's Agricultural Extension Project

C.5.1 Introduction

The first National Extension Project (NEP I) in Kenya introduced the Training and Visit (T&V) system of management for agricultural extension services in 1983. The project had the dual objectives of developing institutions and delivering extension services to farmers, with the goal of raising agricultural productivity. NEP II followed in 1991, and aimed to consolidate the gains made under NEP I by increasing direct contact with farmers, improving the relevance of extension information and technologies, upgrading skills of staff and farmers, and enhancing institutional development.

The performance of the Kenyan extension system has been controversial and is part of the larger debate on the cost-effectiveness of the T&V approach to extension. Despite the intensity of the debate and the large volume of investments made, very few rigorous attempts have been made to measure the impact of T&V extension. In the Kenyan case, the debate has been particularly strong because of very high estimated returns to T&V reported in an earlier study and the lack of convincingly visible results, including the poor performance of Kenyan agriculture in recent years.

The World Bank's Operations Evaluation Department (OED) undertook an evaluation of the Kenyan extension system in 1997-99. Using a results-based management framework, the evaluation examines the impact of project services on farm productivity and efficiency. It also develops measures of program outputs (for example, frequency and quality of contact) and outcomes (that is, farmer awareness and adoption of new techniques).

C.5.2 Evaluation design

The evaluation strategy illustrates best practice techniques in using a broad array of evaluation methods and exploiting existing data.⁸ It drew on both quantitative and qualitative methods so that rigorous empirical findings on program impact could be complemented with beneficiary assessments and staff interviews that highlight practical issues in the implementation process. The study also applied the contingent valuation method to elicit farmers' willingness to pay for extension services.⁹ The quantitative assessment was complicated by the fact that the T&V system was introduced on a national scale, preventing a "with program" and "without program" (control group) comparison. The evaluation methodology therefore sought to exploit the available preproject household agricultural production data for limited before-and-after comparisons using panel data methods. For this, existing household data were complemented by a fresh survey to form a panel. Beneficiary assessments designed for this study could not be conducted, but the evaluation drew on the relevant findings of two recent beneficiary assessments in Kenya.

C.5.3 Data collection and analysis techniques

The evaluation approach drew on several existing qualitative and quantitative data sources. The quantitative evaluation is based largely on a 1998 household survey conducted by OED. This survey generated panel data by revisiting as many households as could be located from a 1990 household survey conducted by the World Bank's Africa Technical Department, which in turn drew from a subsample of the 1982 Rural Household Budget Survey.¹⁰

The study evaluated institutional development by drawing on a survey of extension staff, several recent reviews of the extension service conducted or commissioned by the Ministry of Agriculture, and individual and focus group discussions with extension staff.

The study also drew on two recent beneficiary assessments, a 1997 study by Actionaid, Kenya, which elicited the views of users and potential users of Kenya's extension services, and a 1994 Participatory Poverty Assessment, carried out jointly by the government of Kenya, the African Medical and Research Foundation, British Overseas Development Administration, UNICEF, and the World Bank, which inquired about public services, including extension. Quality and quantity of services delivered were assessed using a combination of the findings of participatory (beneficiary) assessments and staff

surveys, and through measures of outreach and the nature and frequency of contact between extension agents and farmers drawn from the 1998 OED survey. Contingent valuation methods were used to directly elicit the farmers' willingness to pay for extension services.

The survey data were also used to assess program outcomes, measured in terms of farmer awareness and adoption of extension recommendations. The program's results—its actual effects on agricultural production in Kenya—were evaluated by relating the supply of extension services to changes in productivity and efficiency at the farm level. Drawing on the household panel data, these impacts were estimated using the Data Envelopment Analysis, a nonparametric technique, to measure changes in farmer efficiency and productivity over time, along with econometric analysis measuring the impact of the supply of extension services on farm production.

C.5.4 Results

The institutional development of NEP I and NEP II has been limited. After 15 years, the effectiveness of extension services has improved little. Although there has been healthy rethinking of extension approaches recently, overall the extension program has lacked the strategic vision for future development. Management of the system continues to be weak, and information systems are virtually nonexistent. The quality and quantity of service provision are poor. Beneficiaries and extension service staff alike report that visits are infrequent and ineffective. Although there continues to be unmet demand for technically useful services, the focus of the public extension service has remained on simple and basic agronomic messages. Yet the approach taken—a high intensity of contact with a limited number of farmers—is suited to deliver more technical information. The result has been a costly and inefficient service delivery system. The analysis showed that extension activities had little influence on awareness and adoption of recommendations, indicating limited potential for impact. In terms of actual impact on agricultural production and efficiency, the data indicated a small positive impact of extension services on the ability of farmers to get the most production from available resources (technical efficiency). However, no effect was found on allocative efficiency (the use of resources given market prices) or overall economic efficiency (the combination of technical and allocative efficiency). Further, no significant impact of the supply of extension services on productivity at the farm level could be established. The data did show, however, that the impact was relatively greater in the previously less productive areas, where the knowledge gap is likely to have been the greatest. These findings were consistent with the contingent valuation findings: a vast majority of farmers, among both the current recipients and nonrecipients, were willing to pay for advice, indicating an unmet demand. However, the perceived value of the service, in terms of the amount offered, was well below what the government was spending on delivering it.

C.5.5 Policy implications

The Kenya Extension Service evaluation stands out in terms of the array of practical policy conclusions that could be derived from its results, many of which are relevant to the design of future agricultural extension projects. First, the evaluation revealed the need to enhance targeting of extension services, focusing on areas and groups in which the difference between the average and best practice is the greatest and hence the impact is likely to be greatest. Furthermore, advice needs to be carefully tailored to meet farmer demands, taking into account variations in local technological and economic conditions. Achieving a high level of service tailoring requires regular and timely flows of appropriate and reliable information, and a monitoring and evaluation system that provides regular feedback from beneficiaries on service content.

To raise program efficiency, a leaner and less intense presence of extension agents with wider coverage is likely to be required. There are not enough technical innovations to warrant a high frequency of visits, and there is unmet demand from those currently not receiving services. The program's blanket approach to service delivery, relying predominantly on a single methodology (farm visits) to deliver standard simple messages, also limits program efficiency. Radio programs are now popular, younger farmers are more educated, and alternative providers (non-governmental organizations) are beginning to emerge in rural Kenya. A flexible pluralistic approach to service delivery, particularly one that uses lower-cost means of communication, is likely to enhance the cost effectiveness of the program.

Finally, the main findings pointed to the need for institutional reform. The central focus of the institution should be the farmer. Decentralization of program design, including participatory mechanisms that give voice to the farmer (such as cost sharing and farmer organizations) should become an integral part of the delivery mechanism. Financial sustainability is critical. The size and intensity of the service

should be based on existing technological and knowledge gaps and the pace of flow of new technology. Cost recovery, even if only partial, offers several advantages: it provides appropriate incentives, addresses issues of accountability and quality control, makes the service more demand-driven and responsive, and provides some budgetary respite. Such decentralized institutional arrangements remain unexplored in Kenya and in many extension programs in Africa and around the world.

C.5.6 Evaluation costs and administration

Costs. The total cost of the evaluation was approximately \$350,000, which covered household survey data collection and processing (\$65,000—though this is probably an underestimate of actual costs); extension staff survey, data, and consultant report (\$12,500); other data collection costs (\$12,500); and approximately \$160,000 for World Bank staff time and travel costs for data processing, analysis, and report writing should be added to reflect fully the study's cost.

Administration. To maintain objectivity and dissociate survey work from both the government extension service and the World Bank, the household survey was implemented by the Tegemeo Institute of Egerton University, an independent research institute in Kenya. The analysis was carried out by World Bank staff.

C.5.7 Lessons learned

The combination of theory-based evaluation and a results-based framework can provide a sound basis for evaluating the impact of project interventions, especially where many factors are likely to affect intended outcomes. The design of this evaluation provided for the measurement of key indicators at critical stages of the project cycle, linking project inputs to the expected results to gather sufficient evidence of impact.

An empirical evaluation demands constant and intense supervision. An evaluation can be significantly simplified with a well-functioning and high-quality monitoring and evaluation system, especially with good baseline data. Adequate resources for these activities are rarely made available. This evaluation also benefited tremendously from having access to some, albeit limited, data for the preproject stage and also independent sources of data for comparative purposes.

Cross-validation of conclusions using different analytical approaches and data sources is important to gather a credible body of evidence. Imperfect data and implementation problems place limits on the degree of confidence with which individual methods can provide answers to key evaluative questions. Qualitative and quantitative assessments strongly complement each other. The experience from this evaluation indicates that even in the absence of participatory beneficiary assessments, appropriately designed questions can be included in a survey to collect qualitative as well as quantitative information. Such information can provide useful insights to complement quantitative assessments.

If properly applied, contingent valuation can be a useful tool, especially in evaluating the value of an existing public service. The results of the application in this evaluation are encouraging, and the responses appear to be rational and reasonable.

Source: Gautam, Madhur. 1999. "World Bank Agricultural Extension Projects in Kenya: An Impact Evaluation." Report No. 19523. World Bank, Operations Evaluation Department, Washington, D.C.

Case Study C.6 Evaluating Nicaragua's School Reform: A Combined Quantitative-Qualitative Approach

C.6.1 Introduction

In 1991, the Nicaraguan government introduced a sweeping reform of its public education system: it decentralized school management (decisions on personnel, budgets, curriculum, and pedagogy) and transferred financing responsibilities to the local level. Reforms were phased in over time, beginning with a 1991 decree that established community-parent councils in all public schools. Then, a 1993 pilot program in 20 hand-picked secondary schools transformed these councils into school management boards with greater responsibility for personnel, budgets, curriculum, and pedagogy. By 1995, school management boards were operational in 100 secondary schools and more than 300 primary schools, which entered the program through a self-selection process involving a petition from teachers and school directors.

As school management becomes more democratic and participatory and locally generated revenues increase, spending patterns were expected to become more supportive of efforts that directly improve pedagogy and boost student achievement.

The evaluation of the Nicaraguan school autonomy reforms represents one of the first systematic efforts to evaluate the impact of school decentralization on student outcomes. The design is innovative in that it combines both qualitative and quantitative assessment methods. The quantitative component is unique in that it includes a separate module assessing school decisionmaking processes. The evaluation also illustrates best practice techniques when there are no baseline data, and when selective (nonrandom) application of reforms rules out an experimental evaluation design.

The purpose of the qualitative component of the evaluation was to determine whether or not the intended management and financing reforms were actually observed in schools, and to assess how various stakeholders viewed the reform process. The quantitative component addressed the following question: Did changes in school management and financing actually produce better learning outcomes for children? The qualitative results showed that successful implementation of the reforms depended largely on school context and environment (that is, the poverty level of the community), while the quantitative results suggested that increased decisionmaking by schools was in fact significantly associated with improved student performance.

C.6.2 Evaluation design

The design of the Nicaraguan school autonomy reform evaluation is based on matched comparison, where data for a representative sample of schools participating in the reform process are compared with data from a sample of nonparticipating schools. The sample of nonparticipating schools is chosen to match as closely as possible the characteristics of the participating schools and hence provides the counterfactual. This design was chosen because the lack of baseline data ruled out a before-and-after evaluation and because reforms were not applied randomly to schools, thus ruling out an experimental evaluation design.

C.6.3 Data collection and analysis techniques

The qualitative study draws on data for a sample of 12 schools, 9 reformers, and 3 nonreformers that represent the control group.¹¹ The sample of 12 schools was picked to represent both primary and secondary schools, rural and urban schools, and schools with differing degrees of actual autonomy in decisionmaking. A total of 82 interview and focus group sessions were conducted, focusing on assessing how school directors, council members, parents, and teachers understood and viewed the decentralization process. All interviews were conducted by Nicaraguans, trained through interview simulation and pilot tests to use a series of guided questions without cueing responses. Interviews were audio-recorded, transcribed, and then distilled into a two- to four-page transcript that was then analyzed to identify discrete sets of evidence and fundamental themes that emerged across schools and actors, and between reform schools and the control group.

Quantitative data collection consisted of two components, a panel survey of schools, which was conducted in two rounds (November-December 1995, and April-August 1997), and student achievement tests for students in these schools, which were conducted in November 1996. The school survey collected data on school enrollment; repetition and dropout rates; physical and human resources; school decisionmaking; and characteristics of school directors, teachers, students, and their families. The school decisionmaking module is unique, presenting a series of 25 questions designed to gauge whether and how the reform had actually increased decisionmaking by schools. The survey covered 116 secondary schools (73 reformers and 43 nonreformers representing the control group), and 126 primary schools (80 reformers and 46 nonreformers). Again, the control groups were selected to match the characteristics of the reform schools. The survey also gathered data for 400 teachers, 182 council members, and 3,000 students and their parents, with 10 to 15 students chosen at random from each school.

Quantitative data analysis used regression techniques to estimate an education production function. It examined the impact of the degree of school autonomy on student achievement levels, controlling for school inputs and household and student characteristics. The analysis measured the effect of both *de jure* and *de facto* autonomy. *De jure* autonomy was defined simply as whether or not the school has legally joined the reform, while *de facto* autonomy measured the degree of actual autonomy achieved by the school as the percentage of 25 key decisions made by the school itself. *De facto* autonomy was expected to

vary across schools because reforms were phased in (so schools in the sample were at different stages in the reform process), and because the capacity to implement reforms successfully varied according to school context, as found in the qualitative study).

C.6.4 Results

The qualitative study highlighted that policy changes at the central level did not always result in changes at the local level. In general, reforms were associated with increased parent participation, as well as with management and leadership improvements. But the degree of success with which reforms were implemented varied with school context. Of particular importance were the degree of impoverishment of the surrounding community—in poor communities, raising local school financing was difficult—and the degree of cohesion among school staff—where key actors such as teachers did not feel integrated into the reform process, decentralization was limited. Policymakers often ignore the highly variable local contexts into which new programs are introduced. The Nicaraguan results pointed out that the goal of increased local financing for schools was unlikely to be met in poor communities.

The quantitative study reinforced the finding that reform schools were indeed making more of their own decisions, particularly with regard to pedagogical and personnel matters. *De jure* autonomy—whether a school had signed the reform contract—did not necessarily translate into greater school level decisionmaking, nor did it affect schools equally. The degree of autonomy achieved depended on the poverty level of the community and on how long the school had been participating in the reform process. The regression results showed that *de jure* autonomy had little bearing on student achievement outcomes, but *de facto* autonomy was significantly associated with improved student achievement. Furthermore, simulations indicate that increased school autonomy had a stronger bearing on student achievement than other typical actions, such as increasing the number of textbooks, expanding teacher training, and reducing class size.

C.6.5 Policy implications

The evaluation results provided concrete evidence that Nicaragua's school reform produced tangible results. Reform schools indeed made more decisions locally and enhanced local decisionmaking resulted in improved student achievement.

The results also pointed out areas where policy can be improved, and the Ministry of Education introduced a number of changes in the school reform program. The program now places greater emphasis on the training of teachers and on promoting the pedagogical aspects of the reform. Further, in response to the financing problems of poor communities, the Ministry developed a poverty map-driven subsidy scheme. Finally, the tangible benefits from this evaluation prompted the Ministry to incorporate a permanent evaluation component into the reform program.

C.6.6 Evaluation costs and administration

Costs. The total cost of the evaluation was approximately \$495,000, representing less than 1.5 percent of the World Bank credit that supported the reforms.¹² Of this total evaluation cost, 39 percent was spent on technical support provided by outside consultants, 35 percent on data collection, 18 percent on World Bank staff time, and 8 percent on travel.

Administration. The evaluation was carried out jointly by the Nicaraguan Ministry of Education, the World Bank, and researchers from the Harvard School of Education.

C.6.7 Lessons learned

Value of the Mixed-Method Approach. Using both qualitative and quantitative research techniques generated a valuable combination of useful, policy-relevant results. The quantitative work provided a broad, statistically representative overview of school conditions and outcomes; the qualitative work enhanced these results with insight into why some expected outcomes of the reform program had been achieved while others had not, and hence helped guide policy adjustments. Furthermore, because it was more intuitive, the qualitative work was more accessible and therefore captured the attention of Ministry staff, which in turn facilitated rapid capacity building and raised the credibility of the evaluation process within the Ministry.

Importance of Local Capacity Building. Local capacity building was costly and required frequent contact and coordination between Nicaraguan staff, World Bank counterparts, and outside consultants. However, the benefit was the rapid development of local ownership and responsibility for the evaluation process, which in turn fostered a high degree of acceptance of the evaluation results, whether positive or negative. These evaluation results provided direct input into the reform as it evolved. The policy impact of the evaluation was also enhanced by a cohesive local team in which evaluators and policymakers worked collaboratively and by the support of the Minister of Education.

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Case Study C.7 Schooling Outcomes in Philippine Elementary Schools: Evaluation of the Impact of Four Experiments

C.7.1 Introduction

In most developing countries, high dropout rates and inadequate student learning in primary education are a matter of concern to policymakers. This was certainly the case in the Philippines: almost a quarter of Philippine children dropped out before completing sixth grade, and those who leave have often mastered less than half of what they have been taught. In 1990-92, the government embarked on a Dropout Intervention Program (DIP) to address these issues. Four experiments were undertaken: multilevel learning materials (MLM) and school lunches (SL) were provided, and each of these was combined with a parent-teacher partnership (PTP). Multilevel learning materials allow teachers to pace teaching to different student needs and is much less expensive than school feeding. Parent-teacher partnerships cost almost nothing, but they can help with student learning both at home and at school.

The evaluation is noteworthy in that it explicitly aimed to build capacity in the host country so that evaluation would become an integral component of new initiatives, and data requirements would be considered before rather than after project implementation. Another major contribution of the evaluation was to check for robustness of results with different econometric approaches. Finally, the benefit-cost analysis applied at the end was important in that it explicitly recognized that significant results do not suffice to justify an intervention: inexpensive interventions may still be better than expensive ones.

C.7.2 Evaluation design

The key objective of the research was to evaluate the impact of the four different interventions on dropout rates and student outcomes. The evaluation design was conditioned by pragmatic as well as programmatic needs. The DIP team followed a three-stage school selection process:

- Two low-income districts were identified in each of five regions of the country.
- In each district, the team selected three schools which a) had all grades of instruction, with one class per grade; b) had a high dropout rate; and c) had no school feeding program in place.

- 3 In one district, the options available were MLM, MLM-PTP, or nothing; in the other, SL, SL-PTP, or nothing.

The three schools in each district were assigned to the control group or to one of the two interventions based on a random drawing.

Pre-tests and post-tests in three subjects (mathematics, Filipino, and English) were administered at the beginning and end of the 1991 and 1992 school years to all classes in all 30 schools.

C.7.3 Data collection and analysis techniques

Baseline data collection began in 1990–91, and the interventions were implemented in 1991–92. Detailed information was gathered on 29 schools, on some 180 teachers, and on about 4,000 pupils in each of the two years. Although the questionnaires were very detailed, much of the detail turned out to be unnecessary: only a small subset of the information was actually used, suggesting that the burden of the evaluation process could be reduced.

The data were structured to follow both pupils and schools over the two years; unfortunately, the identifiers on the students turned out not to be unique. It is worth noting that this was not known beforehand, and became obvious only after six months of work uncovered internal inconsistencies. The recovery of the original identifiers from the Philippine Department of Education was not possible. Fortunately, data for first-graders could be rescued, permitting some longitudinal analysis.

The structure of the sampling procedure raised some interesting econometric problems for dropout rates and for test score outcomes. In each case, there are two sets of obvious controls: one is the control group of schools; the other is the baseline survey conducted in the year prior to the intervention. The authors handled these controls in different ways.

In the analysis of dropout rates, it is natural to use a difference-in-difference approach, and compare the change in the mean dropout rate in each intervention class between the two years with the change in the mean dropout rate for the control classes. However, two issues immediately arose. First, the results, although quite large in size, were only significant for the MLM intervention, which was possibly the result of small sample sizes. This is not uncommon with this type of procedure, and it is partly due to the lack of funding for large-scale experiments in a developing country context. Second, a brief check of whether student characteristics and outcomes were in fact the same across schools in the year prior to the interventions suggested that there were some significant differences in characteristics. These two factors led the authors to check the robustness of the results via logistic regression techniques that controlled for personal characteristics and family background. The main result was unchanged. However, the regression technique did uncover an important indirect core cause of dropping out, which was poor academic performance. This naturally led to the second set of analysis, which focused on achievement.

Several econometric issues arose in the evaluation of the impact of the intervention on the academic performance of an individual in a given school at a given time: accounting for the clustered correlation in errors that is likely to exist for students in the same classes and schools; capturing unobserved heterogeneity; and dealing with selection bias (if students with lower academic performance are more likely to drop out of school, then estimates of program effects may be biased upwards).

The first issue was dealt with by applying a Huber-White correction to the standard errors. The second issue could in principle be dealt with at the individual level by using the difference in test scores as an independent variable. However, the authors argued that this was inappropriate because it presupposed that the value of the coefficient on academic performance was 1, which was not validated by tests. They therefore used academic performance in the first period as an explanatory variable, but this raised the problem of correlation with the error term, or endogenous regressor bias. This was handled by using as an instrumental variable for the pre-test score in each subject the pre-test scores in the other subjects. The authors noted, however, that the reduction in bias came at the cost of a reduction in efficiency, and hence reported both least squares and instrumental variables results. The authors used both school and teacher fixed effects to control for unobserved heterogeneity in learning environment and classroom conditions.

The third problem, selection bias, is one that is also commonly found in the literature, and for which there is no fully accepted solution. Clearly, individual academic performance is conditional on the decision not to drop out. Although this problem has often been addressed by the two-stage Heckman procedure (Heckman 1976, 1979), there is a great deal of dissatisfaction with this for three reasons: its

sensitivity to the assumption of the normal distribution, the choice and adequacy of the appropriate variables to use in the first stage, and its frequent reliance on identification through the nonlinearity of the first stage. Unfortunately, there is still no consensus on an appropriate alternative. One solution proposed by Krueger (1997) is to impute test scores for students who exit the sample by assigning to them in years when they were absent from the sample their most recent test percentile. The authors report three sets of results: the simple regression of outcomes against intervention, the Krueger approach, the Heckman procedure, and instrumental variables results obtained using Krueger's procedure.

C.7.4 Results

The study found that the positive effect of multilevel learning materials—particularly with a parent-teacher partnership—on dropout rates and academic performance was robust to different specifications. The effect of school lunches was, in general, weak. An interesting component of the study was a cost-benefit analysis, that made the important point that significant results were not the whole story. A straightforward calculation of both the direct and the indirect (opportunity) costs of the programs led to the conclusion that the MLM approach was both effective and cost-effective.

The lack of effectiveness of school feeding might be overstated, however: it is possible that a more targeted approach for school feeding programs—targeting, for example, only malnourished or underprivileged children—might be more cost-effective. Furthermore, since the period of time between the implementation and the evaluation of the program was quite short, the evaluation could not address the long-term impact of the interventions.

C.7.5 Administration

Data collection was carried out by the Bureau of Elementary Education of the Philippines Department of Education, Culture and Sports. The analysis was carried out by a World Bank employee and two academic researchers.

C.7.6 Lessons learned

Several lessons were learned through this evaluation. A major one was that a lot of vital longitudinal information can be lost if the identifiers of observations (in this case, pupils) are not unique over time, is lost. A second lesson was that very little of the information that was gathered in detailed surveys was used and that the burden on the respondents could have been substantially reduced. Third, the study highlighted the value of different econometric approaches and the advantages of finding consistent results across techniques. Fourth, the study was exemplary in both identifying and valuing the costs of the different interventions. Finally, although errors were clearly made during the study, the authors noted that a prime objective was to build evaluation capacity in the Philippines.

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Notes

1. An earlier version of this case study was prepared by Margaret Kakande, Head, Poverty Monitoring Unit, Ministry of Finance, Planning and Economic Development, Government of Uganda and Kimberley McClean, Head International Projects, Aus Health International.

2. For more information on the National Service Delivery Survey, see the World Bank Research Department Web site on public service delivery at [http://www.worldbank.org/research/projects/publicspending/tools/tools.htm#Quantitative Service Delivery](http://www.worldbank.org/research/projects/publicspending/tools/tools.htm#Quantitative%20Service%20Delivery).
3. See <http://www.uppap.or.ug/>.
4. Available at <http://www.worldbank.org/afr/findings/english/find142.htm>.
5. The EDS survey was financed under a World Bank-supported project different from Trabajar. It was designed to improve the quality of information on household welfare in Argentina, particularly in the area of access to social services and government social programs.
6. The EDS questionnaire is very comprehensive, collecting detailed data on household characteristics that help predict program participation and facilitate the use of the propensity scoring technique. The propensity score is calculated for each observation in the participant and control group sample using standard logit models.
7. This is a composite index that includes residential crowding, sanitation facilities, housing quality, educational attainment of adults, school enrollment of children, employment, and dependency (ratio of working to nonworking family members). The index was somewhat dated, although this had the advantage that the departmental poverty measure was not influenced by Trabajar interventions.
8. No attempt was made to study the impact on household welfare, which is likely to be affected by a number of factors far beyond the scope of T&V activities.
9. The contingent valuation method elicits individuals' use and nonuse values for a variety of public and private goods and services. Interviewees are asked to state their willingness to pay to avoid a hypothetical change in the provision of the goods or services, that is, the "contingent" outcome. In this case, farmers were asked how much they would be willing to pay for continued agricultural extension services, should the government cease to provide them.
10. These three surveys generate a panel dataset for approximately 300 households. The surveys cover household demographics, farm characteristics, and input-output data on agricultural production; the 1990 and 1998 surveys also collected information on contact with extension services, including awareness and adoption of extension messages.
11. Data were actually gathered for 18 schools, but only 12 of these schools were included in the qualitative analysis because of delays in getting the transcripts prepared, and a decision was made to concentrate the bulk of the analysis on reform schools, which provided more relevant material for the analysis.
12. This total does not include the cost of local counterpart teams in the Nicaraguan Ministry of Education.

Annex D

Development Targets and Costs: Technical Notes

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Technical Note D.1 SimSIP_Goals: A Simulator for Setting Targets

The Poverty Group in the World Bank's Latin America and Caribbean Region has developed user-friendly, Excel-based simulation tools to help countries prepare PRSPs. Named "SimSIP" (Simulations for Social Indicators and Poverty), the simulators have five components:

- SimSIP_Goals helps analysts assess whether PRSP targets are realistic.
- SimSIP_Poverty facilitates simulations for poverty, inequality, and social welfare indicators.
- SimSIP_Costs estimates what it will cost to reach development targets.
- SimSIP_Incidence analyzes who is likely to benefit from additional social expenditures.
- SimSIP_Determinants analyzes the microdeterminants of poverty and other outcomes.

These first two technical notes for chapter 4 briefly explain what SimSIP_Goals and SimSIP_Costs can do, and how they work. More details on the various simulators, including user manuals, can be found in Wodon and others (2001). The simulators will be made available, free of charge, on the Internet. They are a work in progress, and additional features will be included over time.

SimSIP_Goals is a simulator that can be used to set targets for education, health, basic infrastructure, and poverty indicators. For poverty simulations, the analysis can be complemented with the SimSIP_Poverty application, but this is not discussed here. At present, simulations can be made only for Latin American countries, but these should be extended to other regions in the future. The indicators correspond roughly to the International Development Goals and are listed here by category.

- **Education.** Gross primary, secondary, and tertiary enrollment rates; net primary and secondary enrollment rates; rate of illiteracy among the adult population.
- **Health.** Infant mortality rate, under-five mortality rate, life expectancy, and under-five malnutrition rate.
- **Infrastructure.** Access to water, access to sanitation, and telephone main lines.
- **Poverty and extreme poverty.** Headcount, poverty gap, and squared poverty gap (see chapter 1, "Poverty Measurement and Analysis," for definitions of these measures).

For education, health, and infrastructure services, the indicators are provided at the national level only. Targets can be based on either historical trends or model-based elasticities.

- **Historical trends.** Projections into the future are based on country-level historical trends observed for each specific indicator. Four different ways of fitting a historical trend at the country level are considered for each indicator. The best-fit historical trend among the four functional forms is selected for the simulations. Time is the only exogenous variable.
- **Model-based elasticities.** The second (and arguably better) alternative is to rely on an econometric model giving elasticities of the indicators to variables such as economic growth, population growth, urbanization, and time. These elasticities have been estimated with two different econometric models using worldwide panel data sets, and they are allowed to vary with a country's level of economic development (that is, GDP per capita) and urbanization.

For poverty, the indicators are provided at the rural and urban levels. This yields national poverty measures when urbanization is taken into account. The simulations for poverty are based on estimated elasticities of poverty to growth, taking into account the effect of growth on inequality. Future levels of poverty are simulated as a function of economic growth, population growth, and urbanization growth, while the user is provided with the contribution of each variable to poverty reduction. Given assumptions for these variables, the user can also assess how the Gini index of inequality would have to change in order to reduce the headcount of poverty by the stated objective (say, a reduction in the headcount to half its 1990 rate by 2015).

The simulator can be used to assess the effect of economic growth, population growth, urbanization, and time (as a proxy for other variables, such as technological progress) on the indicators. It can thus be used to set realistic targets for the indicators, on the basis of international experience and country-specific initial conditions. While the simulator gives a feeling for the magnitude of the gains that can be achieved over time for the various indicators, it should be used with caution before inferring policy recommendations. In some countries, the simulator may yield more realistic projections than in other countries. The simulator may also work better for some indicators than for others. Thus users are advised to use their own information in order to adapt the simulator results to their country. Below, we provide more details on the methodology used for making forecasts.

D.1.1 Country-specific time trends for social indicators

Country-specific historical trends are provided for social indicators (education, health, and basic infrastructure), but not for poverty, because in many countries there is no clear time trend in poverty measures. Denoting by y the social indicator, the country-specific historical trends are based on one of four simple specifications wherein only time appears as an explanatory variable:

Linear	$y = a + bt$
Logarithmic	$y = a + b \ln t$
Exponential	$y = ae^{bt}$
Power	$y = at^b$

For each indicator taken separately, and for each country, the specification with the best fit is used for the projection. However, to take into account the most recently observed data, the parameter b is applied from the latest actual data point onward, so that there may be a small break in the historical trend between the past and the future trends if the latest data point is not exactly positioned on the past historical trend. The estimation of such time trends is one variant of the historical benchmarking discussed in section 4.3.1 of chapter 4.

D.1.2 Model-based forecasts for poverty

At a broad macroeconomic level, poverty is affected by economic growth and by changes in income inequality. By building panel models within a region or a country, estimates of the elasticities of poverty and inequality to growth can be estimated. Provided one has state- or province-level data within a country, or country-level data within a region, panel data sets of poverty, mean income, and inequality measures can be constructed in order to estimate the elasticity of poverty to growth and inequality. Denoting by g and l the gross and net elasticities of poverty to growth, by b the elasticity of inequality to growth, and by d the elasticity of poverty to inequality controlling for growth, we have $1 \gg g + bd$. This method was applied to poverty measures computed for 12 countries in Latin America by Wodon and others (2000).

The results were provided in table 4.4 of chapter 4. The net elasticities of poverty to growth in that table have been used in the SimSIP_Goals simulator, in order to yield forecasts for poverty and extreme poverty measures separately for urban and rural areas. It is, however, feasible for the user to specify other chosen elasticities for the simulations. In the simulator, the predicted values are calculated by applying the estimated elasticities to the latest actual data point, and GDP is used as a proxy for private disposable income growth (in Latin America, poverty measures are income-based in part because consumption data are not available in most household surveys; using GDP growth as a proxy for consumption growth would be more problematic). If P_0 is the observed poverty measure for the latest data point available,

GDP_T and GDP_0 represent per capita GDP at the initial period 0 and at the final period T, the forecast for the poverty measure in year T (denoted by P_T) is:

$$P_T = P_0 * \left(\frac{GDP_T}{GDP_0} \right)^\lambda$$

For example, if a country with an initial headcount index of poverty of 50 percent has a rate of per capita GDP growth of 4 percent over 10 years, the poverty headcount is expected to decline from its current level to 34 percent if the elasticity of the headcount index is equal to minus one. Alternatively, we can calculate the average per capita GDP growth rate (r) needed over a period T to reduce the poverty headcount to a target P_T . This is obtained as:

$$r = [(P_T/P_0)^{(1/\lambda)} - 1]$$

To reduce the poverty headcount in 10 years from 50 percent to 25 percent, the necessary rate of per capita GDP growth would have to be 7.2 percent per year. Historical evidence and/or projections for GDP and population growth can then be used to check if this is realistic, and poverty reduction targets can be adapted accordingly. Note that in the simulator, the same GDP growth rate is applied separately to urban and rural areas, and the forecasts for urbanization and population growth are then used to weight the urban and rural poverty measures in order to compute the national poverty measure. Another simulator, SimSIP_Poverty, provides alternative (and more detailed) ways to make poverty simulations.

D.1.3 Model-based forecasts for social indicators

Apart from reducing poverty, growth also improves nonmonetary indicators of well-being. But other factors may have large impacts as well. Urbanization matters, because it is often easier and cheaper to provide access to public and private services for education, health, and basic infrastructure in urban areas than in rural areas. Time may also have an effect; it can be used, for example, as a proxy for technological progress, such as the development of vaccines which reduce infant mortality. The level and targeting of public social spending also matter, but these are more difficult variables to obtain for quantitative analysis, and there are difficult econometric issues involved in assessing the effect of public spending on outcomes. To simulate future levels for social indicators, SimSIP_Goals relies on estimates of the elasticities of each indicator to real GDP growth per capita, urbanization, and time using worldwide panel data. The elasticities are allowed to depend on the level of economic development of the country, as well as its level of urbanization.

Using estimates of the elasticities of each social indicator to real per capita GDP growth, urbanization, and time, it is feasible to set targets for the indicators. That is, if we denote the urbanization rate by u , the elasticity of the social indicator y to urbanization by ϕ , and the effect of time on the indicator by φ , the future level of the social indicator is computed as:

$$y_T = y_0 * \left(\frac{GDP_T}{GDP_0} \right)^\lambda * \left(\frac{U_T}{U_0} \right)^\phi * e^{\varphi T}$$

In the simulator, as for poverty, the future level of real per capita GDP growth is a function of assumptions made by the user for real GDP growth and population growth. The forecasts are bound by the following restrictions: mortality, illiteracy, and malnutrition rates must be greater than or equal to zero; gross school enrollment rates must be less than 130 percent; and net enrollment rates and access to safe water and sanitation must be less than or equal to 100 percent.

Technical Note D.2 SimSIP_Costs: Estimating the Cost of Reaching Targets

This note outlines some of the features of SimSIP_Costs, a user-friendly, Excel-based simulator that can be used to estimate what it will cost to reach development targets for education, health, basic infrastructure, and poverty indicators. The simulator can easily be adapted from one country to another. It includes a fiscal sustainability interface to assess the macroeconomic implications of additional public spending designed to reach PRSP targets. It also includes interfaces for various types of targeted interventions for the poor, and it

can be used to assess financial tradeoffs between targets in different sectors. Below, we describe some of the hypotheses used to estimate what it will cost to reach education, health, and basic infrastructure targets. Information on the other features of SimSIP_Costs is available in the SimSIP manual.

D.2.1 Education

The education simulator is based on a detailed cohort analysis. Using this cohort analysis, it is relatively easy to estimate the cost of reaching education targets, since we know the number of students in school over time. The number and age of students in each grade is a function of parameters chosen by the user, such as the distribution of age at entry in primary school, and the repetition, promotion, and dropout rates per cycle or per grade. Using these parameters, which can change over time, the simulator provides detailed statistics and graphs on the efficiency of the education sector.

Although there are many more options in the simulator than those described below, the basic idea for calculating costs is as follows. In each grade (or cycle), the teacher wage bill is computed by multiplying an average cost per teacher (which is allowed to vary over time) by the number of teachers needed to cater to the student population. The number of teachers is determined by dividing the total gross enrollment by the student-teacher ratio, which is also allowed to vary over time. The “recurrent” supply-side cost is then obtained by adding to the teacher wage bill a provision for administrative costs, which can again vary over time.

$$\text{Recurrent supply-side cost} = \text{Teacher's wage bill} * (1 + \% \text{ administrative costs})$$

$$\text{with Teacher's wage bill} = \text{Number of teachers} * \text{Teacher wage rate}$$

$$\text{Number of teachers} = \text{Gross enrollment} / \text{Student-teacher ratio}$$

The simulator also computes demand-side costs resulting from the possibility of the government granting yearly stipends to qualifying students. The cost depends on the value of the stipends and their coverage rate (that is, the share of all students receiving the stipends).

$$\text{Demand-side costs} = \text{Yearly stipend} * \text{Gross enrollment} * \text{Coverage rate}$$

Investment costs are estimated for training new (or existing) teachers and constructing new classrooms. In the case of new teachers, if T_{t+1} represents the number of teachers in year $t+1$, and ATC is the average new teacher training cost, the total training cost TC in year t is:

$$TC = (T_{t+1} - T_t)ATC$$

Similarly, if C is the average cost of constructing a new classroom in a given cycle, if the number of students in a cycle is denoted by Y , and if we assume for simplicity here that the pupil-teacher ratio (PTR) does not change over time, investments for school construction costs are estimated as:

$$\frac{Y_{t+1} - Y_t}{PTR} C$$

As for all the parameters in the system, the unit investment costs for training new teachers and constructing new classrooms are allowed to change over time. In all cases, the share of the students in the public sector (as opposed to the private sector) is taken into account in order to estimate costs.

D.2.2 Basic package of health care

The health simulator essentially computes the total cost of the implementation of a basic health care package program through mobile health units, taking into account the indirect and direct costs associated with the program. We followed closely the approach proposed by Dicowsky and Cardenas (2000). Each year, the costs vary with the level of coverage of the program. Let IFC_t and IVC_t represent Indirect Fixed and Variable Costs, and OCT_t represent the cost of operation of a single mobile health team in year t . If we denote the number of mobile health teams by N_t , the total cost in year t is:

$$C_t = IFC_t + IVC_t + (N_t \times OCT_t)$$

Indirect fixed costs include salary expenses for supervising staff and civil servants of the Ministry of Health, at the national level and in various regions. The costs are proportional to the amount of time they allocate to the supervision of the basic health package program in their respective region and areas. We may denote by S_i^M the monthly salary of the j agents of the Ministry of Health coordinating the health package implementation M. Monthly salaries are multiplied by a number (say, 14) to reflect 12 months of base pay plus other benefits. The agents are assumed to allocate a share of their time (say, 5 percent) to the program. The resulting indirect fixed costs can be computed as:

$$IFC_t = \left(\sum_{i=1}^j S_i^M \times 14 \right) \times 5\%$$

Indirect variable costs comprise all expenditures allocated to training and travel of health team members, program coordinators, community team members, and officials of the Ministry of Health involved in the programs. These are computed as follows:

$$IVC_t = \left(\sum_{i=1}^m Viaticos_i \times X_i \right) + \left(\sum_{i=1}^m Cap_i \times Y_i \right)$$

where $Viaticos_i$ and Cap_i represent the cost of travels and training for each individual i involved in the program. X_i and Y_i are the number of days during which trips and training occur for the same individuals.

The costs of each mobile health team also consist of indirect and direct costs:

$$OCT_t = DFC_t + DVC_t$$

Direct fixed costs include salary costs of team staff (medical doctor, nurse, nurse assistant, technician, and driver; the user can specify a higher number of each type of worker in a team). Total direct fixed costs are a function of the total number of existing mobile teams. If S_i represents the monthly salary of each of the k ($k = 6$ in this illustration) members in the mobile teams staff, and if we allow the monthly salary to be multiplied by a number such as, say, 16 to include the 12 months of base pay, one month of paid vacation, bonuses, and the salary of a substitute team during the vacation period of each principal team, we get:

$$DFC_t = \sum_{i=1}^k S_i \times 16$$

Direct variable costs include program activities costs. All mobile teams are expected to carry out specific health and nutrition programs as defined in the relevant basic health package. The interface provides the list of programs or activities included in each package. For each activity listed, the costs of material and equipment needed must be specified. Equipment is assumed to depreciate over a given period of time (say, five years), yielding a depreciation rate. The total direct variable costs incurred by each team are estimated based on the number of individuals reached by the programs.

D.2.3 Basic infrastructure (water and sanitation)

The simulator for basic infrastructure uses assumptions for demographics, as well as cost characteristics of alternative technical options, to estimate the total cost of expanding access to water and sanitation services to a greater portion of the population. Total annual costs include investment expenditures as well as annual operation and maintenance costs incurred within a year. Hence, this assumes all investment is performed over a one-year period. For each service j and each technology option k , an annual cost C_i is calculated. This cost is the product of total cost per beneficiary $c^{j,k}$ multiplied by the number of individuals who have new access to water or sanitation services that same year. Costs thus depend on the proportion of population benefiting from new access each year. Population growth is taken into account.

The population benefiting from new access is the difference between the number of individuals with access the year before and the number of individuals benefiting from water (or sanitation) services at the end of the following year. For instance, if the level of water supply coverage is expected to increase from 57 percent in 2000 (number of households = 1.2 million) to 59.5 percent in 2010 (number

of households = 1.5 million), the additional number of households reached in 2010 would be equal to $[(0.595 \times 1.5) - (0.57 \times 1.2)]$. The total cost per beneficiary ($C^{j,k}$) is the sum of the unit cost of investment ($i^{j,k}$), the operation cost ($o^{j,k}$), and the maintenance cost ($m^{j,k}$) associated with the technology k selected. The costs can be shared between the households and the municipalities, which provides the possibility of giving access or consumption subsidies. Therefore for each technology k and service j , the total cost per beneficiary is:

$$C^{j,k} = i^{j,k} + o^{j,k} + m^{j,k}$$

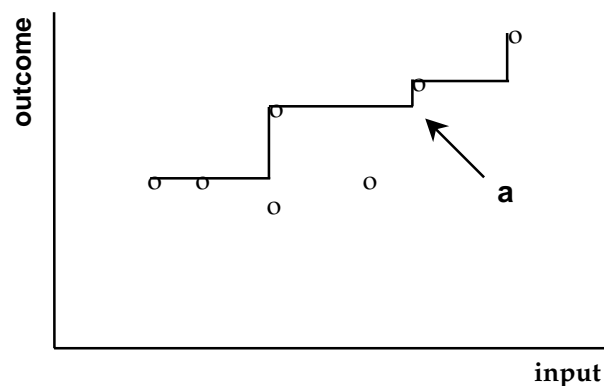
Technical Note D.3 Estimating Production Frontiers

Production frontiers can be estimated by deterministic or by stochastic methods. In the deterministic approach, an outer envelope that encompasses all observations is constructed. Production frontiers determined in this manner are sensitive to extreme observations, as the approach does not correct for outliers or measurement error. This may bias the resulting efficiency measures. In the stochastic approach, it is explicitly acknowledged that some deviations from the maximum observed output may be caused by exogenous shocks outside the control of the production system. Such deviations are clearly unrelated to inefficiency. Stochastic specifications of the production frontier account for this either by assuming that the error term has two components, one representing random errors and one representing technical inefficiency (the error component model, Aigner, Lovell, and Schmidt 1977), or by allowing for variable intercepts (the fixed effect model, Evans and others 2000). While this approach takes care of potential bias introduced by extreme observations, it potentially introduces other bias by imposing a particular functional form on the frontier. In the literature, both methods are commonly used. To provide some understanding of the principles underlying both approaches, as well as their differences, we briefly present two common deterministic and two stochastic methods.

One common deterministic method to establish the production frontier is the Free Disposal Hull (FDH) approach. In this approach, a piece-wise linear “envelope” is constructed connecting the outer points on the surface such that all observed data points are either on the frontier or below it. Empirical applications include: Deprins, Simar, and Tulkens (1984), to study the efficiency of Belgian retail banking; Fakin and de Crombrugghe (1997), to assess the efficiency of government spending in OECD member countries; and Gupta and others (1997), to evaluate the efficiency of government expenditure on education and health. The basic principle is illustrated in figure D.1 using a simple one-input one-output case. All points on the frontier are considered efficient. Efficiency of the other points can be calculated by estimating the relative vertical distance to the frontier. Derivation of the efficiency measures is more complicated in case of multiple inputs and outputs, and we refer to Tulkens (1993) for a more detailed discussion.

Unlike the other techniques discussed below, the FDH technique does not impose many restrictions on the production technology. This is its main advantage. Yet it also has several disadvantages. First, to the extent that multiple observations find themselves on the frontier, the FDH technique only permits a partial ranking, as observations on the frontier are equally efficient. Second, no distinction is made between random factors that might affect production (for example, rainfall in agricultural production) and actual inefficiency. The analysis is not robust to outliers or extreme data points.

Figure D.1. A Free Disposal Hull Production Frontier



Data Envelopment Analysis (DEA) is another common nonparametric deterministic approach to estimating production frontiers. In this approach, linear programming methods are used to construct a linear envelope to bind the data relative to which efficiency measures can be calculated. Multiple inputs and outputs can be considered. A comprehensive discussion of this technique and its differences from FDH can be found in Charnes, Cooper, and Rhodes (1978); Coelli (1990); and Tulkens and Vanden Eeckhaut (1995). The frontier implied by this approach is illustrated in figure D.2 for the simple one-input one-output case.

In contrast to FDH analysis, DEA assumes that the production possibility set is convex, implying that linear combinations of best-observed production results lie on or below the production possibility frontier. Consequently, point a, which was efficient under the FDH approach, is no longer efficient according to DEA. Fewer observations lie on the frontier, which enhances the number of observations that can be completely ranked. Yet the approach remains deterministic and true inefficiency can still not be separated from random variation.

The most common stochastic approach for estimating production frontiers, often referred to as the “error components model,” goes back to Aigner, Lovell, and Schmidt (1977). In this approach, a parametric production function is estimated and the specification of this function explicitly accounts for the fact that deviations from the maximum observed output may also be due to factors unrelated to inefficiency. To address this problem, it is assumed that the error term has two components: one representing random errors and another representing technical inefficiency.

Denote by Y_{jt} output of unit j at time t , by X_{jt} a vector of inputs, by v_{jt} an error term with mean zero, and u_j a random variable representing unit-specific (technical) inefficiency. The latter error term is constrained to be non-negative ($u_j \geq 0$). The error component model can be represented mathematically as:

$$Y_{jt} = \alpha + X'_{jt} \beta + v_{jt} - u_j \quad (1)$$

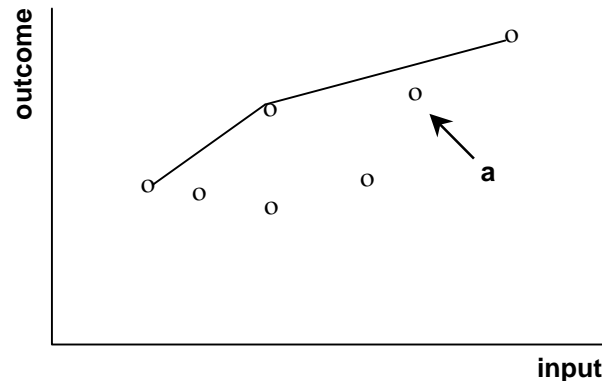
Technical efficiency can be derived as the ratio of the expected value of observed output for country j to the expected value of the output when $u_j = 0$. Or,

$$TE_j = E(Y_{jt} | u_j, X_{jt}) / E(Y_{jt} | u_j=0, X_{jt}) \quad (2)$$

The denominator represents the production frontier, because the inefficiency term u_j is zero. Coefficients in equation (1) can be estimated using maximum likelihood methods. It is further assumed that v and u can be separated (note that it is $v-u$ which is observed), and one must also make certain assumptions regarding the distribution of u . As the u 's are constrained to be non-negative, they are typically assumed to be distributed half-normal or truncated-normal. Efficiency rankings appear to be fairly robust to the choice of the distribution (Kumbhakar and Lovell 2000). Finally, note that the production frontier, estimated this way, does not necessarily encompass all observations. While the expected output value must lie on or below the envelope, the actual output value may well lie above it if the random error for that observation is large enough.

Another stochastic method for estimating production frontiers is the fixed effect approach, which is in essence a variable intercept model. This is the approach used by Evans and others (2000) to estimate

Figure D.2. A Data Envelopment Analysis Production Frontier



the comparative efficiency of national health systems in producing health (see box 4.5 in chapter 4). The production process presented in equation (1) can be rewritten as:

$$Y_{jt} = \alpha_j + X'_{jt} \beta + v_{jt} \quad (3)$$

where $\alpha_j = \alpha - u_j$ is an observation-specific intercept that can be estimated using the fixed effects approach. The frontier intercept is α and the observation-specific inefficiencies are represented by u_j . To ensure that u_j is non-negative, the observation with the largest α_j (denoted α_m) is taken as reference and is deemed fully efficient. Thus α_j equals $\alpha_m - u_j$. Technical efficiency can be calculated as in equation (2).

Annex E

Strengthening Statistical Systems: Technical Notes and Case Studies

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Technical Note E.1 The General Data Dissemination System

The Special Data Dissemination Standard (SDDS) was established in 1996 to guide countries that have, or that might seek, access to international capital markets in the dissemination of economic and financial data to the public. The General Data Dissemination System (GDDS) was established in 1997 to guide countries in the provision to the public of comprehensive, timely, accessible, and reliable economic, financial, and sociodemographic data.

Established by the International Monetary Fund (IMF), both the SDDS and the GDDS are expected to enhance the availability of timely and comprehensive statistics and, therefore, contribute to the pursuit of sound macroeconomic policies; the SDDS is also expected to contribute to the improved functioning of financial markets.

The SDDS, in taking a comprehensive view of the dissemination of economic and financial data, identifies four dimensions of data dissemination:

- the data—coverage, periodicity, and timeliness;
- access by the public;
- integrity of the disseminated data; and
- quality of the disseminated data.

For each of these dimensions, the SDDS prescribes two to four elements capable of being monitored—good practices that can be observed, or monitored, by the users of statistics.

The data dimension lists 17 data categories that provide coverage for the four sectors of the economy, and it prescribes the periodicity (or frequency) and timeliness with which data for these categories are to be disseminated. In recognition of differences in economic structures and institutional arrangements across countries, the SDDS provides flexibility. Certain categories are marked for dissemination on an "as relevant" basis. Furthermore, some data categories or components of data categories are identified as encouraged rather than prescribed. With respect to periodicity and timeliness, a subscribing member may exercise certain flexibility options while being considered in full observance of the SDDS.

The GDDS framework is built around the same four dimensions. However, it assumes that significant deficiencies may exist in the statistical system of a country, and its primary focus is on improvement of data quality and statistical practices. It is intended to provide guidance for the overall development of economic, financial, and sociodemographic data. The framework takes into account, across the broad range of countries, the diversity of their economies and the developmental requirements of many of their statistical systems.

The data dimension includes coverage, periodicity (the frequency of compilation), and timeliness (the speed of dissemination). The data dimension addresses the development, production, and dissemination of two interrelated classes of data: (1) comprehensive frameworks for each of the four economic and financial sectors (real, fiscal, financial, and external) and (2) indicators for each of these sectors, plus the sociodemographic area. Recommendations for good practices as to coverage, periodicity, and timeliness could be accessed for comprehensive frameworks and data categories and indicators can be found at <http://dsbb.imf.org/gddsindex.htm>.

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Technical Note E.3 The Core Welfare Indicators Questionnaire

The Core Welfare Indicators Questionnaire (CWIQ) is the latest in a series of survey instruments that have been developed by the World Bank and its partners to help provide policymakers with household-level information for policy formulation and evaluation.¹

By the mid-1990s, a reassessment of the survey instruments was undertaken in light of the experiences gained in their implementation. There was a need to develop an instrument that could provide policymakers with quicker feedback and at a more disaggregated level than was possible with the existing range of household surveys. Thus the CWIQ was developed.

E.3.1 Objectives of the CWIQ

The CWIQ is intended to monitor poverty and the effects of development policies, programs, and projects on living standards. To make useful impact assessments, researchers and policymakers require appropriate indicators of welfare status for different population subgroups. National-level indicators are usually insufficient for planning purposes, and traditional impact indicators that measure changes in welfare status, such as the percentage of the population below the poverty line and the number of malnourished children, are expensive and time consuming to collect. While the periodic collection of such impact indicators is necessary, the CWIQ is intended to be applied frequently (possibly annually), so implementation time needs to be short. The CWIQ employs simple indicators to ultimately identify who is and who is not benefiting from various actions designed to improve the social and economic status of the poor.

E.3.2 Key Features of the CWIQ Survey

- National annual survey that is quick and easy to implement
- Rapid monitoring of key indicators for different population subgroups
- Part of an overall monitoring package
- Short questionnaire and single visit
- Multiple choice questions for easy and rapid data collection
- Scannable data entry to eliminate data entry bottlenecks
- Complete validation specifications and programs
- Standard tabulation plan and programs
- Employs as large a sample as feasible, given national statistical resource constraints and the need for rapid results

E.3.3 CWIQ Indicators

The indicators available through the CWIQ survey are of two types: (1) indicators of standards of living for the household and household members and (2) indicators of access, utilization, and satisfaction with community and other basic services amenities such as education and health. The key indicators include the following:

Indicators of living standards:

- Percentage of households reporting diminishing or increasing land assets
- Home ownership
- Type of home construction
- Percentage of households using wood, charcoal, or crop residues for cooking fuel
- Type of fuel used for lighting
- Ownership of selected household goods
- Mean number of household members

- Percentage of literate adults
- Percentage of persons sick or injured in previous four weeks
- Type of sickness or injury
- Percentage of children who are malnourished

Access, utilization, and satisfaction indicators:

- Access to clean water
- Access to primary and secondary schools
- Access to local market and public transport
- Net primary and secondary enrollment rates (by gender)
- Satisfaction with school services
- Percentage of children who do not attend school
- Reasons for not attending school
- Primary and secondary dropout rates (by gender)
- Access to medical services
- Use of medical services by persons sick or injured in previous four weeks
- Satisfaction with local health service
- Reasons for nonuse of medical services
- Percentage of women with a recent birth who received prenatal care
- Percentage of births delivered in a health facility
- Percentage of births supervised by a formally trained health worker
- Percentage of children who have participated in nutrition programs
- Percentage of children who have participated in weigh-in programs
- Percentage of persons currently employed
- Percentage of persons underemployed
- Percentage of persons unemployed during the previous week

Technical Note E.4 The Living Standards Measurement Study

The Living Standards Measurement Study² (LSMS) survey was established by the World Bank in 1980 to explore ways of improving the type and quality of household data collected by government statistical offices in developing countries. The LSMS aims to develop new methods for monitoring progress in raising levels of living, identify the consequences for households of current and proposed government policies, and improve communications between survey statisticians, analysts, and policymakers. Although the first few LSMS surveys followed a very similar format, as time passed and countries with different circumstances were added, substantial variety arose in the surveys across the different countries.

Two characteristics distinguish LSMS surveys: (1) multitopic questionnaires designed to study multiple aspects of household welfare and behavior and (2) extensive quality control features.

E.4.1 Multitopic Questionnaires

The main objective of LSMS surveys is to collect household data that can be used to assess household welfare, to understand household behavior, and to evaluate the effect of various government policies on the living conditions of the population. Accordingly, LSMS surveys collect data on many dimensions of household well-being, including consumption, income, savings, employment, health, education, fertility, nutrition, housing, and migration.

Three different kinds of questionnaires are normally used:

- The household questionnaire, which collects detailed information on the household members
- The community characteristics questionnaire, in which key community leaders and groups are asked about community infrastructure

- 3 The price questionnaire, in which market vendors are asked about prices. A fourth type of questionnaire, a school or health facility questionnaire, is sometimes used as well.

E.4.2 Extensive Quality Control Procedures

In order to minimize errors and delays in data processing, LSMS surveys are implemented using procedures that resolve most inconsistencies in the data before they reach the central statistical office. The following elements are distinctive in LSMS surveys, as opposed to those that LSMS surveys share with other good household surveys.

Questionnaire format. Several features of the questionnaire help to minimize interviewer error. For example, the questionnaire makes extensive use of screening questions so that the skip pattern is automatic, requiring virtually no decisionmaking by the interviewer. All of the questions are written out exactly as they are to be asked. Almost all potential responses to each question are marked on the questionnaire with a numbered code, and the interviewer writes only the response code on the questionnaire. Furthermore, the household questionnaire is designed so that the data can be entered into the computer straight from the completed questionnaire, eliminating the additional step of transcribing codes onto data entry sheets. An important element in the design of the LSMS questionnaire is that changes can be made to the questionnaire quickly and easily, either in response to the field test or over the years as policy needs change.

Organization of fieldwork. Fieldwork and data entry are highly decentralized in full-fledged LSMS surveys. The core work is performed by a team consisting of a supervisor, two interviewers, an anthropometrist, a data entry operator, and a driver. The team is based in a regional office equipped with a personal computer for data entry.

The standard fieldwork plan is as follows:

- 3 During round one, which takes a week in each village, two interviewers each administer the household questionnaire to eight households, while the supervisor administers the community and price questionnaires. Following round one in the field, the half-completed questionnaires are taken to the field office, where the data entry operator records the data on computer diskettes. The data entry program prints out the data recorded for each household, highlighting any errors or inconsistencies.
- 3 During round two of the interview, the team returns to the field to complete the second half of the questionnaire and to correct errors found in round one. Errors detected after round two are corrected only if they are data entry errors.
- 3 In the final step, the diskettes of data are sent from the field office to the national office to be reviewed by the data management specialist and consolidated with data from the other field teams.

Sample size. LSMS surveys tend to use small samples, often on the order of 1,600 to 3,200 households and rarely more than 5,000 households. Although larger samples would have smaller sampling error, it was judged by survey designers that nonsampling errors would increase more than concomitantly. Having a small number of teams also economizes on the cost of supplying them with vehicles and computers.

Data management. The LSMS surveys use personal computers in the field, where all the stages of data collection, data entry, and editing are carried out. This dramatically reduces the length of time between when the fieldwork ends and when the data become available for analysis. It also improves the quality of the data. The use of commercially available packages for this purpose has now become widespread, although even today the thoroughness of the checks in the full-fledged LSMS surveys is probably well above average.

Resulting data quality. When all of these procedures are scrupulously followed, data quality can be very high. These datasets were subjected to data entry checks and corrections in the field as explained above but were not subjected to any further "cleaning" in the central office. Missing data in both surveys are extremely rare.

Turnaround times. The LSMS is noted for the short turnaround time between the end of data collection and the availability of data for analysis. Theoretically, this is a matter of only a week or two, and in several countries basic abstracts have been completed within two to six months of the end of fieldwork. This speed has contributed markedly to the relevance of the data to policymaking. The quick turnaround between the completion of fieldwork and the availability of data for analysis is largely due to the

precoding in the questionnaire, the extensive quality control during the fieldwork, and the decentralized, concurrent data entry.

Technical Note E.5 The Use of Administrative Data

The use of administrative data is being examined increasingly by national statistical offices (NSOs) throughout the world, not least because of continuing budgetary pressures to find less expensive ways of collecting data. Administrative data are normally regarded as information that accrues to agencies, usually in their capacity as regulators or monitors of certain activities and functions of government. Almost every government activity generates some form of administrative data; the challenge is to identify and evaluate these sources. It is also worth noting that the choice between using administrative data and setting up a new data collection is not always an either/or one: in many cases there is scope for using data from one type of source to supplement data from another source.

Administrative data are generally not collected in their own right, but as a by-product of other functions of an agency. For example, a system recording the attendance of children at school generally asks for and records details about the age and sex of the child, as well as other information related to academic performance. These are extremely useful data items for generating education statistics and for monitoring both school enrollment as well as performance. Why then should the NSO establish an expensive collection to collect data for this purpose?

It is inevitable that there will always be some administrative by-product data in systems outside the national statistical system (NSS) that are not being fully used. Even if agencies always consulted fully with their NSS before undertaking any systems development—and they often do not—there will always be items of potential interest to the NSS that are not really in a usable form. This frequently cannot be fully resolved because of the tradeoff between (a) the resource constraints of the NSS and (b) the specialist needs of other agencies. National statistical systems simply cannot afford to fund the cost of building their requirements into systems developed for other purposes. At best what can be sought is consultation and cooperation to minimize costs and maximize the value of data that do exist.

E.5.1 The Advantages of Using Administrative Data

The use of administrative data for statistical purposes has increased substantially in recent times. The Nordic countries have taken the lead in this regard, since administrative data have been included in censuses there for a number of years.

Censuses and household surveys are expensive undertakings in both industrial and developing countries. Administrative sources may well cover many more aspects of poverty than censuses or surveys. They are also a much cheaper source of data; for example, a recent study in Denmark estimated that data from administrative sources cost about one-seventh as the same information derived from a population census.

While many statistical systems have strong traditions in designing and carrying out surveys, there is often less experience in exploring the use of administrative data sources. Some of the key advantages of administrative data include the following:

- Administrative data can be very relevant, since they are normally collected to meet a specific need.
- They are usually timely and may well be collected on a frequent basis in contrast to surveys, which may only be carried out infrequently and take a long time to process and analyze.
- The data are often complete; they cover the whole population reached by the administrative process.
- There may well be checks on data accuracy, particularly in relation to financial records that are subject to independent audit.
- The cost of data collection is much less than for survey data.
- The response rate is usually high and the response burden is lessened.

E.5.2 The Challenges Associated with Using Administrative Data

The most important challenge is whether the information collected is fit for statistical purposes. For example, in the United Kingdom unemployment data have been collected by recording details of people who register to receive unemployment benefits. However, this definition is not the same as the ILO definition of unemployment, since there are many people actively looking for work but who are not qualified to receive benefits. In addition, political changes to the definition of who is entitled to receive benefits will change the numbers registered as unemployed even when there has been no change in economic conditions. Statistical data derived from service delivery records, for example, in areas such as health and education only cover those people who receive the service. From the point of view of the Poverty Reduction Strategy Paper (PRSP), it may be just as important to have data on those who are not covered.

Other problems with the use of administrative data include the following:

- A lack of control of data quality: the data may change in response to changes in administrative procedures regardless of the underlying indicator examined. Some sensitive datasets may well be subject to political influence.
- Technical problems of accessing and using the data.
- Possible legal barriers to sharing of data for some datasets.
- Problems of comparability between datasets; for example, in relation to base years, geographical disaggregations, and other variables.
- Limited coverage of the administrative system. For example, a birth and death registration system may operate only in the main cities, or a business licensing system may exclude small firms with just a few employees. Typically the coverage of administrative systems is better in urban areas and less complete in more remote rural areas, where poverty is more of a problem.
- Flexibility is an issue of concern.

Table E.1 shows the advantages and disadvantages of using administrative data.

E.5.3 Opportunities for Using Administrative Data

Exploring the use of administrative data for poverty monitoring requires a process of regular consultation between statisticians and the agencies responsible for the administration. A need exists to integrate statistical systems and to use administrative data in innovative ways. Areas that need to be discussed include the use of coding systems and common geographical regions and areas and training for staff to improve data quality.

Table E.1. Administrative Data Compared with Specific NSS Data Systems

Administrative data		Specific NSS data systems	
+	No/minimal cost to NSO	-	Full cost borne by central statistical office (CSO) (except where there are partner agencies—rare)
+	Can be very secure in terms of longevity, e.g., company taxation, customs, motor vehicle registrations	+	Longevity determined largely by NSO (but increasingly subject to funding support through the annual budget process)
-	Can be vulnerable to changes in policy, e.g., abolition of certain controls	+	Changes to collection determined by NSO
+	May be associated with very strict editing and controls, e.g., revenue functions like tax and customs	+/-	Editing under control of NSO, but this can be resource intensive
-	Confidentiality – individual records may not be available to NSO for edit or query	+	All records available to NSO
+/-	Sometimes very strict reporting requirements, e.g., tax, but others can be unreliable despite apparent strength (e.g., building approvals)	+	Can impose compulsory response under statistics legislation – but does this affect data quality?
-	Data items set up for non-NSO purposes	+	Data items, definitions, scope determined by NSO
-	Control by host agency, NSO cannot impose changes	+	NSO has control
+	Coverage – normally 100% of target population, e.g., tax, customs	+/-	NSO can aim for 100% coverage, but costs often force use of samples

Table E.1. Administrative Data Compared with Specific NSS Data Systems (continued)

Administrative data		Specific NSS data systems	
+/-	Data accessibility – many are electronic but some require extensive manual transfer	-/+	NSO can determine nature of system processing, but data processing is often burdensome
-	Flexibility – it can be difficult to persuade other agencies to change to meet NSO needs	+	NSO can vary items and procedures at its own discretion
+	Minimizes respondent burden	-	Absolute increase in respondent burden
+	Can be benefits to host agency from NSO feedback on the data quality, specialized analyses		
+	Can lead to efficiencies in sharing specialist skills and training		
+	Establishes NSO links to other agency—maximizes chance of NSO involvement in future developments (can introduce changes at the margin)		

Source: From various resources developed by authors.

Areas that are likely to be particularly important for the PRSP include the following:

- ⊃ health statistics derived from the records kept by health centers, clinics, and hospitals;
- ⊃ education statistics collected from schools and other educational establishments;
- ⊃ records maintained by agencies administering social safety net programs;
- ⊃ vital event registration;
- ⊃ records maintained by agencies responsible for water and power distribution; and
- ⊃ business licensing.

Technical Note E.6 Linking Participatory Poverty Assessments and Quantitative Data

Sole reliance on either only the quantitative approach or only the qualitative approach in measuring and analyzing poverty is often likely to be less desirable than combining the two approaches. This is because there are limits to a purely quantitative approach as well as a purely qualitative approach to poverty measurement and analysis. Each approach has an appropriate time and place, but in most cases both approaches will generally be required to address different aspects of a problem and to answer questions that the other approach cannot answer as well or cannot answer at all. The need to combine the two approaches in analytical work on poverty cannot be overemphasized.

E.6.1 Combining the Quantitative and Qualitative Approaches

There are three key ways to combine the quantitative and qualitative approaches:

1. integrating methodologies;
2. confirming, refuting, enriching, and explaining the findings of one approach with those of the other; and
3. merging the findings of the two approaches into one set of policy recommendations.

Some ways in which the integration of methodologies can be achieved are the following:

- ⊃ using quantitative survey data to determine the individuals/communities to be studied through the qualitative approach;
- ⊃ using the quantitative survey to design the interview guide of the qualitative survey;
- ⊃ using qualitative work to determine stratification of the quantitative sample;
- ⊃ using qualitative work to determine the design of the quantitative survey questionnaire;
- ⊃ using qualitative work to pretest the quantitative survey questionnaire; and
- ⊃ using qualitative analyses to refine the poverty index.

Confirming or refuting is achieved by verifying quantitative results through the qualitative approach. *Enriching* is achieved by using qualitative work to identify issues or obtain information on variables not obtained by quantitative surveys. *Examining* refers to generating hypotheses from qualitative work for testing through the quantitative approach. *Explaining* involves using qualitative work to understand unanticipated results from quantitative data. In principle, each of these mechanisms may operate in either direction, from qualitative to quantitative approaches or vice versa. *Merging* involves analyzing the information provided both by the quantitative approach as well as the qualitative approach to derive one set of policy recommendations. The quantitative and qualitative approaches are being increasingly combined in analytical work on poverty, but there remains scope for further strengthening the links between them. Some characteristics of quantitative and qualitative approaches are provided in table E.2.

Table E.2. Characteristics of the Quantitative and Qualitative Approach

Characteristics	Quantitative approach	Qualitative approach
Definition of poverty	People considered poor if their standard of living falls below the poverty line, i.e., the amount of associated income (or consumption) with the minimum acceptable level of nutrition and other necessities of everyday life	Poor people define what poverty means, broader definition of deprivation resulting from a range of factors (not simply lack of income/consumption) adopted
Philosophical underpinning	Positivist paradigm: existence of one reality	Rejection of the positivist paradigm: there are multiple forms of reality and, therefore, it is senseless to try to identify only one
Determination of poverty	Determination by external surveyors	Determination through an interactive internal-external process involving facilitator and participants
Nature of variables for which data are collected	Quantifiable, e.g., household expenditures on food, unemployment rate	Perception variables reflecting attitudes, preferences, and priorities; the number of similar responses with respect to each variable can be added up, but the variables themselves cannot be quantified
Interview format	Structured, formal, predesigned questionnaire	Open ended, semistructured, interactive
Sampling	Probability sampling	Purposive sampling
Sampling error	Less sampling error but prone to more nonsampling error	More sampling error but tends to reduce nonsampling error
Sample size	Usually 2,000–8,000 households	From 1-1,000 individuals or communities
Geographic coverage	Wide: typically, national	Small: typically, a few regions or selected communities
Average time	LSMS: Roughly two and a half years for the highest-quality survey in a country where year-round coverage is desired (one year for planning; one year for field work; six months for initial analytic phase of producing an abstract documenting the data, and setting up other analyses). The planning process can be abridged if (a) capacity is very high or (b) there is willingness to compromise on quality. Similarly, the interviewing period can be reduced from one year to something like three months if the ability to cover the whole year with analytic questions is sacrificed. The majority of the surveys compromise on one aspect or the other, so the actual time is almost always lower. Priority Survey: 7 months	Six to nine months for average-sized PRA component of poverty assessment; roughly four months for average-size beneficiary assessment. In some situations, the qualitative approach can be time consuming because of the lead time required for training interviewers and the lengthy process of classifying qualitative findings to analytical categories.

Table E.2. Characteristics of the Quantitative and Qualitative Approach (continued)

<i>Characteristics</i>	<i>Quantitative approach</i>	<i>Qualitative approach</i>
Average cost	LSMS: Roughly US\$500,000 to \$1,000,000 on average; some part of this is often provided in kind by government and international agency staff so the actual cost to the LSMS conducting agency may be lower. Priority survey: US\$200,000-US\$400,000 (if nationally representative)	Roughly US\$50,000 to US\$150,000 for (average size) qualitative component of poverty assessment. The Focused Area Study Technique (FAST), which was used to review usage of health and education facilities in Tanzania as an input to the social sector review, was conducted at a cost of about US\$52,000 and took about 15 weeks to complete.
Statistical analysis	Statistical analysis forms an important part of approach	Statistical analysis makes little or no use of it. Triangulation is employed, i.e., simultaneous use of several different sources and means of gathering and interpreting information. The expectation is that bits and pieces of information gathered from different sources will yield a pattern of responses. Systematic content analysis and gradual aggregation of data based on themes from the household, group, village, district, and national levels may also be used

Adapted from Saniya Carvalho and Howard White. "Combining the Quantitative and Qualitative Approaches to Poverty Measurement and Analysis." World Bank, Technical Paper No. 366, Washington, D.C., May 1997.

Technical Note E.7 Millennium Development Goals and Indicators

<i>Goals</i>	<i>Indicators</i>
Economic well-being	
Reducing extreme poverty The proportion of people living in extreme poverty in developing countries should be reduced by at least one-half by 2015.	<ol style="list-style-type: none"> 1. Incidence of extreme poverty: population below \$1 per day 2. Poverty gap ratio: incidence times depth of poverty 3. Inequality: poorest fifth's share of national consumption 4. Child malnutrition: prevalence of underweight children under five
Social development	
Universal primary education There should be universal primary education in all countries by 2015.	<ol style="list-style-type: none"> 5. Net enrollment in primary education 6. Completion of fourth grade of primary education 7. Literacy rate of 15- to 24-year-olds
Gender equality Progress toward gender equality and the empowerment of women should be demonstrated by eliminating gender disparity in primary and secondary education by 2005.	<ol style="list-style-type: none"> 8. Ratio of girls to boys in primary and secondary education 9. Ratio of literate females to males (15- to 24-year-olds)
Infant and child mortality The death rates for infants and children under the age of five years should be reduced in each developing country by two-thirds of the 1990 level by 2015.	<ol style="list-style-type: none"> 10. Infant mortality rate 11. Under-five mortality rate
Maternal mortality The rate of maternal mortality should be reduced by three-fourths between 1990 and 2015.	<ol style="list-style-type: none"> 12. Maternal mortality ratio 13. Births attended by skilled health personnel
Reproductive health Access should be available through the primary health care system to reproductive health services for all individuals of appropriate ages, no later than the year 2015.	<ol style="list-style-type: none"> 14. Contraceptive prevalence rate 15. HIV prevalence in 15- to 24-year-old pregnant women¹

Goals	Indicators
Environmental sustainability and regeneration	
Environment² There should be a current national strategy for sustainable development, in the process of implementation, in every country by 2005, so as to ensure that current trends in the loss of environmental resources are effectively reversed at both global and national levels by 2015.	16. Countries with effective processes for sustainable development ³ 17. Population with [sustainable] access to safe water ⁴ 18. Forest area as a percentage of national surface area 19. Biodiversity: land area protected ⁵ 20. Energy efficiency: GDP per unit of energy use 21. Carbon dioxide emissions
General indicators	
Other selected indicators of development For reference: population, gross national product	GNP per capita Adult literacy rate Total fertility rate Life expectancy at birth Aid as percentage of GNP External debt as percentage of GNP Investment as percentage of GDP Trade as percentage of GDP

Notes: This list is neither exclusive nor comprehensive. It covers goals selected from the series of U.N. conferences held in the 1990s and does not imply any diminished commitment to other goals accepted by the international community, at international conferences or elsewhere.

Like the goals, the indicators are interrelated and should be seen as a whole. They constitute a core set reflecting key aspects of economic and social well-being and environmental sustainability. Thus some indicators address more than one goal but for brevity are shown only once. For example, while water is an environmental resource, access to it directly affects the quality of women's lives and the health of their children. In addition to indicators related to the goals, the set includes some general indicators of development.

The indicators are disaggregated by sex where relevant to measure the extent of gender inequality. This global set covers issues relevant to each country in the world. It does not cover issues that affect only some regions or ecological areas. These should be covered in national indicator sets. Where possible and appropriate, countries should also disaggregate indicators to cover subnational groupings such as urban and rural, income groups, and administrative areas.

1. Until satisfactory data coverage is achieved on this indicator, the prevalence of HIV infection in all adults will be used.
2. In addition to the six indicators for each country, two indicators of global environmental resources will be included when presenting global totals: *ozone depletion* and the *accumulation of global warming gases in the atmosphere*.
3. The DAC Working Party on Environment and Development is currently developing guidelines on how to generate national processes for sustainable development. This work will lead to improvements in this indicator to assess the comprehensiveness of the process and the vigor of implementation. Strategies will need to include references to localized environmental issues, such as *air quality, desertification, marine quality (for example, loss of mangrove areas/coral reefs), sanitation, and sustainability of the use of water resources*.
4. It is proposed to develop a measure of sustainability of access to further improve this measure.
5. Biodiversity is a global issue. It is intended to improve the indicator to score the importance of the areas protected and level of protection in force.

Technical Note E.8 Recommendation for Poverty-Related Indicators

Real sector				
Data categories	Core indicators	Encouraged extensions	Periodicity^a	Timeliness
National accounts aggregates	GDP (nominal and real)	Gross national income, capital formation, saving	Annual (quarterly encouraged)	6-9 months
Production index	Manufacturing or industrial Primary commodity, agricultural, or other indices, as relevant		Monthly As relevant	6 weeks - 3 months for all indices
Price indices	Consumer price index	Producer price index	Monthly	1-2 months
Labor market indicators	Employment, unemployment, and wages/earnings, as relevant		Annual ^b	6-9 months ^b

Fiscal sector				
<i>Data categories</i>	<i>Core indicators</i>	<i>Encouraged extensions</i>	<i>Periodicity^a</i>	<i>Timeliness</i>
Central government budgetary aggregates	Revenue, expenditure, balance, and financing with breakdowns (debt holder, instrument, currency), as relevant	Interest payments	Quarterly	1 quarter
Central government debt	Domestic debt and foreign debt, as relevant, with appropriate breakdowns (currency, maturity, debt holder, instrument), as relevant	Government-guaranteed debt	Annual (quarterly encouraged)	1-2 quarters
Financial sector				
<i>Data categories</i>	<i>Core indicators</i>	<i>Encouraged extensions</i>	<i>Periodicity^a</i>	<i>Timeliness</i>
Broad money and credit aggregates	Net external position, domestic credit, broad or narrow money		Monthly	1-3 months
Central bank aggregates	Reserve money		Monthly	1-2 months
Interest rates	Short- and long-term government security rates, policy variable rate	Money or interbank market rates and a range of deposit and lending rates	Monthly	c
Stock market		Share price index, as relevant	Monthly	
External sector				
<i>Data categories</i>	<i>Core indicators</i>	<i>Encouraged extensions</i>	<i>Periodicity^a</i>	<i>Timeliness</i>
Balance of payments aggregates	Imports and exports of goods and services, current account balance, reserves, overall balance		Annual (quarterly strongly encouraged)	6 months
External debt and debt service	Public and publicly guaranteed external debt outstanding (with maturity breakdown)		Quarterly	1-2 quarters
	Public and publicly guaranteed debt service schedule		Twice yearly (with data for 4 quarters and 2 semesters ahead)	3-6 months
		Private external debt not publicly guaranteed	Annual	6-9 months
International reserves	Gross official reserves denominated in U.S. dollars	Reserve related liabilities	Monthly	1-4 weeks
Merchandise trade	Total exports and total imports	Major commodity breakdowns with longer time lapse	Monthly	8 weeks-3 months
Exchange rates	Spot rates		Daily	c
Sociodemographic data				
<i>Data categories</i>	<i>Core indicators</i>	<i>Encouraged extensions</i>	<i>Periodicity^a</i>	<i>Timeliness</i>
Population	<u>Population characteristics</u> Size and composition of the population by standard enumeration units, derived from census, surveys, or vital registration system <u>Dynamics of growth</u> Vital statistic: births, deaths, and migration	Disaggregation of population and vital statistics data by age, sex, and geographic units, as appropriate. Reporting of mortality rates, crude birth rate, fertility rate, and life expectancy	Annual (census every 10 years)	3-6 months for annual updates 9-12 months for census

Sociodemographic data (continued)				
Data categories	Core indicators	Encouraged extensions	Periodicity^a	Timeliness
Health	<u>Inputs</u> Measures of current financial, human, and physical resources available to public and private (if significant) health system, including public expenditures on health services	Private (household) expenditures on health services	Annual	3-6 months following end of reference period
	Capacity of health care facilities by location and type of facility, and the number of trained personnel by location and certification	Disaggregation of data by subnational or regional units, as appropriate Measures of the responsiveness of the health system to nonhealth aspects of service delivery (for example, waiting time for service, quality of facilities, and client perceptions of the quality of service).		
	<u>Process (service delivery)</u> Measures describing the number of clients served and type of care provided by public and private care providers, including inpatient, outpatient, and preventative care; population served by public health services such as immunizations, sanitation services, and improved water supply.	Disaggregation of data by subnational or regional units, as appropriate Comprehensive assessment of the burden of disease		
Education	<u>Outcomes</u> Statistics on mortality and morbidity, including mortality by cause and the incidence of disease by location and patient characteristics. May also record behaviors of the population, such as the use of contraceptives and consumption of cigarettes and alcohol.		Annual	6-12 months following beginning of school year.
	<u>Inputs</u> Measures of current financial, human, and physical resources available to public and private (if significant) educational institutions, recorded by level of education or type of program.	Characteristics of teaching staff, including training, experience, and terms of employment (full or part time) Expenditures by households on education (including fees and other expenses for public or private education)		
	<u>Process</u> Measures of student progress through school, such as enrollment, dropout, and repetition rates, recorded by level of education and sex of students	Disaggregation of data by subnational or regional units, as appropriate Calculation of net enrollment rates (by grade) Disaggregation of data by subnational or regional units, as appropriate		
	<u>Outcomes</u> Educational attainment measured by progress through school, level of educational attainment, or scores on standardized achievement exams	Measures of literacy and numeracy in the population, by age group and sex		

Sociodemographic data (continued)				
Data categories	Core indicators	Encouraged extensions	Periodicity^a	Timeliness
Poverty	<u>Income poverty</u> Number and proportion of people or households with less than minimum standard of income or consumption; valuation of minimum consumption bundle. <u>Other poverty measures</u> Measures of deprivation or insecurity used to identify the population living in poverty, such as evidence of malnutrition, endemic diseases, educational achievement, and lack of access to basic services	Measures of the distribution of household or per capita income or consumption. Separate poverty estimates for urban and rural populations or for major regions, states, or provinces. Disaggregation of data by subnational or regional units, as appropriate	3-5 years	6-12 months following the survey

- a. The GDDS should be viewed as encouraging improvements over time in the periodicity and timeliness of data dissemination that are consistent with improvements in data quality. Objectives for timeliness are set out in terms of ranges of time in recognition of the diversity of countries covered by the GDDS.
- b. Periodicity and timeliness for labor indicators are recommended after consultation with the Bureau of Statistics of the International Labour Office.
- c. Dissemination as part of a high-frequency (for example, monthly) publication.

Technical Note E.9 Fundamental Principles of Official Statistics

Trust of the public in official statistical information depends to a large extent on respect for the fundamental values and principles that are the basis of any society that seeks to understand itself and to respect the rights of its members.

The quality of official statistics and, thus, the quality of the information available to the government, the economy, and the public depends largely on the cooperation of citizens, enterprises, and other respondents in providing appropriate and reliable data needed for necessary statistical compilations and on the cooperation between users and producers of statistics in order to meet users' needs.

The following Fundamental Principles of Official Statistics were adopted at the Special Session of the United Nations Statistical Commission in 1994:

1. Official statistics provide an indispensable element in the information system of a democratic society, serving the government, the economy, and the public with data about the economic, demographic, social, and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honor citizens' entitlement to public information.
2. To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage, and presentation of statistical data.
3. To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods, and procedures of the statistics.
4. The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.
5. Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs, and the burden on respondents.
6. Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.
7. The laws, regulations, and measures under which the statistical systems operate are to be made public.
8. Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

9. The use by statistical agencies in each country of international concepts, classifications, and methods promotes the consistency and efficiency of statistical systems at all official levels.
10. Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.

Case Studies

Case Study E.1 Involving Statisticians in PRSP Preparation

E.1.1 The PRSP Preparation Process

While the arrangements governments put in place to manage the PRSP preparation and to monitor implementation vary from country to country, they often have a number of common components. These include the following:

- 3 An overall political process, often a cabinet committee or a committee of ministers, chaired by the minister with overall responsibility (for example, Albania, Bolivia, Guinea Bissau, Guyana, Kenya, Moldova, Uganda, and Yemen);
- 3 A high-level technical committee that mirrors the political process and will be made up of permanent heads of ministries and other agencies (for example, Cambodia, Cameroon, Chad, Georgia, and Rwanda);
- 3 A technical secretariat that may either be a specially formed unit or perhaps an existing unit in the responsible ministry; and
- 3 Specialist working groups that focus on different aspects of the PRSP, one of which may well be monitoring and evaluation.

E.1.2 Monitoring and Evaluation

In many countries a number of different agencies may be involved in different aspects of monitoring and evaluation. Coordination of this work may be done through a committee or a working group (for example, Tanzania, Guinea Bissau, São Tome, and Principe), through the technical secretariat, (for example, Cambodia, Lesotho, and Madagascar), or perhaps by an existing agency (Kenya, Mali, and Yemen). Many countries distinguish between responsibility for data collection and analysis and use.

E.1.3 Involving statisticians

The managers of statistical agencies become involved in the PRSP process in a number of ways. In some cases they are members of the overall coordinating bodies, usually at the technical level, but elsewhere they act as advisors, providing information on demand. In many countries there are clear gaps in the desired indicator set and the involvement of statisticians at an early stage does appear to facilitate the preparation of statistical development plans.

Burkina Faso. In the course of implementing the national statistical information strategy drawn up in 1994, and with the help of development partners, the government has conducted several surveys with a view toward raising the quantity and quality of statistics available for users. Ongoing improvements in information output will be achieved by consolidating and strengthening already existing surveys and the data derived from routine management of government departments, such as the statistics produced by the Ministry of Basic Education and Literacy for school staff and infrastructure. Future efforts will also be geared to devising and conducting new surveys likely to improve knowledge of priority areas in the PRSP. This whole set of data-generating activities will feed a minimum statistical program to support the poverty reduction effort. Moreover, execution and impact indicators will become increasingly important in coming years. To that end, a unit will be set up specifically to coordinate the work needed to achieve the following:

- 3 Ensure the availability and reliability of pre-identified indicators.
- 3 Prepare the new indicators required to expand monitoring and evaluation of outcomes in all key program areas.
- 3 Provoke fresh thinking on optimal ways to distribute financing based on indicator values.
- 3 Finally, the appropriateness of creating a national poverty observatory will be studied in the course of 2000.

Cameroon. With a view toward (a) monitoring the execution of agreed-on actions, (b) measuring the results obtained and their impact on target groups, and (c) taking the corrective steps deemed necessary, the government intends to introduce appropriate statistical mechanisms in the area of poverty reduction. These should make it possible to produce timely and reliable indicators selected on the basis of the guidelines, orientations, and constraints identified in the strategy. The government has already begun discussions with the IMF, within the context of the general data dissemination system (GDDS) project, on a list of indicators that will be disseminated through that system's site.

The government intends to organize this approach in such a way as to ensure the production of indicators on the various dimensions of poverty, particularly monetary poverty and the living conditions and standards of the population. In the medium term, availability of the various indicators will be ensured through statistical gathering based on the results of the third general population census currently being prepared and on a set of surveys on household living conditions. Administrative sources will also be employed, providing annual indicators measuring progress in the supply of key social services.

As regards dissemination of the indicators produced, the government intends to set up sociodemographic databases and establish a Web site. In this context, and in cooperation with the United Nations Population Fund and the World Bank, work on introducing the sociodemographic database has begun, and a Web site will be created at the Directorate of Statistics and National Accounting during 2001.

The government intends to seek external assistance (technical and financial) in order to improve the production of statistics on a regular basis. The government will work to improve collaboration between the National Statistics Office and sectoral statistical services, particularly in social sectors. The National Statistical Council has already established a medium-term plan for the production of statistics. A three-year rolling implementation program has been set up, as a result of the plan, and will be launched in budget year 2000-01. This program attaches great importance to the compilation of monitoring indicators specifically designed to measure progress on poverty reduction.

Guyana. Program monitoring will involve a large number of institutions, including the State Planning Secretariat, Executive Implementation Unit, and the Bureau of Statistics, Social Impact Amelioration Program (SIMAP), Basic Needs Trust Fund (BNTF) and line ministries. A Program Coordinating Unit will be established. Monitoring will be structured on two main levels. First, monitoring of intermediate outputs will focus on progress in reducing income poverty, improving health, raising educational achievement, and enhancing the voice of the participation of the poor. Most of the information for such outcome monitoring will be drawn from (a) household surveys and repeated exercises under the Statistics Bureau, the Ministries of Health and Education, and the SPS; (b) public sector investment programs; and (c) input and output indicator statistics from the line ministries.

Secondly, there will be regular monitoring of the inputs required for action against poverty. This will involve the tracking of public expenditures on poverty-reducing activities. Such tracking will include periodic analysis of the benefit of public spending and of the effectiveness of sectors in using funds. In some instances, monitoring will also involve information on key inputs needed in sectors to deliver services effectively: teachers and books in education or drugs supplies in health care facilities. It will also include continued monitoring and public debate about the composition of expenditures.

Nongovernmental organizations (NGOs) will play a key role in the implementation of the poverty program, as public sector resources and implementation capacity is limited. In this context, government will support the creation of an NGO umbrella organization to coordinate NGO activities; the establishment of NGOs by village communities; and the involvement of neighborhood democratic councils in the planning and execution of programs.

Nicaragua. The government will evaluate the evolution of poverty and assess the poverty reduction strategy performance in reducing poverty, based on agreed-on targets and intermediate indicators. Parallel and complementarily to this monitoring and evaluation, the government will maintain surveillance of related macroeconomic indicators and compliance with agreed-on structural reforms.

The Technical Secretariat of the Presidency (SETEC) will lead the interinstitutional coordination effort. This effort will also require the strong support of civil society representatives and the donor community to build up capacities for a participatory and effective system of monitoring and evaluation. The monitoring and evaluation system will build upon the existing government structures and upon the available instruments to measure poverty and PRSP programs. The Bank of Nicaragua will track key macroeconomic variables, the Ministry of Finance will plan and monitor the government's budget, and SETEC will monitor the physical and financial performance of public investment, including programs financed through the supplementary social fund. The National Institute of Statistics and Census (INEC) will collect and process socioeconomic statistics.

Rwanda. The Interim PRSP and PRSP itself are likely to raise a substantial range of policy issues that need to be followed up. Responsibility needs to be allocated to specific institutions under the overall guidance of the National Program for Poverty Reduction. The Interministerial Committee will be supported by the Steering Committee and the Technical Committee of the program.

The MTEF process involves defining clear indicators of inputs and outputs for all areas of public expenditure. It is particularly important to define output indicators for the Priority Program Areas. The Budget Department of the Ministry of Economy and Finance (MINECOFIN) is working with all other ministries to develop a set of output measures, and a preliminary list was prepared. The monitoring of poverty outcomes will be coordinated by the Poverty Observatory under the National Program for Poverty Reduction. This unit has been recently established and is developing a set of measures of poverty that will be regularly monitored in addition to commissioning specific studies on poverty in Rwanda. This unit will work in very close cooperation with the Statistics Department of MINECOFIN, which publishes Rwanda Development Indicators annually, and with the Management Information Systems of line ministries.

Rwanda currently has a poor statistical base, because of the destruction of the statistical infrastructure during the war. In order to be able to set meaningful development targets and to monitor progress made over the years in reducing poverty and achieving sustainable growth, it is essential to be informed by accurate national statistics. The government is trying to rebuild the statistical system. Statistics are essential to plan and monitor the poverty reduction strategies and to successfully implement a development framework. The development of a statistical system requires the development of a prioritized program of national statistics, where different surveys are conducted regularly and can be compared over time.

Case Study E.2 Use of GDDS in PRSP

The goal of the GDDS is to assist countries to improve the quality of outputs of statistical systems. It accomplishes this objective by providing tools to facilitate the identification of needed changes in statistical systems, in particular through the design of statistical development plans. Development plans focus on viewing the statistical system as a whole. In this way, the task of establishing priorities such as monitoring and evaluating of progress in poverty reduction is simplified, and resource allocation becomes more effective.

The GDDS includes four categories of social and demographic data: population, education, health, and poverty. Although, not representing the full range of statistics that are relevant for setting or monitoring social policies, these categories represent important areas of statistical activity and the information produced is of great importance to the operation of governments, to the activities of nongovernmental and international organizations, and to the civil society in general.

The preparation of PRSPs in countries such as Bolivia, Cote d'Ivoire, Mauritania, and Uganda was greatly enhanced by using the GDDS framework.

Case Study E.3 The Structure of National Statistical Systems

A national statistical agency is a unit of the government whose principal function is the compilation and analysis of data and the dissemination of information for statistical purposes. A statistical agency may be labeled as a bureau, center, or office as long as it is recognized as a distinct entity.

There is no single way of structuring a national statistical agency to achieve these activities. Depending on the needs, resources, and size of the country, a statistical agency may be structured in a centralized or

decentralized way, or a combination of both. Below are some examples of centralized and decentralized systems.

The Central Statistical Bureau of Latvia (CSB) is an example of a small, centralized statistical system. On September 1, 1919, the cabinet of ministers of the Republic of Latvia established the State Statistical Office and adopted the interim regulations on its activity. A principle of strong centralization was laid at the basis of Latvia's statistics. In the subsequent years seven sections were established: demographic, agricultural, general, industrial, foreign trade, domestic trade, and price and labor statistics sections.

The Central Statistical Office (CSO) of the Latvia Soviet Socialist Republic established after World War II functioned within the structure of the corresponding organization of the U.S.S.R. Under the conditions of planned economy, the methodology of statistical works, the methods of data collection and processing were strongly centralized and regulated. After the retrieval of sovereignty, the Central Statistical Bureau of Latvia started to develop the statistical system on a new basis that was determined by the transition of the country to a market economy.

The CSB is a state administrative institution under the supervision of the Ministry of Economy, and it is responsible for the organization of the state statistical work in the Republic of Latvia. When performing its professional duties, it is still completely independent from any state power or administrative institution, political party, or movement.

The CSB's activity is regulated by the Law on State Statistics, which the Saeima adopted on November 6, 1997; by the CSB's regulations; by an annual state program of statistical information approved by the cabinet of ministers; as well as by other legislative acts. The basic task of the CSB is to establish a unified system of statistical information based on international standards and methodology.

The state statistical system is functionally centralized and territorially decentralized. The central office and local statistical offices comprise the structure of the CSB. There are local statistical offices in every administrative district and major towns. In 2000 the CSB system employed 390 people of which 56 percent were in the central office and 44 percent were in local statistical offices. Seven departments structurally compose the central office of the CSB. In addition to the departments there are four independent divisions not included in the structures of departments.

Another centralized example for a small country is the Mauritius Central Statistical Office. It is a division of the Ministry of Economic Development and Regional Cooperation.

The CSO was set up in 1948 and is the official organization responsible for collection, compilation, analysis, and dissemination of all official statistical data relating to all aspects of the economic and social activities of the country. The only fields that fall outside the purview of the CSO are the following: health and family planning, which is within the Ministry of Health; Fisheries, which is within the Fisheries Division of the Ministry of Agriculture; and Money, Banking, and Balance of Payments, which is handled by the Bank of Mauritius.

The CSO has a technical staff of about 160, of whom 25 are full-fledged professionals. Although the statistical system is centralized, statistical units have been established within different ministries and government departments so as to ensure an efficient service by keeping in close touch with data users in different fields. Currently, there are some 65 CSO staff deployed in statistical units located within 13 ministries or departments. Arrangements are also under way for the creation of statistical units in the Judicial Department and the Ministry of Environment.

The last example of a centralized system is Statistics Norway. It was established as a separate institution in 1876. Statistics Norway is administratively placed under the Ministry of Finance, and the work program and budget are decided upon by the Parliament. Statistics Norway has approximately 900 employees and a budget of 50 million euro, of which 25 percent is user-financed assignments. The Norwegian statistical system is very centralized, and all but a few official statistics are produced by Statistics Norway. The Statistics Act of 1907/1989 gives the legal framework of Statistics Norway's activities as a professional independent institution for the collection, production, and dissemination of official statistics.

The best example of a highly decentralized statistical system is the U.S. statistical system. The United States collected and published statistics long before any distinct statistical agency was formed. Congress has sometimes legislated specific data collection or analysis activities, but frequently the organic act that authorizes a statistical agency is very general. The first U.S. statistical agency was the Bureau of Labor; the second was the Bureau of the Census. In the first case, a widespread public demand for information on the condition of industrial workers led to the formation of the bureau with only very general

guidance. In the second case, the Bureau of the Census inherited specific major statistical duties, formerly undertaken by others. The Bureau of Agricultural Economics was another early statistical agency.

Two world wars and the Great Depression led to considerably more emphasis on the need for statistics for decisionmaking both within and outside the federal government, and the number of statistical agencies grew rapidly. Some of these were analytic agencies; others were agencies concerned with a specific subject. In either case, the agency itself, in consultation with perceived potential users of its information, has the principal responsibility for determining its specific statistical program and for setting priorities. Initially, many of these agencies also had responsibilities for certain policy analysis functions for their department heads. More recently, policy analysis has generally been located in separate units that are not themselves considered to be statistical agencies.

One reason for establishing separate statistical agencies rather than leaving statistical data compilation and dissemination activities as a part of a larger administrative operation is to emphasize the principles and qualities of an effective statistical agency. Another reason is to encourage research and the development of new information in a particular area of public interest. Statistical agencies disseminate data for statistical purposes, not for administrative, regulatory, or enforcement uses.

A Framework for Planning U.S. Federal Statistics for the 1980s (U.S. Department of Commerce, 1978) classified 38 agencies into five groupings:

1. General coordination agency
 - ⊗ Office of Statistical Policy in the Office of Information and Regulatory Affairs, Office of Management and Budget
2. Core multipurpose collection agencies
 - ⊗ Bureau of the Census, Department of Commerce
 - ⊗ Bureau of Labor Statistics, Department of Labor
 - ⊗ National Agricultural Statistics Service, Department of Agriculture
3. Subject matter multipurpose collection agencies
 - ⊗ Bureau of Justice Statistics, Department of Justice
 - ⊗ Bureau of Mines, Department of the Interior
 - ⊗ Employment and Training Administration, Department of Labor
 - ⊗ Energy Information Administration, Department of Energy
 - ⊗ Environmental Protection Agency
 - ⊗ Federal Bureau of Investigation, Department of Justice
 - ⊗ Internal Revenue Service, Department of the Treasury
 - ⊗ National Center for Education Statistics, Department of Education
 - ⊗ National Center for Health Statistics, Department of Health and Human Services
 - ⊗ Office of the Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development
4. Core multipurpose analysis agencies
 - ⊗ Bureau of Economic Analysis, Department of Commerce
 - ⊗ Economics units in the Department of Agriculture
 - ⊗ Federal Reserve Board
 - ⊗ Office of the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services
 - ⊗ Office of Research and Statistics, Social Security Administration, Department of Health and Human Services
 - ⊗ Research and Special Programs Administration, Department of Transportation
5. Program collection and analysis agencies

In addition, 19 agencies with statistical activities were listed, but specific units were not identified. These agencies ranged from the Alcohol, Drug Abuse, and Mental Health Administration to the Veterans Administration.

Another example of a decentralized system is Mexico's newly modernized National Institute of Statistics, Geography, and Informatics (INEGI). It is the agency responsible for integrating Mexico's systems of statistical and geographic information as well as promoting and orienting the development of informatics in the country.

INEGI has a central structure of seven general bureaus:

1. The General Bureau of Statistics
2. The General Bureau of National Accounts
3. The General Bureau of Geography
4. The General Bureau of Cadastral Cartography
5. The General Bureau of Informatics Policy
6. The General Bureau of Dissemination
7. The Administrative Area

Two of the seven bureaus are responsible for producing statistical information on social, demographic, and economic issues; two are responsible for geographic, ecological, and territorial information; one is responsible for informatics policy; one is responsible for dissemination; and one for the administrative area. In addition, INEGI has a regional structure, which enables it to monitor and service requests for information in the different areas of the country.

In an effort to modernize the Mexican systems of statistical and geographic information, in recent years INEGI has implemented a comprehensive and synchronized program encompassing several components. In terms of structural change, the most important components of the modernization program are decentralization and the new administrative framework. Within the decentralization component, the initial strategy involved finishing of the relocation of INEGI's headquarters from Mexico City to the city of Aguascalientes. This included completing the construction and adaptation of the building to house the headquarters, completing the transfer of 1,000 of a total of 3,000 families to Aguascalientes.

In parallel, the 10 regional bureaus were strengthened by granting them more responsibilities as well as human, financial, and material resources to assist them in their duties. In addition, an INEGI office was opened in each of the 32 states. Thus, INEGI has increased its local and regional presence, enabling it to better meet the information needs of its users nationwide. Under the New Administrative Framework, the institute was able to obtain technical and administrative autonomy to perform its duties.

Case Study E.4 Reviewing the Organization and Management of a Statistical System in Africa

Concerned about the decline in the quality and quantity of African statistics, the Addis Ababa Plan of Action for Statistical Development in Africa recommended undertaking a detailed assessment of national statistical capabilities and deficiencies in all African countries. Three categories of countries were identified, and one alternative assessment model was assigned to each category. The first group of countries includes those where there are enough national experts to undertake such an assessment without external assistance. The second group of countries includes those where a need might arise for one or two international experts to join the team. The third group of countries is made up of those that require a majority of its members to be international experts. The review process should first determine what are the minimum data needs for defining, monitoring, and evaluating the national poverty reduction strategy, then define the production infrastructure required to meet these needs. The basic model to conduct a statistical needs assessment includes the following steps:

- 3 Review current outputs and assess their relevance to users.
- 3 Determine national priority statistical outputs, their contents, and periodicity.
- 3 Define the information production system, including data collection, processing, storage, and dissemination capabilities.
- 3 Propose an adequate legislative and institutional framework.
- 3 Propose a statistical development plan.

Actual cases in African countries for which there is adequate documentation in initiating needs assessment are limited. However, three cases, Kenya, Namibia, and Chad, can illustrate the experience acquired.

The Kenyan experience is an example of a comprehensive approach involving review of a country's current statistical needs for preparing medium- and long-term statistical development plans. These plans cover all aspects of the national statistical system, including measures for strengthening institutional and legal aspects, and were carried out by entirely by Kenyan experts. A task force of 17 experts consisting of users and producers of statistical information drawn from government ministries, parastatal enterprises, the private sector, and research and academic institutions conducted the review. An Integrated Statistical Development Plan grew out of this comprehensive review, recommending (a) the restructuring of the Central Statistical Service into an independent body, accountable for its decisions; (b) more accessibility to data by the users' community; and (c) better coordination of statistical activities between users and producers.

The Namibian needs assessment was initiated by a multi-agency mission consisting of a group of international advisers to the CSO who designed a framework for social, demographic, and economic statistics, and took into account available resources and possible international assistance. The assessment of statistics requirements was based on the conclusions of a users/producers workshop that provided recommendations for developing statistics in Namibia, including setting statistical programs covering a broad range of policy areas, with a timetable, and adopting a National Household Survey Program.

Chad used an ad hoc team of international experts who carried out a needs assessment with assistance from existing institutions. The review considered how coordination between suppliers and users of statistics could be improved. Reliability and timeliness of outputs were considered under three categories: multisectoral and economic reports, sectoral reports, and occasional reports. A two-part strategy was proposed for strengthening local capacities: short-term measures focusing on immediately improving the production and dissemination of existing data, and medium- and long-term measures to strengthen institutional capabilities in the areas of data collection, storage, and analysis. Specific actions included creating a permanent monitoring capability and strengthening producers' capacities through increased human and material resources.

Case Study E.5 An Example of a Training Needs and Human Resource Management Assessment: The Case of Malawi

The National Statistical Office (NSO) is the main official statistical agency in Malawi. It is a government department headed by the commissioner for census and statistics and reports to the Ministry of Finance and the Office of the President and Cabinet. It operates through a legislative framework governed by the 1967 Statistics Act. The NSO developed its first strategic plan in 1996. The plan was agreed to by the minister of finance and covered a five-year program from 1996 to 2000. The plan includes a number of changes, improvements, and activities, including a revised structure and the creation of a National Committee for Statistics (NCS). In 1999 the staff complement was 346, but only 222 posts were filled.

E.5.1 Development of the training and human resource management plan

Since NSO already had a strategic plan in place, the training plan and the development of policies to guide and strengthen human resources management (HRM) were developed within this framework. It was felt important to send the right signals to staff and management about the coherence of the training plan and how it was developed.

Responsibility for the formulation of HRM policy and its implementation rests with the Human Resources Division of NSO, under the overall control and guidance of the training committee. The division's functions include identifying training opportunities, assessing training needs, and evaluating training activities.

Based on interviews with staff and the strategic plan and functional review, an overall framework in which to locate the types of staff development and training options appropriate for the NSO was developed (see figure E.1). This framework contained six broad training and development areas.

1. Resource management, which includes all aspects of people management and the skills attached to that, such as delegation, time management, supervision skills, and so on.
2. Human resource management, which includes specialist HRM skills such as training needs analysis, HRM policy development, and managing the training plan.

3. Technical skills, the largest segment for NSO in that this includes all areas of statistical training and development options, as well as the specialist cadres such as cartography, accounts, and others.
4. Basic skills, including areas such as induction programs, basic computing and word processing skills, administrative tasks, and the skills needed by support staff.
5. Team building, which comprises the skills needed to build up a high-performing team of staff, understanding the roles and responsibilities of each section and each other.
6. Product development: given that NSO is known through its “products,” it is crucial that a special focus be placed on the latest techniques, through printed and electronic media.

Figure E.1. Areas for Training Development**Table E.3. Identified Training Needs**

<i>Training areas</i>	<i>Skill needs</i>	<i>Target group</i>	<i>Training methods</i>
Product development	<ul style="list-style-type: none"> ➤ Statistical report writing ➤ Presentation of statistical reports ➤ Computer- and Internet-based dissemination ➤ Marketing products ➤ Market research ➤ Communicating with customers 	<ul style="list-style-type: none"> ➤ Professional statisticians ➤ Other people responsible for report and bulletin preparation 	<ul style="list-style-type: none"> ➤ In-house ➤ Formal courses ➤ Secondment/mentoring, etc.

(Table continues on the following page.)

Table E.3. Identified Training Needs (continued)

<i>Training areas</i>	<i>Skill needs</i>	<i>Target group</i>	<i>Training methods</i>
Resource management	<ul style="list-style-type: none"> ⌘ Time management ⌘ Delegation ⌘ Meetings ⌘ Supervision, etc. ⌘ Financial management ⌘ Logistics 	<ul style="list-style-type: none"> ⌘ All senior and middle-level managers ⌘ Others with relevant responsibilities 	<ul style="list-style-type: none"> ⌘ Formal
Human resource management skills	<ul style="list-style-type: none"> ⌘ Training needs analysis ⌘ Managing in-house training ⌘ HRD policy and strategy ⌘ Monitoring and evaluation of training 	<ul style="list-style-type: none"> ⌘ HR managers 	<ul style="list-style-type: none"> ⌘ In-house ⌘ External (certificate/diploma)
Technical skills	<ul style="list-style-type: none"> ⌘ Statistical procedures and processes ⌘ Data handling and manipulation ⌘ Design and implementation of surveys and censuses ⌘ Sampling theory and estimation procedures ⌘ Statistical analysis ⌘ Computing skills ⌘ Standard packages (word processing, spreadsheets, etc.) ⌘ Database management and GIS ⌘ Specialist statistical packages ⌘ Other skills ⌘ Cartography ⌘ Printing ⌘ Accounting ⌘ Administration and stores 	<ul style="list-style-type: none"> ⌘ All of the statistical cadre ⌘ Other specialists 	<ul style="list-style-type: none"> ⌘ In-house ⌘ Informal, on-the-job ⌘ Self-tutorials ⌘ Short courses ⌘ Academic training (certificate, diploma, degree, master's)
Basic skills	<ul style="list-style-type: none"> ⌘ Induction ⌘ Civil service procedures ⌘ Basic computer and keyboard skills ⌘ Routine administration ⌘ Target groups ⌘ All new entrants ⌘ Registry ⌘ Administrative staff ⌘ Statistical clerks ⌘ Other support staff 	<ul style="list-style-type: none"> ⌘ All staff 	<ul style="list-style-type: none"> ⌘ Commissioned courses ⌘ In-house
Team development	<ul style="list-style-type: none"> ⌘ Change management ⌘ Managing the strategic plan ⌘ Performance management ⌘ In-house communications 	<ul style="list-style-type: none"> ⌘ All staff 	<ul style="list-style-type: none"> ⌘ Formal courses ⌘ In-house

Note: This case study is based on a report prepared in 1999 by consultants for the National Statistical Office (NSO) in Malawi. The purpose of the report was to review the organizational development needs of NSO, to assist the agency to strengthen its human resources management, and to prepare a training plan. The report was part of a long-term strategic support program for the NSO financed by the Department for International Development (DFID) in the United Kingdom. Thanks are due to the commissioner for statistics and DFID for their permission to use this material.

Case Study E.6 Examples of Recent Statistical Legislation

Appropriate legislation is the lifeline of a well-functioning statistical system. Most countries have a formal statistical law where the responsibilities and functions of the statistical agency are spelled out, and the organizational structure of the national statistical system is described. This also governs the relationships between data suppliers and users, including the provision of individual information, the rules for the obligatory supply of information, and guarantees of confidentiality and nondisclosure. Below are some examples of statistical laws ranging from relatively detailed to very short ones.

In 1975 New Zealand enacted a more detailed statistical law. The act consolidated and amended the Statistics Act of 1955 and provided for official statistics; created a department entitled Statistics New Zealand and the Office of Government Statistician; and ensured the independence of the Government Statistician position in the execution of the duties of the office. It consists of an analysis, along with the following six parts, and includes 50 articles, ranging from “Short Title” to “Repeal and Revocations.”

- Analysis
- Part I: Official Statistics
- Part II: Department and Government Statistician
- Part III: Census of Population and Dwellings
- Part IV: Collection of Statistics by the Department (e.g., “Security of Information”)
- Part V: Offences and Penalties
- Part VI: Miscellaneous Provisions

The Law of the Republic of Belarus on State Statistics was approved by the Council of the Republic on January 30, 1997. This law specifies the procedure for organizing state statistics, and governs legal relations associated with the statistical activity of state statistical authorities, ministries, and other central administrative authorities that keep state statistics. The law has six major sections with 17 articles.

- Section I. General Provisions
- Section II. Organization of State Statistics (e.g., “Financing and Material and Technical Supply of the State Statistical Authorities”)
- Section III. Submission and Utilization of Statistical Information
- Section IV. Rights and Obligations of State Statistical Authorities
- Section V. Liability for Violating This Law
- Section VI. Final Provisions

The statistics act of the Republic of South Africa was enacted in 1999 by the Parliament to provide for a Statistician-General as head of Statistics South Africa, to establish a Statistics Council, and provide for its functions; to repeal certain legislation; and to provide for connected matters. The Statistician-General is responsible for the collection, production, and dissemination of official and other statistics, including conducting of a census of the population, and for coordination among producers of statistics.

Contents of Act

1. Definitions
2. Purpose of act
3. Purpose of official statistics and statistical principles
4. Status of Statistics South Africa
5. Minister’s duties and powers
6. Appointment and tenure of Statistician-General
7. Statistician-General’s duties and powers
8. Establishment of Statistics Council
9. Tenure of members of council
10. Meetings of council
11. Committees of council
12. Remuneration of members of council and its committees
13. Duties and powers of council

14. Statistical coordination among organs of state
15. Entry on and inspection of premises
16. Duty to answer questions
17. Confidentiality and disclosure
18. Offences and penalties

Indonesia passed a new Statistics Act in 1997. The old Statistics Act, enacted in 1960, was recently revised and improved to cope with the latest development in the demand and supply of outputs of statistical services. The new Statistics Act, Law No. 1611997 on Statistics, was enacted in May 1997. It gives a bigger and heavier role to the BPS (Statistics Indonesia) and describes a clearer distribution of responsibility between the BPS, the statistical units in other government agencies, and the private sector. The BPS is responsible for the compilation of basic statistics, that is, statistics used by policymakers and general users for a broad range of purposes. The respective government departments compile the sectoral statistics, which are used internally to support the functions and duties of the respective agencies. The private sector may collect statistical data to fulfill the specific needs of the business sector, which is usually in the form of micro data. The BPS also is the reference center or clearinghouse of statistics, since the results of all sectoral statistics should be submitted to the BPS. Any private company conducting statistical activity should provide a synopsis of the statistical activity to the BPS. The BPS also functions as the coordinating agency of statistical activities, at both the central and the regional (provincial and district) levels.

Case Study E.7 Performance Agreements for Statistical Agencies

Since they are providers of essential information for public debate and for decisionmaking at various levels of society, national statistical agencies (NSAs) must take the quality of their products and services very seriously. The performance of NSAs and, indeed, of government services, have come under closer scrutiny in many countries; hence quality management has lately become a focal point for many NSAs. In national statistical agencies there appear to be various approaches to quality management, since there are many sides to the quality of official statistics. As universally agreed, official statistics must be relevant, timely, and accurate, but they should also be produced in a cost-effective manner and without causing too much of a burden for data providers.

In 1996, Statistics Netherlands (SN) adopted a comprehensive quality program in the form of a business plan, which covers quality guidelines and statistical auditing. The focus of statistical auditing in this sense is on the quality of the statistical production process. The SN Business Plan sets out six major objectives, with the ultimate aim of creating a vital organization with a manageable budget:

1. A relevant work program
2. A substantially reduced response burden
3. Effective statistical information
4. Comprehensive quality management system
5. Adequately trained and motivated staff
6. An efficient, well-managed, flexible organization

Statistical auditing was introduced as a form of help and advice to achieve improvements, not a form of surveillance to discover where things are not going as they should. If the auditors, however, discover weaknesses and unprofessional approaches, they will certainly report these and discuss them with management. Also, in the final discussion about the audit reports, agreements are made about how to achieve specific improvements. Statistical auditing has three major purposes:

- actually find out what is being done about quality management in statistical departments;
- generate suggestions on how to improve quality management; and
- determine what are the best practices and incorporate these into the guidelines for quality systems.

To obtain experience with statistical auditing, SN carried out two pilots in 1996. As one of the results of the pilot audits, the following code of conduct for audits was agreed on:

- 3 The main purpose of statistical audits within the SN is to identify within statistical sectors the weak and strong points of statistical processes and how these may be improved. In a way, audits are like presenting a mirror to the auditees.
- 3 There will be an audit plan as part of the management contracts between division managers and the director-general. Each statistical process in a statistical department will be audited once every five years.
- 3 Audits are organized and moderated by an audit secretariat, who is part of the director-general's staff.
- 3 Audits are carried out by teams of three auditors, selected on the basis of specific expertise. A pool of about 25 auditors will be trained and regularly employed. Their performance will be routinely monitored by the audit secretariat.
- 3 Before an audit starts, the procedures and planning will be agreed on with the department manager.
- 3 The department manager is responsible for the supply of proper documentation, including a list of employees and their tasks, work instructions, checklists, handbooks, and existing guidelines for quality control. The manager also appoints a contact person from his or her sector.
- 3 In a workshop, the audit secretariat briefs the audit team on implementation of the audit. Also, the scope of the audit (including any points that deserve special attention) is formulated.
- 3 The audit secretariat organizes an introductory meeting in which the scope and procedures are discussed. After that an interview scheme is drafted (implying, among other things, the final selection of the people to be interviewed). The maximum number of interviews per day is three, by two auditors, because interviews are to be relaxed. Interview reports are only for auditors. However, all reports are given to auditees for correction.
- 3 The audit team drafts its first report, which is initially discussed with the audit secretariat.
- 3 One audit secretary and the lead auditor discuss the first draft with the department head and contact person.
- 3 The audit report is subsequently discussed in a meeting with the department head and auditees.
- 3 The final audit report is then written and sent to the department manager. A copy is sent to the director general of SN.
- 3 The department manager has three months to react and to draft a plan for improvements on the basis of the recommendations.
- 3 One year after the audit has taken place, a questionnaire is sent to the department manager in order to check what has been done with the recommendations.
- 3 After every five audits, the audit secretariat writes a summary report detailing important results, which may be beneficial for other departments as well. This report is discussed by the Management Committee for Auditing and Quality Care and is widely circulated.

In New Zealand a quality and risk assessment framework has been developed as a basis for assessing the risk of an output area or a collection not achieving expected quality or performance standards. It has been produced primarily as a guide for assessing the risk of quality problems, but can also point to where there is a need for additional investment in statistical and information technology (IT) infrastructure to reduce risk or improve performance in areas of corporate concern. Regular assessments should show improvements in those areas of underachievement, particularly areas needing attention to alleviate risk of inadequate performance. Risk is judged across four broad dimensions, and no one of these aspects can be considered in isolation from the others. In particular, a balance is required across aspects of quality, timeliness, and cost.

The Australian Bureau of Statistics (ABS) Action Plan discusses performance-monitoring issues in detail. ABS activities in respect to evaluation and continuous improvement processes can be broadly grouped under five activities:

- 3 Corporate governance processes
- 3 The planning process including the review and improvement framework
- 3 Statistical Clearing House
- 3 The collection and analysis of statistics on the use of services
- 3 System enhancements or upgrades

Case Study E.8 Review of Customer Relations

National statistics agencies provide information for a wide spectrum of users both within and outside their respective governments, including policymakers, administrators, planners, researchers, activists, citizens, students, and media representatives. Identifying the needs of users, therefore, is important for national statistics agencies to carry out their responsibilities. The needs of users can be explored informally, by forming advisory committees, or by undertaking formal surveys. The task is difficult and requires continual alertness to the changing needs of users and the existence of potential users. The agency should engage in scientific cooperation with professional associations, institutes, universities, and scholars in the relevant fields to determine the needs of the research community and insight on potential uses. Below are some examples from different countries about user-agency relations.

In Indonesia a Statistical User Forum has been established. It is a nonstructural and independent organization with the task of giving advice, requested or not, on numerous aspects of statistics to Statistics Indonesia. The advice can be provided periodically as scheduled or on a more casual basis. The forum consists of government, NGOs, experts, professionals, and distinguished citizens.

Pakistan has established panels and working groups on different statistical subjects under the Technical Advisory Committee of the National Statistical Council, which represents the data users. These panels and working groups are composed of members drawn from concerned federal and provincial government departments, while nonofficial members are drawn from universities, research institutions, and relevant organizations of the private sector. Meetings of these panels and working groups are held regularly, at least once a year, to discuss relevant issues relating to the specific field of statistics and to seek solutions.

For example, planning of a census is started in consultation with data users to accommodate their data demands. An advisory committee and subcommittees are formed with the terms of reference to consider various technical aspects of census taking and to recommend topics for formulation of census questionnaires, which are prepared, pretested, and field tested, with eventual approval required from the government of Pakistan before the census is conducted.

In Pakistan the media are mobilized to project the importance of statistical activities of the Federal Bureau of Statistics. The bureau also releases census and survey results and price statistics, foreign trade statistics, and industrial production statistics through press releases and conferences. A census/survey publicity program is also launched through the media to create public awareness about the importance and objectives of censuses and surveys.

Thailand's National Statistics Office (NSO) does not have users' councils, but the NSO has close communication with its users, especially the National Economic and Social Development Board, which is responsible for formulating and implementing national economic and social development plans. To serve users' needs and make its products more useful, the NSO occasionally organizes meetings and seminars on statistical data required for decisionmaking. These meetings and seminars are attended by users and other statistical producers. In planning for surveys and censuses, other government agencies concerned are invited to send representatives to be members in the steering committee and the working group.

Statistics Netherlands has stated in its business plan, Statistics Netherlands 2000, that it will ensure its work program meets the needs of users. Decisions about the work program are made by the Central Commission for Statistics. To assess user satisfaction, regular evaluation rounds are held among all major user groups: ministries, government research and planning institutions, organizations representing employers and employees, academia, and so forth. In addition, to flexibly approach new user needs, proposals to exchange 10 percent (in budgetary terms) of "old" statistics for "new" statistics will be made in each four-year work program. These proposals will be submitted to the Central Commission for Statistics, enabling it to make real choices and to set priorities.

In the United Kingdom, formal advisory committees are set up by government departments and agencies to provide independent advice on statistical matters. They go under a range of different names, such as consultative committees and advisory panels. Their members can be users, suppliers, other interested parties, or a mixture of all three. Their great strength is that, with appropriate membership and chairs, they can provide independent and authoritative advice to the Government Statistical Service (GSS), which balances the interests of both users and suppliers.

The main advisory body is the Statistics Advisory Committee, which has been established to advise the director of the Office for National Statistics (ONS) on the statistical work of ONS and on his or her responsibilities as head of the GSS. It comprises members who are customers or data suppliers and others

with appropriate knowledge acting in a personal capacity. The director, with the agreement of the chancellor of the exchequer, appoints members. The director may appoint subject advisory committees and promote and encourage the establishment of other user groups as appropriate.

There are 52 other official advisory bodies, covering a wide range of the GSS's activities. Some of the committees by broad subject area are as follows:

- 3 Statistics (general)
- 3 Population and Migration
- 3 Social and Welfare
- 3 Health and Care
- 3 Crime and Justice
- 3 Education and Training
- 3 Labor Market
- 3 Transport, Travel, and Tourism
- 3 The Economy
- 3 Agriculture
- 3 Commerce, Energy, and Industry
- 3 Environment

There are numerous other official advisory bodies that, while not specifically statistical, may be seen as related or may be used on occasion as mechanisms for liaison on statistical matters. They are an important part of the overall framework for consultation. For example, there are a number of Department of Health/National Health Statistics committees concerned with health information systems. The Advisory Panel on Deregulation has an interest in the burden of statistical form filling on business. Customs and Excise has formal consultative committees on both customs and value added tax (VAT) matters, which have been used to consult on aspects of Intrastat, the statistical system for measuring intra-European Community trade.

In addition to using formal advisory bodies, members of the GSS take every opportunity to consult interested parties, wherever appropriate, using mechanisms best tailored to the task. Consultation—with users, suppliers, and other stakeholders—is important for the following activities:

- 3 Planning services to best meet the needs and expectations of users while keeping the load on suppliers to a necessary minimum
- 3 Monitoring the effectiveness of services and the load placed on suppliers
- 3 Prioritizing services and resources
- 3 Setting relevant performance standards
- 3 Fostering good relations
- 3 Providing early warning of problems

Case Study E.9 The Development of a Poverty-Related Information Management System

In many developing countries, the quality of national statistics and the timeliness with which they are produced have been issues of considerable concern for a number of years. Many countries have embarked in the wake of the Poverty Reduction Strategy Paper (PRSP) on a major program to upgrade their statistical systems. As in Uganda, the main agency for the collection and dissemination of statistics has been the statistics department. Many of these national statistical offices have suffered from common problems such as high staff turnover, inadequate funding, lack of timeliness in delivering outputs, unevenness in quality of data produced, and inability to respond quickly to new data needs.

The starting point for reform is to persuade government and donors to commit more resources to essential statistical activities. To this end, a statistical needs assessment would be undertaken, followed by the development of a statistical action plan. In Uganda, the main goal of such a program is to support the building of national capacity to collect, process, store, and disseminate statistical information for the

purpose of monitoring and evaluating outcomes and outputs of development policies and programs at both national and district levels. Several interesting and novel features have been proposed:

- 3 The national statistical infrastructure is being extensively overhauled through the creation of a new statistics act, the establishment of a statistics board, a commitment by the government to a substantially increase budgetary allocation to statistics, and the creation of a new statutory statistical body called Uganda Bureau of Statistics (UBOS).
- 3 UBOS will focus on delivering a core statistical program capable of monitoring national and international development goals. The core program includes the production of timely macroeconomic and sectoral indicators for monitoring growth and the ability to generate and disseminate primary data for monitoring poverty and tracking the outcomes of various development initiatives.
- 3 The most important element of the new system is the establishment of a new information technology infrastructure for an Integrated Information Management System. It is designed to ensure that all primary or secondary collected data are stored in a central depository of data. Main output of surveys and censuses is also stored in a cleaned format ready for all further analysis and use. Given the need to disseminate statistical information, the system incorporates the concept of a centralized store of macro data or output tables.
- 3 The setting up of this system involves the establishment of standards for receiving and storing data in databases and databanks in a common format. The main benefit of the system is to facilitate users' open access to the data, whether in hard copy or electronic form (on-line, Internet, CD-ROM, and so on). A further feature of this component could be the construction of a geographical information system (GIS) database.
- 3 Given the continuous and growing demand for high-quality household survey data, a permanent national household survey capability is created along with a three-year Integrated Household Survey Strategy designed by UBOS with the close participation of users. UBOS established a core field force of mobile teams that will be used both to undertake surveys directly and to serve as a pool of technical support for districts that plan their own surveys.
- 3 The enhanced statistical program will also support government in its goal to improve the quality and performance of public services and, in particular, the targeting of such services to the poorest and most vulnerable communities. This is to be done through the repeated administration of an annual National Service Delivery Survey. When the results are coupled with public expenditure reviews, they provide a powerful instrument for evaluating the effectiveness of public expenditure programs.
- 3 The monitoring and evaluation system also involves tracking administrative records of other central ministries of the social sector (Education, Health) down to district and subdistrict levels, and the matching of their expenditures to their outcomes on the various population groups.

The outputs of this system would also be particularly useful for monitoring the outcomes of the new Comprehensive Development Framework approach to development aid as well as of the Poverty Reduction Strategy. A similar approach to statistical capacity building is being used in Mozambique, where the recently created National Statistical Institute is installing a national database system modeled on the World Bank's Africa Live Database system.

Case Study E.10 Principles and an Example of a Sequenced Information Strategy

E.10.1 Principles

A sequenced information strategy is meant as a management tool for governments and central statistical agencies to provide an enabling framework for meeting the information needs of poverty reduction strategies and economic development plans. A well-defined and cost-effective strategy should be implemented with secured financial and human resources, subject to a timeframe. Such a strategy should have a holistic scope—poverty reduction, population well-being, and all the needs of policymakers; it aims to reach a realistic goal by tackling impediments, evaluating costs, and involving all partners, and identifies relevant objectives capable of being monitored through measurable results.

An information strategy is geared toward generating quantitative and qualitative information relevant to monitoring input, output, and outcome and impact of predetermined objectives, and information complying with high-quality standards and generated in a timely fashion. A *sequenced* information

strategy establishes an information needs hierarchy in terms of scope and content that would meet all partners' expectations, identify indigenous and exogenous funding capacities, and plan a series of actions sequenced in time—short-, medium-, and long-term interventions—and stemmed on existing systems.

E.10.2 Examples

Uganda. The monitoring strategy of the Poverty Eradication Action Plan (PEAP) is designed for two main purposes. First, it is essential to monitor progress in order to continually inform key agents involved in the process. Encouraging a two-way flow of information between beneficiaries, service providers, and policymakers is an essential component of the PEAP. In this way, the design and implementation strategies can be continually modified to build on what works and to avoid repeating mistakes. Second, the monitoring strategy will help to build accountability. Where targets are set, the government will expect to account for its successes or failures in achieving them, though it is understood that these successes and failures sometime depend on factors outside government's control.

Poverty monitoring involves a large number of institutions, including the Poverty Monitoring Unit, the Uganda Bureau of Statistics, and the Uganda Participatory Poverty Assessment Project. Five aspects of the system are worth noting:

- Household surveys are being used to prepare high-quality estimates of trends in poverty, and the published reports provide much useful information.
- Participatory work has shed light on numerous aspects of poverty in Uganda and has immediately influenced budgetary allocations on water supply and the priority given to improving security.
- There is a need to develop indicators for performance in all sectors. This is being done by sectoral ministries, and the Poverty Monitoring Unit has also developed a list of indicators in cooperation with the districts.
- The institutional provision for monitoring the PEAP is found in the preparation of the *Poverty Status Report*. It synthesizes information on recent poverty trends and makes recommendations on the poverty eradication strategy, to be incorporated in future PEAP revisions. The PEAP will be revised every two years.
- Finally, there is a proposal for a GIS that would link existing sources of data and allow the spatial distribution of poverty to be studied in more detail.

Monitoring is structured at three main levels:

- First, the monitoring of PEAP *outcomes*. This will focus on progress in reducing income poverty, improving health, raising educational achievement, and enhancing the voice and participation of the poor. Most of the information for such outcome monitoring will be drawn from household surveys and repeated exercises under the UPPAP.
- Second, the strategy will entail monitoring actions or *outputs* intended to achieve these outcomes. Data sources will include both sample surveys and data from management information systems.
- Third, there will be regular monitoring of the *inputs* required for action against poverty. This consists mainly in tracking public expenditures on poverty reducing activities.

Tanzania. The Vice President's Office (VPO) will have the overall responsibility for monitoring the implementation and impact of the poverty reduction strategy. Monitoring and evaluation (M&E) of the poverty reduction strategy will require indicators or qualitative assessments pitched at different levels.

- M&E will require impact and outcome indicators. Impact indicators will describe progress toward overall poverty eradication objectives, while outcome indicators will refer to results of interventions (inputs) directed at poverty reduction. The government has already coordinated a consultative process to draw up a list of poverty and welfare monitoring indicators that contain many of the required impact and outcome indicators. These indicators have been incorporated into the Tanzania Socioeconomic Database, which contains a wider set of indicators.
- Proxy indicators will be developed to substitute for impact and outcome indicators that are more difficult to measure or are available only at infrequent intervals.
- Intermediate indicators will be used to provide supplementary information for assessment of progress under the poverty reduction strategy.

- 3 Resource allocation for, and expenditure on, priority poverty reduction initiatives will be monitored under the public expenditure review and Medium-Term Expenditure Framework.
- 3 M&E will also seek to assess the extent of participatory involvement by the poor, as well as other shareholders, in subsequent revisions of the PRSP and in the implementation, monitoring, and evaluation of related programs and projects.
- 3 M&E, supported by well-targeted research, will assess the impact on the poor of policies that transcend the immediate agenda of the poverty reduction strategy.
- 3 A set of gender-oriented indicators will be developed as an integral part of the M&E.
- 3 Given financial and technical constraints, the M&E system will be limited to “core” strategic indicators that can be used readily by policymakers and other stakeholders.
- 3 Moreover, a special effort will be made to include indicators with at least two observations during the three-year horizon of the poverty reduction strategy.

International Guidelines for Major Data Categories

Balance of payments and international investment position

Balance of Payments Manual, 5th edition, 1993 (BPMS), IMF, Washington, D.C., 1993; *Balance of Payments Compilation Guide*, IMF, Washington, D.C., 1995; *Balance of Payments Textbook*, IMF, 1996; and *Financial Derivatives: A Supplement to the Balance of Payments Manual, 5th edition, 1993*, IMF, Washington, D.C., 2000.

Central government debt

GFSM, IMF, Washington, D.C., 1986. Other guidelines for compilers are included in *External Debt: Definitions, Statistical Coverage and Methodology*, and *Debt Stocks, Debt Flows, and the Balance of Payments*, publications of the Bank for International Settlements (BIS), the IMF, OECD, and the World Bank, Paris, France, 1988 and 1994, respectively.

Monetary and financial statistics *Monetary and Financial Statistics Manual*, IMF, Washington, D.C., 2000.

Central government operations

A Manual on Government Finance Statistics (GFSM), IMF, Washington, D.C., 1986. A revised edition of the *GFSM*, currently being prepared, is projected for publication in 2001.

Education

United Nations Economic and Social Council (UNESCO) *International Standard Classification of Education*. Paris, 1997; UNESCO. World Education Indicators Web site, Technical specifications at <http://Hunesco5tat.unesco.org/en/stats/stats.htm>; UNESCO *Methodology Used in the Estimation and Projection of Adult Literacy*. Paris, 1995. U.N. *Indicators of Sustainable Development: Framework and Methodologies*. New York, 1996.

External debt

External Debt: Definitions, Statistical Coverage and Methodology, and *Debt Stocks, Debt Flows, and the Balance of Payments*, publications of the BIS, the IMF, OECD, and the World Bank, Paris, France, 1988 and 1994, respectively. Several international organizations are currently cooperating in the preparation of a new guide, *External Debt Statistics: Guide for Compilers*. A draft version of that guide was released in March 2000 under the auspices of the Inter-Agency Task Force on Finance Statistics, which is chaired by the IMF and includes representatives from the BIS, the Commonwealth Secretariat, the European Central Bank, the European Statistical Office, the IMF, the OECD, the Paris Club Secretariat, the U.N. Conference on Trade and Development, and the World Bank.

Health

OECD. *A System of Health Accounts for International Data Collection*, Version 1.0. Available at <http://www1.oecd.org/els/health/>; U.N. *Indicators of Sustainable Development: Framework and Methodologies*. New York,

1996. World Health Organization (WHO) *Monitoring Reproductive Health: Selecting a Short List of National and Global Indicators*. Geneva, 1997.

International reserves

BPMS, IMF, Washington, D.C., 1993, and *Data Template on International Reserves and Foreign Currency Liquidity: Operational Guidelines (provisional)*, IMF, Washington, D.C., October 1999.

International services

Draft Manual on Trade in Services, revised June 13, 2000, OECD, Paris, France, is available on the OECD Web site at [http://www.oecd.org/sta/serv\(2000\)1.12df](http://www.oecd.org/sta/serv(2000)1.12df), and summaries of the draft are provided on the IMF Web site at <http://www.imf.org/external/np/sta/itserv/methdev.htm>.

Labor market

R1 70 *Labour Statistics Recommendation*, 1985, as updated, Bureau of Statistics, International Labour Organization, Geneva, Switzerland. ILO recommendations can be accessed at the ILO Web site at <http://ilotex.ilo.ch:1567/public/english/does/recdisp.htm>.

Merchandise trade

International Trade Statistics: Concepts and Definitions, Series M, No. 52, Rev. 2, United Nations, N.Y., 1998.

National accounts

System of National Accounts 1993, a publication of the Commission of the European Communities, IMF, OECD, United Nations, and the World Bank, United Nations, N.Y. 1993 and earlier editions, or regional versions such as the *European System of Accounts* 1995, EUROSTAT, Luxembourg, 1996.

Price indices

Classification of Expenditure According to Purpose, Statistical Papers, Series M, No. 84, United Nations, N.Y., 1999; *Consumer Price Indices: An ILO Manual*, 1985, Bureau of Statistics, International Labour Organization, Geneva, Switzerland; and *Manual on Producers' Price Indices for Industrial Goods*, United Nations, N.Y. 1979. U.N. classifications can be accessed through the U.N. Web site at <http://esa.un.org/unsd/cr/registry/regtr>. The most recent information on the consumer price index can be accessed through the ILO Web site at <http://www.ilo.org/public/english/bureau/stadauideslcpi/index.htm> and on the producers price index, the IMF Web site at <http://www.imf.org/external/np/sta/te222i/index.htm>.

Population

U.N. *Principles and Recommendations for Population and Housing Census*. New York, 1996. U.N. *Handbook on Civil Registration and Vital Statistics Systems*. New York, 1998. U.N. *Indicators of Sustainable Development: Framework and Methodologies*. New York, 1996.

Poverty

Martin Ravallion, *Poverty Lines in Theory and Practice*, vol. 1. Living Standards Measurement Survey Working Paper, World Bank, 1999; Angus Deaton and Salman Zaidi. (forthcoming). *Guidelines for Constructing Consumption Aggregates for Welfare Analysis* (World Bank); M. Lipton. *Defining and Measuring Poverty: Conceptual Issues*. UNDP, New York, 1996. U.N. *Assessing the Nutritional Status of Children*. New York, 1990.

Notes

1. For further information, please visit <http://www4.worldbank.org/afr/stats/cwiq.cfm>.
2. For further information, please visit <http://www.worldbank.org/html/prdph/lms/index.htm>.

Annex F

Public Spending: Technical Notes and Case Studies

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Technical Note F.1 Expenditure Classifications

The value of a system of expenditure classification is that it enables analysis of expenditures that is a fundamental prerequisite for effective budget management. Most governments have an economic classification that identifies the amounts spent on salaries, interest, transfers, and so on. Such information provides a basic building block for budget analysis. The *Government Finance Statistics* (GFS) provides a common basis for classifying such expenditure so that cross-country comparisons of expenditure patterns is possible.

Most countries also collect and organize information on budget allocations and expenditure on the basis of administrative classification, that is, corresponding to the agencies and entities that constitute government. The aggregate amount spent by each agency and the economic classification under each agency head is often also available.

Tables F.1 and F.2 can be usefully presented in absolute real terms, as a share of gross domestic product (GDP), and as a share of public spending for current and earlier fiscal years.

The functional classification of expenditure differs from the simple administrative classification because functions do not map into agencies on a one-to-one basis. A number of agencies may have overlapping functions (for example, health services may be provided by public hospitals as well as by

Table F.1. Functional Classification of Expenditures

Economic services
Transportation
Fuel and energy services
Agriculture, forestry, and fisheries
Mining and manufacturing
Social services
Education
Health
Social Security and welfare
Water supply and sanitation
General public services
Defense
Public order and safety
General public administration
Other functions
Interest
General transfers

Source: IMF Government Financial Statistics.

Table F.2. Economic Classification of Expenditures

Current expenditures
Expenditures on goods and services
Wages and salaries
Employer contributions (social security, other goods and services)
Interest payments
Subsidies
Other current transfers
Capital expenditures
Lending minus repayments

Source: IMF Government Financial Statistics.

agencies associated with immigration and border security). Also, some functions such as public administration will constitute a part of the responsibilities of most agencies. Where budgets are highly fragmented and many activities are financed by off-budget arrangements, the accurate identification of the functional classification of expenditure is problematic. The functional composition of expenditure is useful for analysis of sectoral budgets and performance and generally important for poverty analysis.

Given the assignment of service responsibilities to different levels of government, it is desirable, if data permit, to identify the functional composition of expenditure across different levels of government. The appropriate treatment of transfers between government will be needed to ensure that expenditures are not double counted.

A classification of expenditure by program categories is desirable, but is often not available in developing countries. Its value is that it enables plan and policy objectives to be more directly linked to the budget, thereby facilitating the tracking of whether policy priorities are appropriately funded.

Table F.3. Functional Composition of Expenditures by Level of Government

	<i>Central government</i>	<i>State government</i>	<i>Local government</i>
Economic services			
Transportation			
Fuel and energy services			
Agriculture, forestry, and fisheries			
Mining and manufacturing			
Social services			
Education			
Primary education			
Secondary education			
Tertiary education			
Health			
Primary health			
Secondary health			
Tertiary health			
Social security and welfare			
Water supply and sanitation			
General public services			
Defense			
Public order and safety			
General public administration			
Other functions			
Interest			
General transfers			

Source: IMF Government Financial Statistics.

Technical Note F.2 International Benchmarks for Social Sector Spending

Primary health care spending is defined as public spending on clinics and medical, dental, and paramedical practitioners, according to the GFS economic classification. Secondary and tertiary health is defined as hospital services and curative treatments by medical specialists. Intrasectoral data for health care spending are often not comparable across countries due to the lack of a universally accepted definition of primary health care.

Table F.4. Public Expenditure Allocations Between Preventive and Curative Health Care in Selected Countries^a

	<i>Year</i>	<i>Preventative/primary health care</i>	<i>Curative/tertiary hospital health care</i>
All countries		28.0	61.8
Angola ^b	1992	6.0	48.5
Bolivia	1994	–	31.0
Burundi	1993	24.2	42.3
Central African Republic	1992	5.0	95.0
Côte d'Ivoire ^c	1995	42.5	57.5
Ethiopia	1995	50.0	50.0
Gambia, The	1991	63.0	37.0
Ghana	1992	32.2	67.8
Guinea	1991-94	24.0	62.0
Honduras	1991	42.9	57.1
Kenya	1991	27.6	68.8
Lesotho	1990-91	5.0	95.0
Madagascar	1993	52.2	47.8
Nepal	1985	33.0	67.0
Uganda	1991-92	10.0	90.0
Tanzania	1993-94	14.0	79.0
Zambia	1994	–	33.0
Zimbabwe	1989	16.0	84.0

– = Not available.

a. The totals do not sum up to 100 for five countries because of nonallocation of administrative and other expenditure to preventive/primary health care and curative/tertiary hospital health care.

b. Capital expenditure only.

c. Recurrent expenditure only.

Sources: Gupta, Honjo, and Verhoeven (1997) cite World Bank Poverty Assessments: Angola (1992), Burundi (1992), Central African Republic (1993), Côte d'Ivoire (1994), Ethiopia (1994), Guinea (1997), Honduras (1994), Kenya (1995), Lesotho (1995), Mongolia (1995), Tanzania (1994), Zambia (1995) and Zimbabwe (1995); IMF *Government Financial Statistics* database (1995): Bolivia, The Gambia, Malawi, and Nepal; and Castro-Leal and others (1999): Ghana and Madagascar.

Table F.5. Allocation of Public Education Expenditure in Selected Countries (as percent of total)^a

	<i>Year</i>	<i>Primary education</i>	<i>Secondary education</i>	<i>Primary and secondary education</i>	<i>Tertiary education</i>	<i>Other</i>
All countries		46.8	23.1	69.2	20.9	8.6
Benin	1992	54.0	–	–	–	–
Bolivia	1994	–	–	50.0	32.0	18.0

(Table continues on the following page.)

Table F.5. Allocation of Public Education Expenditure in Selected Countries (continued)

	<i>Year</i>	<i>Primary education</i>	<i>Secondary education</i>	<i>Primary and secondary education</i>	<i>Tertiary education</i>	<i>Other</i>
Burkina Faso	1993	17.0	–	–	–	–
Burundi	1993	44.0	25.0	69.0	23.0	8.0
Central African Republic	1992	56.0	16.0	72.0	23.0	5.0
Côte d'Ivoire	1995	48.6	33.5	82.1	17.8	0.0
Ethiopia	1992-93	45.0	24.0	69.0	13.0	18.0
Gambia, The	1990	63.0	16.0	79.0	–	–
Ghana	1992	41.5	43.2	84.7	15.3	0.0
Guinea	1992	42.0	25.0	67.0	33.0	0.0
Guinea Bissau	1992	54.3	11.4	65.7	5.5	28.8
Kenya	1992-93	60.0	17.0	77.0	17.0	6.0
Lesotho ^b	1991-92	52.0	30.0	82.0	15.0	3.0
Madagascar	1993	44.9	29.9	74.8	25.2	0.0
Mozambique	1990	50.0	35.6	85.6	14.4	0.0
Myanmar	1990	–	–	76.0	24.0	0.0
Nicaragua	1994	40.1	9.5	49.6	32.9	17.5
Nepal	1985	–	–	46.0	20.0	34.0
Niger	1992	42.0	25.0	67.0	22.0	1.0
Senegal	1991	48.9	25.5	74.4	25.5	0.0
Sierra Leone	1991	38.6	22.6	61.2	29.6	9.2
Tanzania	1993-94	52.0	13.0	65.0	35.0	0.0
Togo	1995	41.0	16.0	57.0	25.0	18.0
Zambia	1994	46.1	12.1	58.2	11.5	30.6
Zimbabwe	1990	49.3	30.6	79.9	20.2	0.0

– Not available.

a. The coverage of other expenditure varies by countries and includes items such as unallocated administrative expenses, adult education, vocational and technical training.

b. Current expenditure only.

Sources: Gupta, Honjo, and Verhoeven (1997) cite World Bank Poverty Assessments: Benin (1994), Burkina Faso (1993), Burundi (1992), Cameroon (1992), Central African Republic (1993), Ethiopia (1994), Guinea (1997), Guinea Bissau (1994), Kenya (1995), Lesotho (1995), Mongolia (1995), Mozambique (1992), Nicaragua (1995), Niger (1996), Senegal (1992), Sierra Leone (1994), Tanzania (1994), Togo (1996), Zambia (1995) and Zimbabwe (1995); IMF Government Finance Statistics database (1995): Bolivia, The Gambia, Malawi, and Nepal; and Castro-Leal and others (1999): Côte d'Ivoire, Ghana and Madagascar.

Note: This note borrows from Gupta, S., K. Honjo and M. Verhoeven. 1997 "The Efficiency of Government Expenditure: Experience from Africa," IMF Working Paper No. 97/153. International Monetary Fund, Washington D.C.

Technical Note F.3 Public Expenditure Tracking Surveys

Expenditure tracking surveys can be used as supply-side checks on service delivery and budget execution when reliable and accurate data on actual budget disbursements do not exist. They are useful in situations where institutions charged with service delivery or budget management at the local levels perform poorly, or where transparency in budget management at the local level is lacking. This technical note outlines the main components of Uganda's Expenditure Tracking System.

Expenditure tracking surveys were introduced in Uganda in the mid-1990s, partly because health and education outcomes had stagnated despite large increases in public spending over 1980s levels. The underlying hypothesis was that actual service delivery (output) was much worse than budget allocations implied because public funds did not reach the local facilities. Possible reasons for facilities not receiving the allocated funds could include reallocations of funds during budget execution due to competing priorities at various levels of government, corruption, or misuse of public funds.

Methodology and Survey Design. Budget allocations and actual spending amounts were compared in two decentralized sectors: primary education and health. Because local government accounts were not generally available, a field survey was carried out in 19 of Uganda's 39 districts to collect spending data for 1991–95. The survey covered a randomly selected sample of 250 government schools and 100 public health clinics.

Education. Enumerators who collected the data from schools and clinics were mainly former teachers and health workers resident in the districts. Standardized forms were used, along with qualitative observations. Enumerators were trained and closely supervised by a national research team to ensure quality and uniformity of data collection and to assess the standard of record-keeping in schools and clinics.

The field survey found that input flows in the education sector suffered from serious problems, largely due to weak governance and lack of accountability. On average, less than 30 percent of the funds intended for nonsalary expenditures actually reached schools between 1991–95. District authorities kept and used most of the nonsalary capitation (per student) grants meant for schools. In theory, schools were allowed to keep up to one-third of mandatory tuition fees paid by parents and the rest was for district education offices. Although there were large variations between schools, at the median school retention of both capitation grants and tuition fees was zero. Teacher salaries seem to have reached schools much better than nonwage allocations, although with considerable delay. The only systematic way of misappropriating salary funds was through “ghost” teachers on the payroll.

Hence, despite an increase in budget allocations, most of the burden for financing education costs continued to be borne by parents, who accounted for as much as 70 percent of total spending on primary schooling in 1991 and 60 percent in 1995 (see table F.6). Parents' contributions continued to increase in real terms over the survey period.

Health. Qualitative evidence was used because there was no financial information at the health facility level that would allow comparison of actual and received budget funds. The method included casual observation, focus group discussions, and interviews with health care staff.

Enumerators working on the health survey gathered information on the following topics:

- whether user fees charged were higher than what was mandated by the government;
- extent to which donor-funded drug supplies were being offered to patients or sold privately by clinic staff;
- timeliness of salary and nonwage disbursements from district offices to clinic staff;
- payment scales and rate of attrition among health workers; and
- technical skills of staff and other factors that affect the quality of care received, especially in remote areas.

The expenditure tracking survey revealed that most medical supplies provided by the Ministry of Health did reach public health facilities. Unlike in the education sector, supplies in the health sector were distributed directly to health units. However, researchers found that clinic staff was expropriating nearly 70 percent of drugs and medical supplies for private sale.

In addition, the survey found that most clinics did not follow user fee guidelines provided by the Ministry of Health, and that drugs supplied by donors are routinely used by underpaid staff as a source of additional income. Due to low pay of health care professionals, there is a high rate of attrition among health care workers and a scarcity of well-trained clinic staff in rural areas.

Policy Response. Upon release of the survey findings, the government took steps to remedy the identified weakness in the budget disbursement systems in the education and health sectors. These reforms included the following:

Table F.6. Summary of School Income Data (1991 Prices)
(Ush millions)

	1991	1992	1993	1994	1995
Teachers' salary payments by Government of Uganda	213.9	214.7	381.3	784.6	914.6
Capitation grants received by schools	4.2	15.8	58.0	60.9	58.3
Other government funding	73.8	62.5	73.6	118.7	147.1
<i>Total government</i>	<i>291.9</i>	<i>293.0</i>	<i>512.9</i>	<i>928.2</i>	<i>1120.0</i>
Tuition collected	55.4	96.8	116.6	136.2	141.3
O/w Tuition retained by schools	2.2	7.4	10.6	23.7	50.3
Parent-Teacher Assoc. (PTA) levies	591.1	609.6	775.2	934.9	1032.7
Salary payments by PTAs	125.8	134.1	196.0	300.7	475.9
<i>Total parents</i>	<i>772.3</i>	<i>840.5</i>	<i>1087.8</i>	<i>1371.8</i>	<i>1649.9</i>

Source: Ablo and Reinikka (1998, p. 10).

- Publication of monthly transfers of public and donor funds for wage and nonwage expenditure to districts in main newspapers and radio broadcasts announcing these amounts in order to increase local knowledge of budget disbursements and to promote greater transparency and accountability at the local level. Moreover, government policy requires that transfers to primary schools from the Ministry of Education be displayed on public notice boards in each school and district center, and the Ministry monitors compliance.
- Districts are requested to pay conditional grants for primary education directly to individual school accounts.
- School-based procurement has replaced inefficient central supply of construction and other materials.
- The Local Government Act of 1997 incorporated measures to enhance accountability and dissemination of accounting information. The previous statute had no such provisions.
- Efforts are being made to institute basic public accounting systems that include district accounts with the financial support of donors.

Source: Ablo, E. and R. Reinikka (1999).

Technical Note F.4 Tax Incidence Analysis

It is important to analyze the distributional impacts of tax policy because highly distortionary and regressive taxation can impose large welfare losses on the poor. Macroeconomic and pricing policies may also indirectly tax certain types of economic activity with direct linkages to the incomes of the poor (see chapter 1, "Poverty Measurement and Analysis"; chapter 12, "Macroeconomic Issues"; and chapters 15 and 16 dealing with rural and urban poverty).

Tax incidence analysis can reveal whose real purchasing power falls due to the imposition of a tax. A tax is *progressive* if wealthier households pay a proportionately larger share of the tax than do wealthy households, relative to their overall expenditures (or a different measure of welfare). A tax is *regressive* if the poor pay a proportionately larger share of the tax than do wealthy households. A tax is *neutral* if the tax shares among the different income groups are equal to the group's income or expenditure shares.

Statutory versus Economic Incidence. Tax incidence analysis requires knowledge of both the statutory and economic incidence of taxes. The *statutory incidence* of the tax refers to who is legally required to pay the tax to the government. The *economic incidence* of the tax refers to who experiences a decline in purchasing power as a result of the tax. If a tax is imposed on a product or factor of production for which the household demand or supply are relatively *elastic*, the burden of the tax will generally be shifted onto those agents whose demand or supply are *inelastic*, regardless of the tax's statutory incidence. For example, if the government levies a tax on sugar, households whose consumption of sugar is highly price elastic can avoid paying the tax by switching to close substitutes; households or firms whose consumption is price inelastic will be forced to pay the tax and will bear the economic incidence of the tax.

It is common to assume that *direct taxes* fall on those who also bear the statutory incidence of the tax and *indirect taxes* fall on those who consume or purchase the commodity being taxed. There are two important exceptions to this rule, however: (a) gasoline taxes affect users of public transportation services as well as those who directly purchase gasoline, and (b) tariffs on imported goods affect the consumers of the imported good as well as consumers of domestically produced substitutes, since import taxes protect domestic goods from competition, and enable domestic producers to raise prices. Domestic producers of close substitutes to heavily taxed import goods will derive benefits from import taxes.

Table F.7 outlines common assumptions about the economic incidence of direct and indirect taxes. However, analysts are advised to test these presumed effects in national circumstances.

How can policymakers identify taxes that are regressive? There are different ways to work out which income groups in society pay a disproportionate share of a given tax, and how to shift the tax burden away from poorer households in order to improve the distribution of welfare. Four possible approaches are mentioned here, which are ordered from the least to the most demanding in terms of data and analysis.

F.4.1 General assessment

This can be based on a systematic review of the structure of taxes and knowledge about consumption and production patterns among different population groups (see also chapter 1, “Poverty Measurement and Analysis”). A country-specific version of table F.8 could be completed. Table F.9 lists the taxes used to raise revenues, the statutory tax rates and coverage, those groups affected by the tax, and international evidence about the distributive impact of a particular type of revenue measure.

Statutory tax rates, rather than actual amounts paid, can be used for a simple review. These statutory rates, however, may overstate the burden of the tax on consumption goods, profits and wages due to low collection rates or tax compliance, and substitution away from commodities that are heavily taxed, depending on the price elasticity of demand for the taxed commodity (see approach on following page).

F.4.2 Cross-tabulations

Using household survey data, simple cross-tabulations of consumption patterns and income sources of different income deciles using household survey data can shed light on the distributive impact of

Table F.7. Economic Incidence of Taxes

<i>Taxes</i>	<i>Economic Incidence</i>	<i>Statutory tax rate</i>
Direct taxes		
Corporate income tax/ profit tax	⇒ Owners of firm	
Withholding tax on wages and salaries	⇒ Workers	
Indirect taxes		
Excise duties (on alcohol, tobacco, soft drinks, and so forth)	⇒ Households that consume goods	
Petroleum tax	⇒ Consumers and firms who use gasoline ⇒ Users of public transportation	
Import tariffs	⇒ Consumers of the good, whether produced domestically or abroad, pay the tax. It is often the case that prices of goods for which imports are a large share of the market go up by the amount of the tariff when imposed.	
Value-added tax (VAT) (broad-based)	⇒ Consumers of taxed goods	
Trade taxes	⇒ Consumers of taxed goods	
Explicit export taxes	⇒ Producers of export goods	
Gasoline taxes	⇒ Consumers of gasoline ⇒ Consumers of transport services (optional)	

Source: Younger, and others (1999, pp. 303–09).

Table F.8. Domestic Sources of Government Tax Revenues and Their Progressivity

<i>Revenue source</i>	<i>Share of total government revenue</i>	<i>Average (statutory) tax rate</i>	<i>Which groups are affected?</i>	<i>International evidence about distributive impact</i>
Examples				
Export duties		Cashew nut tax (35 %)	Rural smallholders, mainly in poor provinces	Regressive
Import duties				
VAT				
Excise duties: tobacco, alcohol, and nonalcoholic beverages				
Sales tax				
Nonpetrol excise taxes				
Profit taxes on firms				
Wage income taxes		Say, 30%	Formal sector employees	Uncertain
Kerosene duties				
Gasoline tax				
Tourist visas		Flat 50\$	Tourists and groups relying on tourist income	Progressive
Automobile				
Diesel				
Transportation				
Utility charges				
Primary school fees				
University student fees				
Medical user fees				

alternative revenue services. Even without knowing how household and firm purchases will shift as a result of the imposition of a tax, it is possible to use recent household data containing information on the subsector in which the poor work, which goods and services they purchase, and so on to inform country-level analysis of the likely economic incidence of the tax. It may lead to the conclusion that levying taxes on consumption goods that are overwhelmingly consumed by the urban and rural poor—and for which there are no close substitutes—would likely have negative distributional impacts. Chapter 1, “Poverty Measurement and Analysis,” provides further guidance on this technique.

Table F.9. Format of Spreadsheet for Tax Incidence Analysis

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>
<i>Household ID</i>	<i>Total household expenditures (ranked from poorest to wealthiest)</i>	<i>Cumulative proportion of expenditures</i>	<i>Total consumption of good x</i>	<i>Statutory tax rate good x a</i>	<i>Total tax payments good x</i>	<i>Cumulative proportion of taxes paid</i>
3353	20	0.00	2	0.05		0.00
266	23		5	0.05		0.01
2773	25		3	0.05		
3885						
4877						
2777	20,000	1.00	9	0.05		1.00

a. Some goods may be subject to an import duty as well as a VAT tax. This double taxation of some consumption goods should be taken into account when calculating total tax payments.

F.4.3 Price elasticity of demand analysis

When inferring the economic incidence of a tax from household data, it is better, if possible, to take into account how consumers or producers will change their behavior once a tax has been imposed. What would happen if the government levied a tax on a commodity for which demand is highly price elastic—for example, an excise tax on cashew nuts? It is likely that the tax will affect the tax base. For example, the number of producers who sell cashew nuts in the formal markets might shrink along with demand for the commodity itself; that is, demand would fall and further affect the incomes of cashew nut producers. This type of analysis requires the estimation of demand systems for different goods and services in order to obtain estimates of the own- and cross-price elasticities of demand from which welfare losses from taxes can be calculated (see Deaton 1997).

F.4.4 Concentration curves

A graphic illustration of the distributive effect of different taxes across a continuum of households ranked by consumption expenditures can be constructed. This method uses household income or expenditure data to construct the concentration curves for various taxes and compares the relative progressivity of different taxes in the economy using statistical dominance tests, which are described below in greater detail.

The data needs for constructing tax concentration curves are:

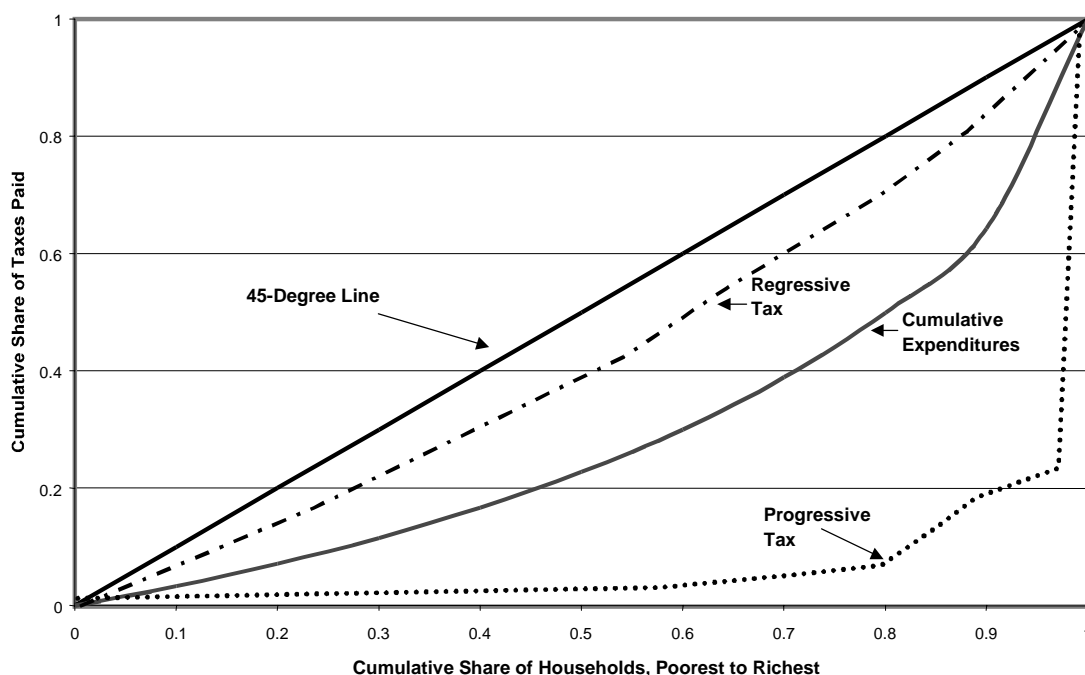
- ⌚ a household survey with information on total household expenditures or income and information on the consumption of specific goods being taxed;
- ⌚ detailed information about statutory tax rates for different types of taxes (this is used to calculate the loss in purchasing power experienced by those people who bear the economic incidence of the tax);
- ⌚ general knowledge about the economic incidence of a tax (that is, the extent to which the burden is passed on) sufficient to underpin the assumptions of the analysis; and
- ⌚ consumer price index (ideally on a regional basis) to adjust household expenditure estimates for regional differences in price levels.

To compute the concentration curve for a given tax, one can follow these steps:

1. Compute total household expenditures for each household in the survey.
2. Calculate the amount of the tax paid by each household based on that household's consumption of that good and the statutory tax rate, and direct tax payments on profits or wages. The assumption is that those who bear the economic burden of the tax will face a percentage price increase equal to the tax rate.
3. Sort the households from the poorest to the wealthiest based on the total household expenditure variable calculated above.
4. In a separate column calculate the cumulative proportion of taxes paid and cumulative proportion of total expenditures as you move from the poorest to the richest household.
5. Plot the cumulative proportion of taxes paid (along the y-axis) against the cumulative proportion of households (ranked from poorest to richest along the x-axis). This can be easily done using Excel spreadsheet software. The resulting graph will resemble figure F.1.
6. Graph the Lorenz curve for household expenditures, which is simply a plot of the cumulative proportion of total expenditures (along the y-axis) against the cumulative proportion of households (ranked from poorest to richest along the x-axis). The Lorenz curve can be a benchmark against which to judge whether a particular tax is progressive or regressive.

Figure F.1 shows a hypothetical plot of tax payments against cumulative household expenditures and the associated Lorenz curve for total household expenditures. The 45-degree line of perfect equality is a benchmark in which expenditures or tax payments are equal across households. The Lorenz curve for household expenditures falls below the 45-degree line, which means total expenditures are not distributed equally across households, as expected. The wider the gap between the 45 degree line and the Lorenz curve for household expenditures, the greater the inequality in welfare implied by the distribution of household expenditures.

The concentration curve for a given tax is more progressive as it approaches the lower right-hand corner of the box. If the concentration curve for a tax is below the Lorenz curve for household expenditures, wealthier households are paying a larger share of the tax relative to their expenditures, and the tax

Figure F.1. Regressive and Progressive Taxes

is considered progressive. Exactly the opposite is true if the tax concentration curve is located *above* the expenditure Lorenz curve. In the example above, the wealthiest 10 percent of households are paying 80 percent of the progressive tax.

As a summary measure, a “progressivity coefficient” equal to the area between the expenditure Lorenz curve and the tax concentration curve can be calculated. Positive values indicate a progressive tax and vice versa for negative values (Younger 1993).

One can also estimate the implicit tax burden on a specific commodity (say, an agricultural crop) associated with an overvalued exchange rate. This requires making an assumption about the size of the implicit tax due to overvaluation. For example, half of the difference between the official and parallel exchange rates times the international price minus a reasonable marketing margin for domestic and international transport and processing could be taken to be the size of the tax (Younger 1993).

The result of this analysis has to be interpreted with care for several reasons, including that combining concentration curves for different taxes (for example, to calculate the combined incidence of gasoline, petroleum, and diesel taxes) may cause the concentration curve to be biased if assumptions about per-unit taxes levied on each of the individual goods are wrong. In this case, the actual taxes are added across commodities and a ratio is not used to derive the concentration curve.

For example, suppose that we undervalue by 50 percent the taxes that households pay for alcohol consumption. Problems would arise if we added the tax on alcohol to the tax on tobacco and checked the incidence of the two together. Because the estimated alcohol tax is too low, its weight in the composite commodity comprising alcohol and tobacco is also too low, and the concentration curve for the two together, which is a weighted average of the individual curves, will be weighted too little by the concentration curve for alcohol and too much by the curve for tobacco (Younger, Sahn, Haggblade, and Dorosh, p. 311).

If the profile of household spending patterns that emerges from the household survey differs from reality (due to underreporting of consumption among different income groups), the estimated tax burden across income groups will be biased.

Comparing the estimated tax payments calculated from the sample (simply by summing up total estimated tax payments for the commodity in question) with actual tax revenues reported by the government is a good way to check roughly the accuracy of the results. It is likely that estimates of tax payments from the household survey will *underestimate* the amount of taxes the government actually collected.

Revenues from certain taxes may be underestimated in calculations based on household surveys due to either under-reporting of consumption or the absence of relevant questions in the household survey instrument (especially relating to firm expenditures). The following tax payments are likely to be underestimated using household surveys:

- income taxes due to the under-reporting of income by households;
- profit taxes due to the lack of coverage of firms in the survey, and undersampling of wealthy households;
- petroleum taxes due to the lack of coverage of firms in the survey; and
- excise taxes due to compliance and measurement problems, especially in economies where the informal sector is large.

Technical Note F.5 Spending Incidence Analysis

How much of the benefits of public spending accrue to households at the bottom end of the expenditure distribution? Examining the incidence of public expenditures helps to answer this crucial question using information about household utilization of publicly financed health and education services, or consumption of publicly subsidized goods.

Public spending on a certain service or category is *progressive* if poorer households derive a proportionately larger share of the benefits than do wealthy households (as evidence by utilization rates, and so forth) relative to the overall distribution of expenditures (or income) as measured by the Lorenz curve. Spending on a certain service is *regressive* if the poor do not derive benefits from the service provided, or if wealthier households derive a proportionately larger share of the benefits. Spending is said to be *neutral* if the benefit shares among the different income groups is equal to the group's income or expenditure shares.

Data needs for spending incidence analysis include the following:

1. a representative household survey with information on household expenditures or income;
2. consumer price index (ideally on a regional basis) to adjust household expenditure estimates for regional differences in price levels;
3. binary indicators of utilization of publicly funded services (such as enrollment in primary, secondary, or tertiary school) for each household in the sample; and
4. (optional) data on per-unit subsidy provided by the government for the relevant service or government budget data by sector and level of service from which one can calculate the per capita public expenditure on a given service, ideally in small geographic areas.

The data steps necessary to compute the spending concentration curve are similar to those described in the tax incidence analysis section above:

1. Compute per capita household expenditures (or income) for each household in the survey.
2. Obtain indicators for households' utilization of publicly funded services in the appropriate sector (for example, primary, secondary, and tertiary attendance).
3. Sort the households from the poorest to the wealthiest based on the per capita household expenditures (or income) variable.
4. Plot the cumulative proportion of spending on a certain level of service along the y-axis against the cumulative proportion of households (ranked from poorest to richest along the x-axis). This can be most easily accomplished using Excel spreadsheet software. The resulting graph will resemble figure F.2 below. The series will be referred to as the concentration curve for public spending.
5. Plot the Lorenz curve for household expenditures, which is simply a plot of the cumulative proportion of total household expenditures (along the y-axis) against the cumulative proportion of households (ranked from poorest to richest along the x-axis). The Lorenz curve can be a benchmark against which to judge whether a particular tax is progressive or regressive.

A binary indicator of service utilization can be used as a measure of the benefits derived from public spending on the service being analyzed. However, using a binary indicator as the basis of such a benefit calculation will not adjust for likely differences in the quality of public services and facilities in poor versus

rich areas (Sahn and Younger 1999) and may cause bias in estimated concentration curves because the binary indicator would overestimate the benefits derived by the poor from low-quality service.

Alternatively, a combined indicator that reflects the underlying value of the service provided (such as the unit cost of the subsidy for health and education services or per capita public expenditures for a given level of service) may be used to calculate the benefit series. Data on per-unit subsidies is often lacking or, if available, may not be as reliable as other data sources due to the inherent difficulty of measuring the cost of service delivery. Therefore, if government budget data by sector and level of service are available, they can be used to calculate per capita government expenditure (for a given service by dividing total government expenditures by the approximate number of people using the service in question) and to estimate the benefits derived from spending among different expenditure groups.

Figure F.2 is an example of spending distributions and an associated Lorenz curve for household expenditures (see Technical Note F.4 regarding interpretation). The concentration curve for spending on a public service is more progressive, for it approaches the 45-degree line of perfect equality. If the concentration curve for spending is below that of the Lorenz curve for household expenditures, wealthier households are deriving a disproportionately larger share of the benefits relative to their expenditures (as shown in the example of spending on tertiary education above). If the concentration curve for a particular spending item is above the Lorenz curve for household expenditures, a disproportionate share of the benefits are accruing to the poor, and spending on this item is considered progressive.

In this example, spending on primary education is found to be progressive; the concentration curve for primary education appears above the 45-degree line, which suggests that a large share of the benefits from public spending on primary education accrue to poorer households.

F.5.1 Potential sources of bias

Using binary indicators of service utilization as the sole basis of constructing the benefit may bias the concentration curve. If the poor have access to lower-quality health and education services, for example, a binary indicator of utilization will cause the benefit estimates to overstate the share of benefits accruing to the poor.

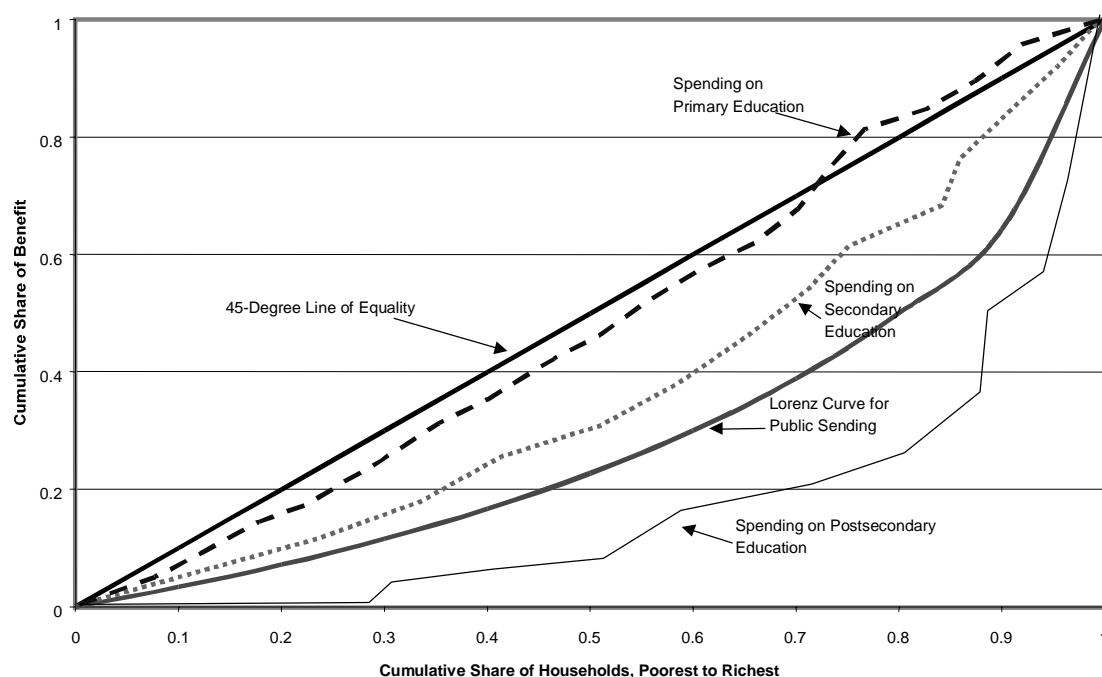
Concentration curves for public spending are calculated as ratios and, therefore, any errors in the assumptions about the per-unit subsidies or per capita public spending do not matter as long as the error is consistent across households.

While graphic analysis of welfare distributions derived from public spending data is an easy way to examine the extent to which different services are progressive or regressive, because the underlying household data are taken from a survey, each point estimate along the concentration curve has an associated standard error. Hence, graphic analysis is insufficient to establish statistically that public spending on a certain service is progressive or regressive. Statistical dominance tests can be used to

Table F.10. Format of Spreadsheet for Spending Incidence Analysis

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>
		<i>Lorenz curve for expenditures</i>				
<i>Household ID</i>	<i>Total Household expenditures (ranked from poorest to wealthiest) in local currency</i>	<i>Cumulative proportion of expenditures</i>	<i>Binary variable indicating utilization of primary schooling</i>	<i>Per capita public spending on primary education (in local currency)</i>	<i>Benefits from spending on primary education</i>	<i>Cumulative proportion of benefits for person j= (sum 1-row(j)) (sum col e)</i>
3353	20	0.00	1	1.5	1.5	0.001
266	23		1	1.5	1.5	0.002
2773	25		1	1.5	1.5	0.005
3885			0	1.5	0	
4877				1.5		
2777	20,000	1.00	0	1.5	0	1.000

Source: From various resources developed by authors.

Figure F.2. Concentration Curve for Public Spending

statistically test the hypothesis of whether one tax is “better” than another, or to test public spending over the expenditure Lorenz curve. By calculating the standard errors associated with each point on the concentration curve, one can test the null hypothesis of dominance along a selected confidence interval. However, using statistical dominance tests will not be possible in many countries, and graphic analysis of concentration curves can provide a good first approximation of the extent to which tax and spending measures are progressive.

Note: This note borrows from Sahn and Younger. 1999. “Dominance Testing of Social Sector Expenditures and Taxes in Africa.” IMF Working Paper No. 99/172, International Monetary Fund, Washington, D.C.

Technical Note F.6 Average and Marginal Benefit Incidence Analysis

What was described in Technical Note F.5 was the *average benefit incidence* of public expenditures. *Marginal benefit incidence* measures the incremental increase in the share of expenditures going to a given quintile with a change in spending on the program.

Marginal benefit incidence analysis is useful for examining the distribution of marginal benefits from program expansion across different income groups. Recent research indicates that there is often early capture of public programs by the nonpoor (due to a political constraint, for example, that restricts any adverse welfare impacts on the nonpoor in the short run) but that the poor will benefit disproportionately more from an expansion of the existing program. For example, the rich may demand short-term payoffs from paying taxes to cover a social program’s start-up costs, and only once the program has expanded (and the marginal costs of program expansion have been lowered) will it be politically feasible for the government to concentrate services in poor, remote areas (Ravallion and Lanjouw 1999, p. 8).

Ravallion and Lanjouw (1999) provide an example of marginal benefit calculations based on quintile-specific participation rates in public works schemes; primary school programs among children aged 5–9 years; means-tested rural credit scheme; and food rationing scheme in India.

Data requirements for marginal participation analysis are binary indicators of participation in publicly funded programs from survey data that enable analysis by quintile. However, in order to identify

the marginal impacts of program spending, the programs subject to the analysis should have inter-regional differences in program scale in terms of financing and the number of participants.

Average participation calculations can begin with the following steps:

1. Calculate total household expenditures for each household in the survey and adjust this measure for regional price differences using a regional consumer price index.
2. Rank the sample household by consumption expenditure (income) per person adjusted for cost of living differences across geographic zones. The zones can be as small as you like (provincial, district, region, township, and so on), depending on the level at which the household dataset is representative of the larger population.
3. Calculate the average participation rate for a given quintile—for example, of consumption per person in the program. The average participation rate is simply the number of participating households (individuals) in a given quintile divided by the total number of households (individuals) in that quintile.

The *average odds ratio* of participation is given by the ratio of the quintile-specific average participation rate to the overall average participation rate (for example, the quintile average participation rate divided by the population average participation rate).

In order to calculate the average odds-ratio of participation, one should:

1. Calculate the average participation rate for a given quintile—for example, of consumption per person in the program.
2. Calculate the average participation rate for the entire population.
3. Calculate the average odds of participation, as defined above.

The *marginal odds ratio* of participation (MOP) is defined as the incremental increase in the quintile-specific participation rate associated with an aggregate change in the program participation rate. It is simply the instrumental variables regression coefficient of the quintile-specific participation rate for a given region on the “leave-out mean” participation rate. The leave-out mean participation rate is calculated for each quintile and region and is the average region participation rate for a given quintile, excluding that region’s participation rate for the specific quintile (which is being used as the dependent variable in the regression). Using the leave-out mean will ensure that the correlation of the regressor and error term is zero in expectation, a necessary condition for the instrumental variables estimate to be unbiased.

Note that this technique requires estimation of quintile-specific regressions across regions—there will be a set of five regression coefficients (one for each of the five quintiles). Implicitly, one is allowing differences in program participation rates across regions to identify the effects of increases in program spending on participation rates among the poor.

This technique is equivalent to regressing the quintile-specific participation rate on the leave-out mean. However, the econometric technique is an instrumental variables regression in which the leave-out mean is the instrument (for example, an exogenous variable that is not correlated with the error term but is correlated with the variable it is instrumenting—the average state participation rate).

Ravallion and Lanjouw (1999) use data from India to analyze the average and marginal benefit incidence of public spending on various programs. Some of their results are presented in tables F.11–F.14. Using the standard average benefit incidence analysis, one might conclude that extra spending on primary schooling would mildly favor higher income groups. The average odds of enrollment are significantly lower among the bottom quintiles than the top two quintiles. Note also that there are significant differences in the average odds of enrollment between boys and girls at the bottom quintile but that the gender-based differences diminish as the consumption measure rises.

Marginal benefit analysis, however, yields quite different results and suggests that the poor would disproportionately benefit from marginal increases in program expansion. Ravallion and Lanjouw (1999) explain that “while the average odds of participation in table F.11 suggest that the share of the total subsidy going to the poorest quintile is only 14 percent (0.71 times one-fifth), the marginal odds in table F.12 imply that the poorest quintile would obtain about 22 percent of an increase in the total subsidy going to primary education” (Ravallion and Lanjouw 1999, pp.14–15).

Tables F.13 and F.14 show that the average and marginal odds of participation lead to different conclusions about the extent to which an average increase in spending on these programs will benefit the poor.

Table F.11. Average Primary School Enrollment in Rural India

Quintile	Boys		Girls		Total	
	Enrollment rate (%)	Average odds of enrollment (mean = 1.0)	Enrollment rate (%)	Average odds of enrollment (mean = 1.0)	Enrollment rate (%)	Average odds of enrollment (mean = 1.0)
Poorest	42.6	0.75	31.6	0.66	37.2	0.71
2 nd	63.4	0.93	43.1	0.91	48.6	0.90
3 rd	60.5	1.07	50.3	1.06	55.8	1.08
4 th	66.1	1.16	58.6	1.26	62.6	1.21
5 th	69.9	1.23	65.2	1.38	67.7	1.31

Note: Average primary school enrollment rates are as a percentage of children ages 5–9, and the odds of enrollment, defined as the ratio of the quintile-specific enrollment rate to the mean rate, are based on the 1993–94 National Sample Survey (NSS).

Source: Ravallion and Lanjouw (1999, p. 24).

Table F.12. Marginal Odds of Primary School Enrollment

Quintile	Boys	Girls	Total
Poorest	1.09 (6.90)	1.08 (9.65)	1.10 (8.99)
2 nd	0.91 (6.05)	0.91 (6.99)	0.97 (7.92)
3 rd	0.92 (5.85)	0.84 (6.54)	0.87 (7.65)
4 th	0.66 (4.10)	0.66 (4.28)	0.67 (4.77)
5 th	0.53 (4.08)	0.70 (5.53)	0.67 (5.69)

Note: See text for explanation of marginal odds ratio.

Source: Ravallion and Lanjouw 1999, p. 25.

Table F.13. Average Participation Rates for India's Main Antipoverty Programs in Rural Areas

Quintile	Public works programs		Integrated rural development program		Public distribution system	
	Participation rate (%)	Average odds of participation (mean = 1.0)	Participation rate (%)	Average odds of participation (mean = 1.0)	Participation rate (%)	Average odds of participation (mean = 1.0)
Poorest	5.0	1.23	6.5	1.03	69.5	0.92
2 nd	4.6	1.13	7.1	1.13	76.7	1.01
3 rd	4.2	1.04	6.4	1.03	77.9	1.03
4 th	3.5	0.86	6.0	0.96	78.1	1.00
5 th	3.4	0.83	5.6	0.89	76.1	1.00

Note: Average participation rates and the odds of participation are defined as the ratio of the quintile-specific participation rate to the mean participation rates for each program, based on the 1993–94 NSS.

Source: Ravallion and Lanjouw 1999, p. 26.

Table F.14. Marginal Odds of Participation for India's Antipoverty Programs

Quintile	Public works programs	Integrated rural development programs	Public distribution system
Poorest	1.16 (3.27)	1.11 (15.49)	1.06 (8.14)
2 nd	0.93 (3.64)	1.28 (17.73)	0.99 (7.26)
3 rd	0.80 (2.98)	1.21 (23.52)	0.91 (6.88)
4 th	0.92 (4.32)	0.96 (19.09)	0.86 (7.16)
5 th	0.55 (3.29)	0.39 (8.06)	0.81 (6.27)

Note: See text for explanation of marginal odds ratio.

Source: Ravallion and Lanjouw (1999), p. 27.

Note: This note borrows from Lanjouw, P. and M. Ravallion. 1998. "Benefit Incidence and the Timing of Program Capture." World Bank Policy Research Working Paper No. 1956, World Bank, Washington, D.C.

Case Study F.1 Implementation of the MTEF in Ghana

The government of Ghana introduced its MTEF in 1998 in order to enhance budgetary performance, as one component of a broader Public Financial Management Reform Program (PUFMARP) that sought to improve the links between policymaking, planning, and budgeting systems and processes at the district and sector levels in central agencies.

Prior to the adoption of the MTEF, the Ghanaian budgeting system was characterized by:

- ⌘ weak explicit links between the annual budget and longer-term plans and policy priorities, like Vision 2020 and the MTEF plan;
- ⌘ tenuous links between national budget allocations and actual spending;
- ⌘ recurrent and development budgets that were prepared independently of each other;
- ⌘ use of incremental recurrent budgeting;
- ⌘ a development budget driven largely by individual donor-financed projects that increasingly encompassed donor-funded recurrent expenditure;
- ⌘ minimal links between resources and results during budget formulation and in budget documentation presented to Parliament;
- ⌘ minimal links between the previous year's budget disbursements and the next year's budget allocations; and
- ⌘ a detailed line-item classification with a bias toward input control.

Shortly after the initial pilot, coverage was extended to all ministries, departments, and agencies (MDAs), thus reducing the possibility that the traditional budget process would run parallel to the MTEF.

Achievements during the first year of implementation included the following:

- ⌘ Steps were taken toward eliminating the barrier between recurrent and development expenditure, including the elimination of Public Investment Program.
- ⌘ The number of budget items was reduced from nine to four (and the expansion from one to the same four items in the case of subvented agencies), and an initial linkage of nonsalary and investment items to objectives and outputs was made.
- ⌘ All MDAs were required to develop mission statements, thus encouraging an outcome orientation within the budget process, and budget allocations were influenced by the content of MDA strategic plans.
- ⌘ Greater emphasis was placed on the reliable and accurate costing of activities and policies in the budget.
- ⌘ The first steps to merging various sources of funding (domestic tax and nontax revenue and donor funding) in the budget were taken.
- ⌘ The original budget ceilings given to MDAs were largely adhered to during the budget formulation process.

The budget formulation phase in the first year of the MTEF successfully initiated a shift from the traditional incremental but fragmented annual budgeting exercise to one that has more of a performance focus; a more medium-term perspective; and one that integrates decisions on recurrent and capital expenditure and sources of funding. The MTEF could also potentially support the current approach to sector deconcentration (devolution of authority within central government sector ministries to district level) by making more transparent the links between resources and performance at lower levels of government.

A second-year review noted, however, that the initial progress, while underpinned by widespread support in the public sector, was largely technical in nature, and the real test would be in the following years. By the end of 2000 (the third year of implementation), assessing progress has been more complicated. Even allowing for adverse macroeconomic events and political change, there have been major gaps in implementation. There is nonetheless strong commitment to the principles underpinning the MTEF, which is a credit to the initial strategy for engaging both central agency and line ministry staff in the process.

F.1.1 Factors that contributed to the initial success of the MTEF

When the initial pilot approach was expanded, the MTEF approach to budget preparation became “the only game in town” in the words of one commentator explaining the successful implementation of South Africa’s MTEF. In other words, during the first year of implementation, the MTEF process became the budget process.

Other lessons that may be important in sustaining the MTEF as a framework for budget preparation in other countries include the following:

- 3 The MTEF approach was introduced to managers and developed by them using workshops built around action learning, not traditional training; consultants worked to facilitate, not lead, the process. Key Ghanaian officials, including a number of the potential losers from the introduction of the MTEF, became facilitators of the process and of members of the MTEF central implementation team.
- 3 Ghanaian officials are responsible for public expenditure reviews, which has enhanced the sense of domestic ownership of the problems in budgeting and public sector performance generally, in addition to the solutions to these problems devised under the MTEF.
- 3 The output of the first MTEF has been incorporated into other government processes. For example, MTEF targets have been included in the performance agreements of chief directors and the MTEF made redundant and replaced the annual action plan.
- 3 There was a relatively good fit between existing sector approaches in, for example, the health, education, and roads sectors and that of the MTEF. Hence, adoption of a national MTEF covering the operations of the entire government brought about existing sector strategies that used a forward-looking approach to budgeting.
- 3 There was strong leadership at the ministerial and chief director levels.
- 3 Donor approaches in the country were broadly supportive of the MTEF approach.

Despite the significant progress made, there are nonetheless weaknesses in Ghana’s MTEF that continue to undermine the efficiency and effectiveness of public spending. These relate to the need for fiscal discipline and predictable budgets, reliable costing of programs, aid management and performance orientation. Due to the fact that these weaknesses are likely to arise in other countries as they implement MTEFs, they are worthy of consideration.

Fiscal discipline and predictable budgets

The achievement of aggregate fiscal discipline and increased predictability in the flow of budgeted resources to MDAs and frontline ministries are key determinants of the success of the MTEF. As of the end of 2000 (the second full year of the MTEF), the record on the flow of budgeted funds has been poor and is straining the credibility of the MTEF. Measures to improve predictability in resources flows are set out in section 6.4.1 of the chapter.

Increasing the predictability of policy is crucial to enhancing the credibility of the government’s expenditure plans. In particular, once the policies and expenditure plans that underpin the MTEF are determined through the annual budget (MTEF) process, they should be sustained through the period of budget execution. If it is necessary to reduce expenditure during budget implementation for macroeconomic reasons, budget priorities must be protected, and the rules for changing allocations must be clear. An improvement in predictability of budget allocations provides a necessary but not sufficient condition for ministries, departments, and agencies to practice fiscal discipline, live within their sector spending ceilings, and avoid the generation of arrears.

Costing policies and programs

A related challenge, which requires guidance from the central agencies and sustained effort across government, is to improve the accuracy of cost estimates for policies and programs that will help to ensure budget priorities, budget allocations, and sectoral spending levels are properly aligned. As discussed in section 6.4 of the chapter, the first step is to create the awareness of costs and then to undertake estimation of the full costs of policies and programs.

Aid management

There is scope to increase the extent to which the MTEF is used to manage external assistance. The widespread support for the MTEF process among donors in Ghana has facilitated a shift among donors to a more sector-oriented financing approach and a move away from individual projects. Even where donors are still project-focused, such as in the roads sector, the focus on the sector strategy as the basis for projects is important. In order to use an aggregate spending ceiling that incorporates external funding on the same basis as domestic funding, it will be necessary for donors to provide credible estimates of aid flows for the coming budget year and also for the timeframe of the MTEF.

Performance orientation

Performance orientation is important in achieving the overall value of the MTEF, yet it is the most institutionally difficult change to manage. While some progress has been made in this regard, greater emphasis needs to be placed on increasing the efficiency and effectiveness of resource use through performance incentives. Performance incentives can be adopted at the agency level, whereby sector allocations will correlate with the conclusions of ex post monitoring of spending efficiency and effectiveness, and also within agencies by better aligning authority and accountability when making resource and personnel management decisions.

Other key issues that have emerged include the following:

- 3 The links between development planning, including the updating of the poverty reduction strategy, and resource and implementation constraints, remain weak. The lack of linkage here is a key factor in the subsequent problems with funding predictability.
- 3 The respective roles of the MOF and the MDAs, and the flow of information among the MDAs, the MOF, and the Parliament and the public, need to be clarified (an initial lesson is how quickly there can be a data overload).
- 3 The MTEF and the government's decentralization strategy need to be more effectively linked.

The final lesson, perhaps, is that the MTEF is not a panacea for all the resource management problems of a country. It is a framework that can discipline and make more transparent the tradeoffs involved in resource allocation decisions.

Source: Based on M. Holmes. 2000. "Ghana: Issues in MTEF." World Bank, Washington, D.C. Processed.

Case Study F.2 Implementation of the MTEF in Uganda

Until 1992-93, budgeting in Uganda had traditionally focused on the annual budget and was not embedded within a rolling macroeconomic framework. Changes in expenditure allocations were often made by incremental adjustments to the previous year's budget rather than by reviewing all allocations in light of the government's spending priorities and prevailing macroeconomic conditions. Such incremental budgeting also meant that there were few mechanisms to ensure that resource allocations (including donor funds) reflected national priorities or were aligned with actual budget disbursements from previous years. Because of the inadequacies in the actual budget formulation process, important decisions about tradeoffs were made during budget execution by budget administrators and technicians rather than by those charged with policy formulation, namely, elected politicians in the cabinet or Parliament.

The development of Uganda's MTEF took place in stages, beginning in 1993 with the formulation of a macroeconomic framework from which the aggregate spending constraint was derived. This development was combined with the selective use of a medium-term budgeting approach to plan for the financing of the wage bill and road sector investments, the latter of which was regarded as the highest priority sector. During the second phase of MTEF development, which began in 1996-97, the macroeconomic framework has continued to provide the basis for determining overall expenditure levels. This has, however, been accompanied by comprehensive sector allocations that are linked specifically to sectoral policy objectives.

The MTEF has provided an important instrument for improved macroeconomic stability. By setting out future limits on aggregate expenditure consistent with low inflation and other macroeconomic objectives, the MTEF has helped sector ministries formulate more realistic budget proposals and has helped the government bring expectations of future financing in line with resource availability. In

addition, the development of sustainable aggregate expenditure ceilings over the medium term has provided a fiscal framework to cost and appraise key policy changes at the sector level.

Ensuring adherence to the aggregate expenditure ceiling has been achieved using a system of cash-flow management under which expenditures are controlled by monthly releases made by the Ministry of Finance, Planning, and Economic Development in the light of actual and projected budgetary resources and the prevailing macroeconomic conditions.

The MTEF approach to budgeting in Uganda has a few key advantages over the traditional annual budget process it replaced. These include those described below.

- The MTEF forces policymakers to focus on the overall budget and to make early strategic choices regarding resource allocation during the preparation of the budget document rather than during actual budget execution.
- The MTEF has enabled policymakers in the cabinet and Parliament to make strategic choices about budgetary allocations. It has therefore increased the political ownership of the budget.
- The MTEF provides opportunities to increase the clarity and focus of donor financing plans and to make donor support consistent with the government's strategic objectives. In addition, the MTEF has allowed the government and donors to rely upon the budget framework as the basis for sector planning and the design of future donor support.

Although implementation of the MTEF has significantly improved the quality of fiscal analysis at the sector level, there are still weaknesses and sources of instability in the MTEF budgeting framework, including those described below.

- Resource envelopes are subject to considerable instability due to fluctuations in tax revenues and volatility in aid disbursements.
- Line ministries have not adhered to hard budget constraints at the sector or program level. Consequently, powerful ministries or agencies sometimes overspend their MTEF ceilings. Given that the overall level of expenditure is effectively subject to a hard budget constraint, overspending in one sector implies spending cuts in another. Therefore, poor budget discipline undermines the predictability of resource flows to sectors, leads to the ad hoc reallocation away from certain sectors where expenditures cuts are politically feasible, and, thereby, undermines the credibility of MTEF as a tool for medium-term budgetary planning. This process in turn weakens incentives for, and undermines commitments to, sector planning.
- Instabilities in the MTEF and the lack of adherence to hard budget constraints by line ministries means that budget allocations and actual out-turns are poorly matched. In Uganda, an index of budget deviation is used to estimate how closely budget out-turns match actual allocations. The index of budget deviation is defined as the sum of the absolute value of all budget shortfalls and overspending by vote, expressed as a percentage of the total budget; this index has remained in excess of 25 percent for nonwage recurrent budget in recent years.
- Most donors do not provide firm medium-term commitments of financial assistance, which makes it difficult to plan expenditures over the medium run given the importance of external aid in the government budget. In addition, external shocks sometimes necessitate expenditure cuts, such as the coffee price boom of 1993-94, in order to avoid excessive money growth or a very sharp appreciation of the exchange rate.
- When expenditure cuts are made relative to the MTEF ceilings, they disproportionately affect a relatively small part of the budget because many expenditure items (such as salaries) are downwardly rigid. Expenditure cuts may also be difficult to implement because an item may be a statutory expenditure, have political importance, or be subject to donor conditionalities as to the minimum level of spending required for cofinancing or external support.
- Weaknesses in sector planning, including a lack of clarity on sector objectives and weak integration of recurrent and development expenditure plans, are various causes of the poor budget discipline discussed above. These weaknesses arise due to weak capacity within many sector ministries to formulate coherent programs within hard budget constraints. There are also acute weaknesses in the capacity of district administrations to undertake budgetary planning and management.
- The quantitative content of Sector Budget Framework Papers (SBFP), which are prepared annually by line ministries and designed to feed into the government's Budget Framework Paper, is very low, especially in the area of program costing. The usefulness of these SBFPs as budgetary plan-

ning tools could be significantly enhanced, improving the quality of cost estimates for sectoral programs and developing performance indicators to monitor the achievement of sector priorities and targets. Because monitoring capacity is weak at the sector level, it will be necessary to establish monitoring systems within the sector programs and at project level, and develop staff accounting skills in order to improve the quality of SBFPs.

F.2.1 Lessons learned

Strengthening the MTEF will require addressing key capacity constraints at the sectoral and district levels for planning, monitoring, and evaluation of expenditure programs. These constraints relate to institutional coordination as well as staff skills and resources. Lessons learned from the implementation of the MTEF in Uganda imply that the most effective way to encourage capacity building is to increase responsibility and ownership.

The Ugandan experience also highlights the fact that it is politically and institutionally challenging to impose hard sectoral budget constraints. However, making these budget constraints hard is a key determinant in ensuring that the MTEF is credible and leads to budget disbursements that reflect public priorities.

Ultimately, the MTEF in Uganda has provided a key instrument for achieving macroeconomic stability, improving expenditure analysis to ensure that budget allocations and disbursements are consistent with public priorities, and improving cost analysis and policy appraisal during the budgeting process.

Source: E. Tumusiime-Mutebile, Permanent Secretary to the Treasury of Uganda. 1999. "Uganda's Experience with the Medium-Term Expenditure Framework." World Bank, Washington, D.C. Processed.

Annex G

Participation: Technical Notes

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<p>Parmesh Shah, Deborah Youssef, Seema Tikare, Paula Donnelly-Roark, and Caroline Robb contributed to this Annex.</p>

Technical Note G.1 Participation versus Conventional Approaches

This technical note discusses some of the benefits of using participation over “conventional,” less participatory approaches in the implementation of development strategies.

In the past, policy formulation has typically been designed and controlled by policymakers with little participation of the populations affected. Successful implementation of development policies is increasingly linked to participatory approaches in terms of effectiveness and sustainability. This is supported by a Task Manager Survey performed by the World Bank (1999a). This study found that 74 percent of the task managers who responded believed that participatory processes in projects had improved preparation, design, and implementation.

Table G.1. Comparison of Conventional and Participatory Approaches Relevant to the PRS

<i>Conventional</i>	<i>Participatory</i>	<i>Advantage of including participatory methods</i>
Initiation/assessment		
Poverty Diagnostics—LSMS	PPA—participation of the poor Collaboration—data collectors and analyzers	Combining datasets and involving a range of stakeholders leads to a more realistic understanding of poverty and more appropriate public actions
Formulation		
Validation workshop with limited stakeholder involvement	Involvement in design, consultations regarding formulation in government, civic engagement at the national and local levels, information dissemination, feedback, validation of revised strategy	<ul style="list-style-type: none"> ➤ Opens dialogue ➤ Builds broad consensus ➤ Country ownership ➤ Develops trust between government and civil society ➤ Increases relevance and probability of successful implementation
Institutionalization: Implementation and monitoring		
Use limited number of strategies and stakeholders (providers) Often limited information flow and feedback Limiting opportunities to adapt to changing conditions and unsuccessful mechanisms (that is, limited impact on poor)	Participation of stakeholders in implementation—priorities, resource allocation, monitoring Mechanism for reanalysis	Maximize impact on the poor—participation gives a range of options that increase the possibility of success—transparency and accountability Adapt institutional arrangements accordingly

Technical Note G.2 Case Example: Uganda’s Poverty Reduction Strategy (PEAP)

The formulation (1995–97) and implementation of the Poverty Eradication Action Plan (PEAP) in Uganda (from 1996) included the key stages outlined below.

G.2.1 Commitment to, and Enabling Environment of, Poverty Reduction

President Museveni’s Manifesto to the Ugandan people in 1986 emphasized the need to reduce poverty. *Macroeconomic growth* and stability achieved through successful adjustment policies since 1987 (6.5 percent annual growth from 1987–97). However, the *Consultative Group* (CG) meeting in 1995 raised concerns about poverty in Uganda based on an analysis of consumption poverty. A subsequent *two-day conference on poverty eradication*, in November 1995, was organized by government and facilitated by the World Bank and attended by high-level government representatives, parliamentarians, participants from the private sector, donors, social researchers, academia, civil society organizations, the press, and the general public. Important features of the conference were the following:

- Government opened the door to potential collaboration with civil society for the first time.
- Diversity of stakeholders attended from government, including the president, donors, and civil society.

- 3 Three months' notice was given of the conference. Civil society organizations (CSOs) presented a very critical but constructive paper.
- 3 Development issues with a poverty focus were discussed for the first time.
- 3 Consensus that macroeconomic growth had not been sufficiently broad based to improve the income or the quality of life of the majority of the population: 60 percent of the population living below the poverty line.

G.2.2 Formulation of the PEAP (1995–97)

A *National Task Force on Poverty Eradication* was formed in late 1995 by the Ministry of Finance and Planning, in consultation with civil society, and was headed by a senior government official. The membership represented civil society organizations, government ministries, and donors. The mandate of the task force was to prioritize public actions across various sectors to maximize poverty reduction and to formulate a strategy, called an action plan (eventually the PEAP), that would direct the use of public resources and actions for poverty eradication.

The task force drafted an *operational direction* to ensure the widest possible participation in formulating the government, Parliament, donors, academia, and CSOs, especially those that were providing social services to the poor. A *resource team* of five local and international experts was hired to draft a working document that formed the basis of consultation. This working document was modified over time. This resource team organized the participatory process on behalf of the task force. A key feature to this administration was the rapid and effective flow of information (such as meeting minutes and workshop proceedings) to all stakeholders during the process.

Thematic working groups (seven) were formed by the task force, with representation from government, civil society, and donors to analyze the situation in thematic areas, such as macroeconomics, social services, and food security. Additional working groups were formed as the need arose. The working groups used existing data, collected additional data (such as the public expenditure tracking survey for health and education), and consulted technical experts and service providers to prepare reports, which focused on priorities for poverty reduction in each thematic area and relations with services and infrastructure—opportunities and constraints.

Thematic seminars meetings and retreats were organized as required by the thematic teams to discuss sectoral issues. Parliamentarians and key stakeholders in the area were invited to these events that were chaired by the Ministry of Finance and Planning and often facilitated by local or international experts. In these meetings, the government was often hard pressed to defend its policies. The minutes were widely disseminated.

Drafting was undertaken by a team of consultants who were not part of the original resource team. This occurred due to the split in the Ministry into the Ministry of Finance and the Ministry of Planning.

Dissemination of the PEAP draft (early 1997) led to extensive criticism. This caused a major revision of the draft based on the outputs of the working groups. Subsequent regional and national workshops were held, and feedback came from subsequent CG meetings. Revision of the PEAP produced the working version in August 1997. The priority areas of the PEAP were verified to a limited extent during two consultations with the poor during the 1997 participatory Country Assistance Strategy (CAS).

The cabinet endorsed the PEAP formally in 1998, although the priority poverty areas had been agreed by Parliament and had operated for the budget-making process since mid-1996.

G.2.3 The PEAP

Since 1997 the PEAP has formed the guiding framework for achieving poverty reduction in Uganda. It was submitted to and endorsed by the Boards of the Bank and IMF as the PRSP in 2000 (see <http://poverty.worldbank.org/files/Uganda%20IPRSP.pdf>). Within the context of continuing macroeconomic stability and broad-based economic growth, the PEAP aims to promote increased incomes for the poor, improving the quality of life of the poor, and strengthening governance.

In order to eradicate poverty effectively, priority poverty areas have been set under the PEAP as primary health care, rural feeder roads, education, water, modernization of agriculture, particularly extension and research. The government of Uganda has embarked on implementing the PEAP through sector policies and sectorwide investment programs.

The PEAP is implemented under the three-year Medium-Term Expenditure Framework (MTEF), a government-wide approach that integrates policymaking with expenditure based on strategic priority poverty areas and current budget constraints consistent with the PEAP and medium-term financial stability. Under the MTEF, line ministries and local governments¹ are given ceilings upon which to base their budget allocations. Revision of the MTEF occurs annually as part of the budget-making process. The annual MTEF revision is a participatory process, as indicated by the 1999–2000 budget process.

Some of the key highlights of the implementation of the PEAP are listed below.

Participation:

1. *Institutionalization of participation* in government processes occurred at national level as a result of the participatory process of formulating the PEAP.
2. *Uganda Participatory Poverty Assessment Process* (UPPAP) was commenced with an extensive participatory poverty assessment, the findings of which were fed into national policy decisions and the budget process (see technical note G.15).
3. *MTEF*, as described above.
4. *Participatory sector reviews and planning*.
5. *District development planning* in some of the 45 districts is performed by consulting lower levels and the community, particularly as a result of the Local Government Act of 1997 and the Local Government Development Pilot Project.

Resource Allocation:

1. *Adjustments* in the 1996–97 budget to reflect the Priority Poverty Areas.
2. *Poverty Action Fund* (PAF), created in 1998 with Heavily Indebted Poor Countries (HIPC) debt relief and subsequent donor funds, has enabled the government to double the resources available to programs within the PEAP. The PAF is ring-fenced for the Priority Poverty Areas but is an integrated part of the budget. PAF funds are used exclusively for conditional grants to districts under each of the priority poverty areas. A committee composed of government and civil society representatives oversees allocations and monitoring of the PAF.
3. Since 1998–99, the MTEF process has incorporated civil society in the dialogue on priorities and spending (see above).

Dissemination:

1. Dissemination to ministries and national NGOs has occurred since 1997.
2. A *Poverty Status Report* was produced in 1999 and 2001, and will be produced every two years. This report, produced by the Monitoring Unit in the Ministry of Finance, Planning, and Economic Development, reviews the implementation of the PEAP and assesses progress in achieving the objectives, goals, and targets of the PEAP. The Poverty Status Report highlights achievements, constraints and challenges for government.
3. A simplified, pictorial version of the PEAP was produced and translated into five of the major local languages.
4. An official regional dissemination tour was conducted.
5. Media dissemination of simple action-oriented messages.

G.2.4 Revision of the PEAP

The first progress report on the PEAP was prepared in 2001 (see <http://poverty.worldbank.org/files/uganda%20ppr.pdf>). Currently, the PEAP is being revised based on new information, including an improved poverty profile as a result of the Integrated Household Surveys, Core Welfare Indicator Questionnaire, UPPAP findings, and other relevant research or reports, findings from consultations with the poor under UPPAP (technical note G.15) reports from the MTEF working groups, and the plan for modernization of agriculture and working groups

The revision is also based on the following participatory processes of UPPAP, MTEF thematic working groups, CSO poverty working group activities, sector reviews, and feedback from the recent

regional PEAP dissemination (Technical Note 15 outlines the plan for the revision of the PEAP in the first half of 2000). During the revision, lessons from the first iteration had ensured that the participatory process was well planned, and that it incorporates public information campaigns and district level inputs. A Poverty Working Group is revisiting the outcome milestones and indicators, under the poverty monitoring system.

Sources: Personal communication. Ministry of Finance, Planning, and Economic Development, government of Uganda; Kitabire 1999; Action Learning Program. Country process document, Uganda.

Technical Note G.3 Participation Action Plans from Several Countries

A participation action plan (PAP) helps countries set out a roadmap for the participatory processes that will be undertaken over the course of the PRS formulation process. Participation action plans have taken many different shapes and characteristics in the diverse contexts of PRSP countries. However, most PAPs have some common traits, such as a timeline and cost estimates. Key options for designing a participation action plan can include, first, finding the starting point for participation by reviewing past and current participation in the country, as well as examining the level of government experience and civil society organization. Second, it can involve determining the feasible level of participation that is achievable given the starting point. The third step often requires planning a realistic participation action plan that takes into consideration the skills needed to carry out the participatory process, the time available, and how much the process will cost.

Below are examples of three participatory action plans from Guinea-Bissau, Bolivia, and Kenya that outline participation in macro-level planning and policymaking.

G.3.1 Guinea-Bissau's Participation Action Plan (September 2000)

Participatory processes have been evident in Guinea-Bissau for more than a decade due to the emergence of nongovernmental organizations. A series of "Perspective Studies" resulted from a wide-ranging participatory process conducted by staff of the National Research Institute of Guinea-Bissau.

The preparation of the I-PRSP, the starting point for the preparation of a full strategy, proceeded in the following stages: (a) declaration of commitment by the government to make the fight against poverty its main concern, announcement of the decision to prepare the PRSP, and consultations with its development partners (April 2000); (b) presentation of the results of the prior consultation to the civil society; (c) establishment of the National Committee (chaired by the vice prime minister and involving relevant ministers, the vice president of the National Assembly, and representatives of civil society and donors) and the Technical Drafting Committee of the PRSP (April 2000); (d) poverty retreat (May 2000); (e) discussion of the first draft of the I-PRSP, involving civil society, the military, diplomats, international organizations, NGOs, development partners, and local authorities (June through August); and (f) redrafting and transmission to the IMF and World Bank of the final version of the I-PRSP (September 2000).

In preparing the full PRSP, the government will continue its consultations with local communities in urban and rural areas, with the goal of achieving a national consensus on aspirations and strategies and preparing regional programs to reduce poverty and improve living standards. Consultations will also continue at the national level through meetings between the government and civil society during 2001, in order to prepare a strategy paper that will include regional grassroots contributions. Representatives of local authorities, associations, labor unions, businesses, and domestic and foreign NGOs will be invited to take part in these consultations. Moreover, the various action plans and programs to be prepared in the context of the full PRSP will also use participatory methods with active involvement of stakeholders.

To encourage popular participation in the development process in the regions, the government will speed up and deepen the process of decentralization and strengthening of local authorities and will consolidate the mechanisms for the participation of civil society. The government will encourage and support improvement of the organizational capacity of different associations and other social and professional groups. As it improves the monitoring of social indicators at the national and local levels and delegates to local authorities the responsibility for preparing and implementing economic and social programs, the government is convinced that this will help broaden the people's support for the poverty reduction programs and increase the efficiency of economic and social activities.

Methodology for Preparation of Full PRSP

The process of designing the full PRSP will comprise five stages: (1) conducting surveys—Multiple Indicator Cluster Survey (MICS), Household Consumption and Expenditure Survey (HCES) 2001, Democratic Health Survey, or DHS); (2) conducting participatory studies on poverty; (3) conducting consultations with development partners; (4) estimation of costs to meet objectives proposed in the various components of the full PRSP; and (5) preparation of the full PRSP. The envisaged timetable was as follows:

Table G.2. Timetable for the Preparation of a Full PRSP

<i>Stages</i>	<i>Responsible Agency</i>	<i>Timetable</i>
1. Surveys		
1.1 Survey of women and children (MICS)	National Statistics Office (INEC)	November 2000
1.2 Updated poverty profile (HCES 2001)	INEC	September 2001
1.3 Education statistics	Min. of Education	September 2001
1.4 Health statistics (DHS)	Min. of Health	September 2001
2. Participatory Study on Poverty	Secretariat of State for Employment and Fight Against Poverty (SSEFAP)	2nd quarter 2001
2.1 Surveys	SSEFAP	April 2001
2.2 Preliminary report	SSEFAP	May 2001
2.3 Full report	SSEFAP	July 2001
3. Preparation of Sectoral Programs and Action Plans	SSEFAP	Nov. 2000-Jul. 2001
3.1 Guidelines for sectoral ministries	SSEFAP	November 2000
3.2 First draft	SSEFAP	June 2001
3.3 Final draft	SSEFAP	July 2001
4. Consultations	SSEFAP	July/Sept. 2001
4.1 Preparation of sectoral programs/action plans		
4.1.1 Interested stakeholders	Relevant ministries	March-June 2001
4.2 Preparation of full PRSP		
4.2.1 Local communities—rural areas	SSEFAP	March-Sept. 2001
4.2.2 Local communities—urban areas	SSEFAP	March-Sept. 2001
4.2.3 Public sector entities	SSEFAP	March-Sept. 2001
4.2.4 Private sector entities	SSEFAP	March-Sept. 2001
4.2.5 Civil society (People's National Assembly, NGOs, religious associations, professional associations, labor unions, armed forces and police, and so on)	SSEFAP	March-Sept. 2001
4.3 International organizations	SSEFAP	Sept. and Nov. 2001
5. Preparation of Full PRSP	SSEFAP	Nov. 2000-Dec. 2001
5.1 Approval of detailed PRSP preparation program	SSEFAP	November 2000
5.2 Definition of system of indicators for full PRSP	NPSRP Committee (PRSP-C)	December 2000
5.3 Preparation of initial draft	SSEFAP / PRSP-C	October 2001
5.4 Preparation of final version	SSEFAP / PRSP-C	December 2001

In view of the preliminary stage of programming of the various I-PRSP components, the government is aware that some of the ambitious policy commitments and objectives described above may have to be reviewed when the full version of the PRSP is prepared.

Monitoring

Preparation of the full PRSP will be the responsibility of the Ministry of Social Solidarity, Reinsertion of Combatants, and Fight Against Poverty, acting through its Secretariat of State for Employment and Fight Against Poverty. A Steering and Monitoring Committee will be established in November 2000 to ensure the successful preparation of the poverty reduction program and monitor data on poverty. In this context, the committee will: (a) approve in November 2000 a detailed program for preparation of the full PRSP; (b) issue guidelines, in December 2000, for line ministries on preparing sectoral programs/action plans, on the basis of, among other things, the I-PRSP and the baseline macroeconomic framework for the period through 2003; and (c) specify, by December 2000, the system of indicators to monitor poverty developments to be included in the full PRSP.

The government intends to set up a poverty observatory system by (a) strengthening national, regional, and local capacities to collect, process, and monitor quantitative and qualitative data on poverty; and (b) providing information to the public on the poverty situation and on the impact of the policies implemented. In order to set up and guarantee the proper operation of the system to monitor the PRSP indicators and, in particular, the data on poverty, the government intends to carry out annual cost-of-living and living conditions surveys, with external support yet to be identified. The government is aware of the need to continue the efforts undertaken in the context of the PRSP with a view to establish an updated knowledge base on poverty. The government intends to strengthen existing information systems, including those pertaining to public expenditures and social indicators at the central and local government levels, and to develop new systems as deemed necessary, such as comprehensive household consumption and expenditure surveys.

G.3.2 Bolivia's Participation Action Plan (May 2000)

Bolivia's government aimed to develop a full strategy for the reduction of poverty with full participation of the principal social and political actors, including the political opposition. A National Dialogue has convened with the following objectives:

- to transform initiatives into state policies aimed at promoting growth and reducing poverty, on the basis of agreements reached between the government, the opposition, and civil society;
- to strengthen civil society trust in this instrument;
- to prioritize the use of resources for poverty reduction; and
- to institute a participatory body in charge of following up on and monitoring commitments made in the course of the National Dialogue.

The agenda to achieve these objectives was as follows:

January 2000	<p>National Dialogue announced and convened.</p> <p>Consultations with all political parties, congress representatives, and the church to reach an agreement regarding the most important topics to be discussed in the dialogue.</p> <p>A steering council will be formed, chaired by the president of the Republic and comprising the vice-president of the Republic; the ministers of the Presidency, Finance and Economic Development; and representatives of civil society. The council will determine the topics of discussion within the issues agreed on in the previous consultations and will promote participation. The council will meet every two weeks to monitor the dialogue process and to follow up on its results.</p> <p>A national dialogue secretariat will also be created, chaired by the vice-president and composed of representatives of the ministries of Finance and Economic Development and representatives of civil society. The secretariat will organize meetings to develop and analyze the proposals and will name representatives for the workshops in which participation will be actively promoted.</p> <p>Discussions with the representatives of the civil society to assist in defining the specific issues for the National Dialogue.</p>
February 2000	<p>Working documents will be prepared by the participants in the dialogue, the government, and representatives of the civil society. These documents will constitute the basis for the discussion. The government will provide official information on social statistics, financial data, and other documents required by the representatives of the civil society for the development of their working documents.</p>
March 2000	<p>Three national workshops will be held to revise the policy proposals obtained from the working documents, and the agreements and disagreements resulting from the workshops will be documented. These results will, in turn, be presented to the regional workshops.</p>
April 2000	<p>The results of the national and regional workshops will be discussed with the goal of helping to define the national policies at local levels, taking the specific problems and characteristics of each region into account.</p>
May 2000	<p>National Dialogue meetings will be held to consider the Poverty Reduction Strategy Proposal and its plan of action.</p> <p>The proposals will be brought together and a final Poverty Reduction Strategy document will be prepared.</p>

G.3.3 Kenya's Participation Action Plan (June 2000)

The government of Kenya undertook an intensive, wide-ranging consultation process. The consultation to elicit views and ideas will be thorough and involve all sectors of society, but particularly the poor themselves together with civic organizations long experienced in addressing poverty. The timetable proposed for undertaking the exercise is given in the table below.

Table G.3. Kenya I-PRSP Participation Action Plan (estimated total cost—Ksh. 70 million)

Objectives/Values	Activities	Stakeholders	Monitoring Indicators	Timeframe
To promote participation of the poor and vulnerable. To increase transparency and accountability to the public from the planning to delivery stages. To reach consensus or agreement with various stakeholders on policies and priorities for poverty reduction. To develop a gender-responsive poverty reduction strategy. To enhance ownership of PRSP.	1. Set up a National Consultative Structure: <ul style="list-style-type: none"> Set up a consultative committee. Stakeholder mapping. Capacity building for all stakeholders on the PRSP process. 	<ul style="list-style-type: none"> Government Sector groups Civil society Private sector Poor communities Media Women's groups NGOs Others 	<ul style="list-style-type: none"> Functioning small working group (6–10 persons). Develop participatory map and agree on principles, select districts and stratify by livelihood patterns. Information dissemination (on the process) through variety of channels, that is, public forums, districts, and civil society organizations, media, etc. Organize capacity building workshops for all stakeholders. 	July/Aug 2000
To reach agreement of monitoring and evaluation plan for the PRSP. To develop an action plan on poverty reduction. To seek support from development partners on the implementation of PRSP. To ensure transparent resolution of implementation difficulties.	2. Conduct Local Level Consultation: <ul style="list-style-type: none"> Transparent participatory poverty diagnosis inclusive of the perspectives of the poor, women, and other vulnerable groups. Poverty information is analyzed. IPRSP reexamined. 	<ul style="list-style-type: none"> Communities Sector groups Local-level institutions Women's groups and women opinion leaders NGOs 	<ul style="list-style-type: none"> Participatory monitoring and evaluation plan that articulates: <ul style="list-style-type: none"> identification of the poor location of the poor identification of their needs for goods and services opportunities for engaging the productive poor confirmation or proposed changes to Interim Poverty Reduction Strategy (I-PRSP) 	Sept 2000
	3. Conduct District-Level Consultation: <ul style="list-style-type: none"> Participatory monitoring and evaluation plan endorsed. Compiling information from local-level consultations 	<ul style="list-style-type: none"> Local communities Research institutions Sector groups Private sector Civil society Women District officials Development partners Media NGOs MPs 	<ul style="list-style-type: none"> Agreed-on list of monitoring and evaluation indicators. Consensus on priorities and strategies for poverty and growth. Ranked priorities and strategies by sector. 	Nov 2000
	4. Provincial Workshops: <ul style="list-style-type: none"> Harmonize sector needs by province and livelihood patterns 	<ul style="list-style-type: none"> Government officials Private sector Civil society Sector groups Women representatives 	<ul style="list-style-type: none"> Articulate reports on needs per sector and livelihood patterns. 	Nov/Dec 2000

Table G.3. Kenya I-PRSP Participation Action Plan (*continued*)

<i>Objectives/Values</i>	<i>Activities</i>	<i>Stakeholders</i>	<i>Monitoring Indicators</i>	<i>Timeframe</i>
	5. National Level	<ul style="list-style-type: none"> › Sector groups › Private sector › NGOs › Development partners › Civil society › National-level committee › Women representatives 	<ul style="list-style-type: none"> › Draft PRSP › Well articulated Participatory Monitoring and Evaluation Plan endorsed › Feedback to stakeholders 	Jan 2001
	<ul style="list-style-type: none"> › Emerging priorities and proposed policy responses. › Agree on and endorse the proposed Monitoring and Evaluation Plan. › National seminar 			
	6. Parliamentary Consultations:	<ul style="list-style-type: none"> › Parliamentary Committees › Cabinet 	<ul style="list-style-type: none"> › Articulated political support and commitment to implementation 	March 2001
	<ul style="list-style-type: none"> › Workshop to disseminate information and discuss draft PRSP. 			
	7. Consultative Group Meetings	<ul style="list-style-type: none"> › Development partners › Civil society › Women › Public media › Private sector › NGOs 	<ul style="list-style-type: none"> › Achieve agreement on strategies › Agree on support to PRSP implementation › Publication 	May 2001
	<ul style="list-style-type: none"> › Feedback › Dissemination 			
	8. Monitoring and Evaluation:	<ul style="list-style-type: none"> › Mps › Communities › Private sector › Women's representatives › Other 	<ul style="list-style-type: none"> › Operational Committee › Feedback to communities › Ongoing improved implementation 	Ongoing
	<ul style="list-style-type: none"> › Set up implementation oversight committees. 			

area of decisionmaking and program implementation, ranging from high to low.

Table G.4. Template to Map the Status of Participatory Processes in Poverty Reduction

Stakeholder Groups		Formulating the PRS		Implementing the PRS		Monitoring the PRS
National Level	Planning	Priority setting	Public action choices	Resource allocation	Programs	Participation in monitoring
Government						
Representative assemblies						
General public						
Poor and vulnerable groups						
Organized civil society						
Private sector						
Donors and IFIs*						
Local level	Planning	Priority setting	Public action choices	Resource allocation	Programs	Participation in monitoring
Government						
Representative assemblies						
General public						
Poor and vulnerable groups						
Organized civil society						
Private sector						
Donors and IFIs						

* International Financial Institutions

Technical Note G.5 Conducting a Stakeholder Analysis

The purpose of stakeholder analysis is that the policymakers gain a better understanding of the range and variety of stakeholders in their society. This can be done through local surveys, studies by researchers, community-based networks that track civil society development and activities, and so forth.

Section 7.4.2 in the chapter provides overall guidance on stakeholder analysis. This technical note sets out a sample template to map stakeholders (table G.5) and questions to ask when selecting stakeholders.

Once stakeholder groups have been initially identified and differentiated by influence and importance, additional questions can be asked. For example:

- Have vulnerable groups been identified?
- Which groups are mobilized and have been active in promoting their interests?
- Have supporters and opponents of PRS been identified?
- Which groups will benefit from the delivery of key PRSP programs and policies and which groups might be adversely impacted?
- Where are groups located? Representatives and membership?

When broad stakeholder groups have been identified, representatives of each group should be selected, preferably by the stakeholder group itself. The representative should be capable of active dialogue, contributing the views of the membership and sharing the information with the members of the group. Consultations with the community and with the poor will be different, as discussed in chapter 9, “Community-Driven Development”; chapter 1, “Poverty Measurement and Analysis,” and section 7.4.2 of chapter 7, “Participation.” Some guidance on selection is given below.

G.5.1 Selection of Representatives within Government

While selecting participants for consultations within government, it is important to include government officials both at the national and the local levels. At the national level, the lead ministry and the line ministries, such as Health, Education, Infrastructure; local government, Gender, and Agriculture; and agencies such as the Bureau of Statistics should attend participation events and, ideally, should be present at the coordination and working groups. Local representation at the national level may be achieved through associations of local authorities or by choosing regional representatives from the districts in each area. Mechanisms to include representative assemblies must be considered. Sharing information or involving a member of a relevant parliamentary committee on the coordination group also could be considered.

G.5.2 Civil Society Selection at the National Level

Selection of civil society organizations (CSOs) is a difficult and sensitive task. The ideal process of selection is carried out by civil society participants themselves, for example, through an umbrella or apex body (such as an NGO federation) or a national steering group with government support.

Table G.5. Mapping of Stakeholders

<i>Influence of Stakeholder</i>	<i>Importance of Stakeholder</i>			
	<i>Unknown</i>	<i>Little/no importance</i>	<i>Some importance</i>	<i>Significant</i>
Unknown				
Little/no influence		CSOs	CSOs Local gov't.	The poor Local gov't.
Somewhat influential				CSOs Local gov't
Significant influence			Donors	National gov't Donors Rep assemblies

The questions below allow the process to be focused on the most appropriate participants. More detailed profiles of civil society might be sought by commissioning a specific analysis or from existing donor files, academic sources or network/apex/umbrella organizations. The types of CSOs expected in the three types of countries are presented in table G.6.

G.5.3 Civil Society Selection at the Local Level

At the community level, selection is complicated process by the size and diversity. It is important again to allow the local groups to make their own selection criteria, with specific consideration given to certain groups, such as women, indigenous groups, communities in remote areas, the sick, and the elderly.

Overall, the coordinating body of the participatory process will, in most cases, have to monitor who is left out when self-selection occurs, and to take appropriate action (for example, separate consultations for indigenous people's groups). The dangers of bias can be reduced by

- listening to the advice of key informants in civil society;
- ensuring that participants represent the full range of groups and interests that exist by gender, ethnic origin, region, and social class; and
- using objective selection criteria, including the organization's track record and credibility among its peers.

G.5.4. Selection Criteria for the Private Sector

In contrast to the international private sector, domestic firms and small businesses often are not as well organized. As a result, when selecting private sector representatives, it will be important to gain access to domestic firms and representative bodies who might not have an established communication link with policymakers.

Box G.1. Key Questions for Assessing Individual Organizations

1. What are the activities in which CSOs and community-based organizations are engaged? Is the area of specialty one of the major poverty priority areas?
2. At what levels do these actions take place and to what extent are they coordinated with other CSOs and with government activities?
3. What umbrella organizations exist that represent major stakeholder groups? Do these organizations coordinate at the local or national level? Is the network far reaching? Are mechanisms for sharing information with membership and the general public in place?
5. How do civil society organizations and government work together and in what areas?
6. What groups of society do not have organized representation or groups?

Table G.6. Country Types: Civil Society Organizations Relevant for Participation at the National Level

<i>Country type I</i>	<i>Country type II</i>	<i>Country type III</i>
<ul style="list-style-type: none"> ➤ Networks of civil society organizations including NGOs ➤ Key NGOs implementing social sector and poverty reduction programs ➤ Federations or networks of community-based associations (membership) both governmental and nongovernmental ➤ Academics and think tanks ➤ Unions (organized) ➤ Private sector including trade and industry chambers ➤ Religious institutions 	<ul style="list-style-type: none"> ➤ Key NGOs implementing social sector and poverty reduction programs ➤ Community associations promoted through state development programs ➤ Academics and think tanks ➤ Private sector including trade and industry chambers ➤ Religious institutions 	<ul style="list-style-type: none"> ➤ Community associations promoted through state development programs ➤ Informal sector organizations (low level of organization)

Technical Note G.6 Guiding Questions for a National Participation Plan

The following guiding questions may assist senior decisionmakers in government to assess their specific context, and to identify priority areas in which participatory processes would best contribute to formulation of a poverty reduction strategy.

1: *Is there participation in formulating poverty reduction strategies or national development strategies?*

Illustrative responses	Suggested follow-up
Yes, we have used participatory approaches in formulating our current strategy.	<ol style="list-style-type: none"> (1) Examine if the extent was adequate. Consider broadening the public understanding of the plan. (2) Assess the degree to which poor and vulnerable groups have been able to contribute to the vision and strategy. (3) Examine the quality of the participation process (see section 7.3 of chapter 7, "Participation").
We are using consultations to develop a national vision and medium-term development strategy.	<ol style="list-style-type: none"> (1) Focus on including civil society organizations in the setting of priority poverty reduction areas and key public action choices. (2) If donors are engaging in national envisioning processes (e.g., United Nations Development Programme), consider increased collaboration and use of existing coordination mechanisms. Analyze where the existing process needs strengthening.
We have so far had little or no participation beyond a small group of national-level officials.	Examine the need and opportunities for broadening the involvement and ownership of the strategy (see sections 7.2 and 7.3 of chapter 7, "Participation").

2: *Are qualitative poverty diagnostics available?*

Illustrative responses	Suggested follow-up
We have already conducted large-scale consultations with poor and vulnerable groups, and adequate/participatory quantitative data exists.	Assess the degree to which the data collected have been analyzed and used in decisionmaking.
The poverty profile is focused on income poverty.	<ol style="list-style-type: none"> (1) Better use of qualitative data (from consultations with the poor) should be made; or (2) More data should be collected to ascertain the perspectives of the poor
We have some relevant data from consultations with the poor, but the data are not comprehensive and systematically available.	Undertake an adequacy assessment (see chapter 1, "Poverty Measurement and Analysis.")
We have inadequate, insufficient, or no qualitative (perspectives of the poor) data.	Consider a primary data collection exercise by consulting the poor (see chapter 1, "Poverty Measurement and Analysis.")
The understanding of poverty is limited to a few stakeholders.	Disseminate information and conduct workshops to build consensus on the understanding of poverty.

3: *Is there participation in budget processes?*

Illustrative responses	Suggested follow-up
Within government, broad priorities are determined by the cabinet; resource allocation is decided primarily by central ministries (possibly under the sanction of the Parliament).	Consider broadening the participation of civil society (through participatory approaches) and the general public (through governance structures) (see sections 7.3 and 7.4 of chapter 7, "Participation").
As above, but local governments have a role in determining priorities and allocations at the local level.	Consider deepening the involvement of local communities by consulting them (see section 7.3.3 of chapter 7, "Participation," and chapter 9, "Community-Driven Development.")

4: Is there participation in poverty monitoring?

Illustrative responses

Yes, we have used participatory approaches in poverty monitoring and/or impact monitoring.

No, we might consider this: What is involved?

Suggested follow-up

- (1) Assess which stakeholder groups have participated and consider broadening the range of groups involved.
- (2) Assess the degree to which the outcomes of participatory efforts have been used in decisionmaking.

See chapter 3, "Monitoring and Evaluation," and section 7.4 of chapter 7, "Participation."

5: Has participation been mainstreamed?

Illustrative responses

We have little experience with participatory approaches, except at the local level associated with donor-funded projects.

We have experience in regularly consulting civil society organizations, central and line ministries, and the donor community, but this rarely extends beyond a series of sporadic meetings to get comments on our draft budget.

Suggested follow-up

Consider using the PRS formulation process to enhance participation and to build local capacity and taking the long-term perspective into account when deciding priority participatory processes.

Consider mainstreaming participatory processes into the implementation and monitoring of the strategy (see section 7.4 of chapter 7, "Participation").

6: Is information about poverty reduction policies and programs widely available?

Illustrative responses

The poverty reduction strategy was drafted in one of our central ministries, and circulated to the donor community.

Government policies and strategies are disseminated widely at national level and to local authorities.

We have had extensive consultations in the capital city with sector thematic working groups (including NGO representatives and district officials) preparing the first drafts of relevant sections of our medium-term budget framework.

Suggested follow-up

Consider broadening the consultative process to include key line ministries and regional and district centers (See section 7.3.4 of chapter 7, "Participation").

Consider a public awareness campaign (see section 7.3.4 of chapter 7, "Participation").

Consider broadening the consultative process to include more stakeholder groups at the local level (see sections 7.2.2 of chapter 7, "Participation").

Technical Note G.7 Costing of the Participatory Process

The cost of undertaking participatory processes obviously varies across countries. It would depend on the context; participatory approaches are to be used for PRS, existing national and local capacity for facilitating and managing participation, the existing donor efforts, and programs for introducing participatory approaches. In a country with a higher existing capacity and intensity of participatory processes at the national level, there is a high potential to strengthen participatory processes at lower incremental costs. Therefore, the incremental/additional costs for strengthening participation in formulating a PRS will be low, although the total costs of participation may still be high (many of which are ongoing and have already been included in a budget).

However, in a country with little capacity and limited participatory processes, efforts would be required initially to assess the situation, including stakeholder analysis, ensuring that poverty data incorporate qualitative approaches, and building local capacity for facilitation and participatory research. The incremental costs may be high if external resources and professional inputs are required for capacity building and facilitation. However, this could be reduced further if facilitators and practitioners from other neighboring countries are used to facilitate the process (for example, using the teams trained in Bulgaria and the Kyrgyz Republic for doing PPAs in Albania).

G.7.1 Major Cost Components

The following are the key areas in which participation has cost implications:

- coordination of the process;
- assessment of stakeholders and participation, and process design;
- participatory approaches leading to more comprehensive poverty diagnostics and consulting the poor for their perceptions, for example, PPAs, *Voices of the Poor*;
- participatory approaches for civic engagement that enable discussions on priority setting and public action choices and for building consensus, for example, national- and local-level consultations and workshops; and
- mechanisms for information sharing, that is, dissemination and feedback mechanisms that include translating and preparing documents in local languages and public information campaigns.

Within these areas, the costs are likely to include training, personnel costs, costs of organizing workshops and events (includes logistics, material, and so forth), and costs of institutional coordination.

In countries where many of these processes may have been initiated and costs have been already incurred, the local capacity for organizing and participating may be high. Therefore, it would be critical to ensure that the PRS process is linked with the existing process. Also more resources are likely to be available from other donors who are already supporting similar processes.

In other cases, limited finances may restrict participation activities to assessment, coordination, a *Voices of the Poor* consultation exercise, limited national consultation, and some sharing of information. Resources would need to be raised externally from the donors active in the country. External expertise may be required for facilitation and capacity development.

Table G.7. Illustrative Cost Estimates

<i>Participatory process</i>	<i>Approximate costs (range in U.S. dollars)</i>
1. Stakeholder analysis and process design	10,000–30,000
2. Coordination group meetings	5,000–10,000
3. Consulting the poor:	
➤ <i>Voices of the Poor</i> (seeking direct perceptions of the poor)	25,000–50,000
➤ PPA (input to the poverty diagnostic and seeking perceptions)	75,000–100,000
4. National-level consultations	80,000–150,000
5. Local-level (for example, regions/districts) workshops	20,000–30,000
6. Focus groups with key stakeholders	10,000–20,000
7. Public Information campaign	40,000–100,000
8. Feedback and validation workshops	50,000
9. Institutional structures within government for participatory processes, feedback, and analysis (for example, UPPAP, Uganda)	300,000–500,000

Note: All these costs are for a single event. Many events may be required for representation and iteration. The number and intensity of these participatory processes would depend on the context and design of the participatory process.

Technical Note G.8 Ensuring that Participatory Processes Include Women

Initial difficulties are often experienced in meeting with groups of poor women. In some communities it may be necessary to have separate sessions for women and men, while in other cases special techniques must be used to ensure that women are actively involved. Some of the steps that can be taken to promote women's participation include the following:

Assess existing mechanisms to evaluate the extent to which different groups of women (single/married/widowed; young/old; poor/less poor, and so forth) are involved in participatory processes. In many cultures the most important kinds of consultation are face-to-face, so the assessment must capture the dynamics of traditional culture as well as observe what happens in formal meetings.

Assess the barriers to women's participation. In some cases the barriers may be cultural, but in many others the reasons are more due to meetings that are held at times and places convenient to men, and the

level of women's participation could be significantly increased simply by consulting them on when and where to hold the meeting. In some cases it may be necessary to pay for or provide transport so that women can attend. Child-care arrangements may also be required.

Assess the extent to which women feel that their views and priorities have been reflected in the choice of projects.

Experiment with and evaluate different mechanisms to increase women's participation.

Table G.8 below identifies some solutions to overcoming barriers to women participating in consultations (see also chapter 10, "Gender").

Table G.8. Overcoming Barriers to Women's Participation in PRS Consultations

<i>Barrier to women participating</i>	<i>Possible solutions</i>
National level	
Lack of representation at national consultations	<ul style="list-style-type: none"> ➤ Include women's networks and umbrella organizations ➤ Include ministry handling gender issues
Women's participation is not considered by organizers	<ul style="list-style-type: none"> ➤ Ensure there are women members of coordinating group
Local level	
Women do not attend meetings at lower levels or do not speak	<ul style="list-style-type: none"> ➤ Hold separate meetings with women ➤ Organize meetings at a venue and time to suit women ➤ Ensure the meeting is put into the context of women's lives—what affects them
Women are not informed	<ul style="list-style-type: none"> ➤ Targeted dissemination of information about PRS and poverty priorities to reach women ➤ Use women's networks or umbrella groups for representing the voice of women at national levels
Culture may limit meetings of women with male facilitators or outsiders	<ul style="list-style-type: none"> ➤ Use female facilitators and local interlocutors
Facilitators may be told information that the participants expect they want to hear, possibly reinforcing the stereotype	<ul style="list-style-type: none"> ➤ Build trust with women, locally and nationally ➤ Use trusted or well-respected facilitators
Women's views are not heard nationally	<ul style="list-style-type: none"> ➤ Develop new gender-inclusive consultation mechanisms

Technical Note G.9 Designing a Participation Plan

This technical note offers some basic tools for designing a Participation Action Plan (PAP), once the linkages between stakeholders and participation in government processes have been understood. This tool can be used to assign participation objectives and participation methods to stakeholder groups, as well as a timeframe and costing implications.

G.9.1 Increasing the Capacity of Civil Society to Dialogue

In a country with limited CSO development, capacity needs may be identified as strengthening the ability of civil society to dialogue by organizing a workshop for major stakeholder representatives, building local capacity to consult communities by local authorities with local expertise and organizing training and information sharing by collaboration with media groups. In a type III country, all-round capacity for participation would be limited. A starting priority may be identifying capacity for consulting the poor from neighboring countries, if not available locally, and using this expertise to conduct the consultation and train local facilitators. Additionally, national training may be required for government, and external technical advisory support may be needed.

In order to strengthen constructive dialogue, the following activities may be considered to build capacity of CSOs:

- share information and aid understanding—government facilitates civil society;

- 3 training in influencing government processes and negotiation techniques for key government and civil society stakeholders, possibly funded by donors;
- 3 building capability to design and conduct policy-focused research;
- 3 developing market research skills to test public opinion and evaluate the impact of policy influence initiatives;
- 3 negotiation skills, including analysis of institutions and power relationships; and
- 3 broadening linkages and networks.

Table G.9. Design Analysis: Linking Stakeholder Analysis to Participation Tools and Techniques

Stakeholder group	Objective of their intervention Why are they included?	Type of participation	Participation methods		Time line		Estimated cost
			Which ones?	Who will be responsible?	Start date	End date	
Government							
Representative assemblies							
General public							
Poor and vulnerable groups							
Organized civil society							
Private sector							

Technical Note G.10 Measuring Progress in Participation

Milestones, or indicators, for measuring progress in participation during the formulation of the PRS should be developed in a participatory manner. This increases ownership and commitment to the process and increases the likelihood of achieving participation outcomes. Table G.10 provides some milestones that may be appropriate for the three different typology countries.

There are, however, no universal proposed criteria for measuring the quality of participation. Indeed, the issue of minimum acceptable standards for quality in participation is controversial. One approach would be to ensure that the weakest and most powerless group is enabled to participate in the policy formulation. This will ensure that the voices not normally heard are included.

At the same time, the relevant dimensions for assessing the quality of participation could include the following:

- 3 **Quality of the resulting policy** in terms of how equitable, farsighted, and sustainable its effects are
- 3 **Inclusiveness** of the participation process: the hearing and inclusion in negotiations of all the different perspectives and priorities on a particular issue
- 3 **Broad-based ownership** providing attainment of widespread ownership of and support for the policy in the country and throughout the population
- 3 **Capacity-building** enhances the capacities of various stakeholder groups and public agencies to enable participation in future policy work.

Table G.10. Participatory Process Development Milestones

<i>Country type I</i>	<i>Country type II</i>	<i>Country type III</i>
<ol style="list-style-type: none"> 1. PRS coordination mechanism in place 2. Participation assessment performed 3. Consensus through consultation has been reached at the national level on the PRS process 4. The PRS formulation process has broad-based representation at all levels 5. The poverty reduction strategy formulation process has broad-based representation in civil society 6. Participatory processes have taken place for priority setting for poverty reduction 7. Local capacity to organize participation is being increased 8. Participation is being decentralized by engaging local civil society 9. Information on poverty priorities is being disseminated at all levels 10. All data gathered, especially qualitative data, is being incorporated into the poverty profile 11. The monitoring system is reoriented to include participation 12. Poverty reduction strategy paper has been prepared and validated by a wide range of stakeholders 	<ol style="list-style-type: none"> 1. PRS coordination mechanism in place 2. Major stakeholder participation in government processes to date has been assessed 3. Current mechanisms for information flows have been analyzed within government and between government and civil society 4. Consensus has been reached with civil society at the national level on the PRS process 5. Interim PRSP has been validated 6. Capacity developed 7. Understanding of poverty has improved through use of qualitative data and perceptions of the poor, and consensus built 8. Local capacity to organize participation is being increased 9. Information flows between government and civil society have been improved 10. PRS paper has been prepared and validated by a wide range of stakeholders 	<ol style="list-style-type: none"> 1. PRS coordination mechanism in place 2. Examination has been conducted into the existing participatory processes within government 3. Assessment has been made for possible stakeholder participation in national processes 4. Capacity for organizing participation has been evaluated 5. Capacity has been developed 6. Current mechanisms for information flows have been analyzed, especially within government 7. A process of consensus building on assessment results and the way forward has been undertaken 8. Validation of the Interim PRSP has been undertaken 9. Poverty diagnostic, including qualitative data, has been conducted 10. Validation of the PRS has been done with some inputs from the local level
Medium-term goals		
<ul style="list-style-type: none"> ➤ Develop mechanisms for institutionalizing participation in implementation, review, and monitoring government processes 	<ul style="list-style-type: none"> ➤ Develop mechanisms for ongoing consultation and feedback in poverty reduction in government processes ➤ Increase information given to the public ➤ Increase participation in implementing and monitoring poverty reduction 	<ul style="list-style-type: none"> ➤ Expand the processes of participation initiated through PRS formulation ➤ Increasing information flows within government and between government and the public ➤ Continue processes of stakeholder engagement that have been started in the PRS formulation process

Technical Note G.11 Overcoming Constraints

This technical note provides some guidance about the pitfalls of a participatory process and the constraints that may be faced. The following table offers some possible solutions to overcome frequently encountered constraints.

Table G.11. Possible Solutions to Overcome Constraints of a Participatory Process

Constraints	Solutions
Creating parallel participatory processes that are not integrated with existing political structures.	Link the participatory processes for PRS with government decisionmaking
Limited trust between stakeholder groups	Finding allies Identifying facilitators
The diverse perceptions of different stakeholders concerning the participation process, poverty, and the importance of poverty reduction efforts in the country	Information flow – scope and objectives agreed on and made clear Facilitators Emphasize the importance/benefits of participation
The high expectations of stakeholders that all of their desires will be met	Emphasizing benefits in the bigger picture Emphasizing change takes time Explain the implications of their demands Information sharing and feedback mechanisms Scope and objectives agreed on and made clear Realistic goal setting in participatory manner Improved information flow
Information regarding the purpose, the process, and the outcomes of participation is not widely disseminated	
Poorly planned participation processes that are open ended and not realistically budgeted	Identifying facilitators—impartial, respected Cost the process and determine funding available
Lack of political will among government agents to allow wide participation due to the fear of loss of power or influence	Develop commitment Emphasize benefits of participation
Skeptical attitudes and nonparticipatory behaviors	Emphasize benefit of participation in achieving outcomes—poverty reduction, economic growth Emphasize benefits and opportunities to work together
<ul style="list-style-type: none"> ➤ Government—know what people want, not transparent ➤ Civil society organizations—want to criticize, disrupt, use process for ulterior motives 	Ground rules—Active listening, respect of other stakeholders and their views, open-mindedness
Time pressure	Careful planning to maximize input and broaden input of views of variety of stakeholders
Limited capacity	Identify deficiencies and train or recruit Seek technical assistance
Limited financial resources	Budget for participation Fund-raising
Consultation fatigue	Use and build on ongoing and existing processes
Conflicting interests/disunity between stakeholder groups such that processes are disorganized	Organize process to avoid conflict Emphasize benefits
Different bargaining powers	Awareness so that participation can be employed to access the views of all stakeholders in the process
Confidence of government is abused by CSOs, e.g., leak government documents as basis for publicity or lobbying	Government increase transparency Emphasize benefits Form a compact and ground rules of participation
Token effort by the organizers	Commitment by government Emphasize benefits

Technical Note G.12 Private Sector Participation in the PRS Process

Private sector participation is essential for a fully representative view of a national context. This technical note provides some mechanisms and case examples illustrating private sector participation in macro-policy formulation and implementation, as well as good-practice examples.

The private sector can be engaged at local and at national levels through the following mechanisms (also refer to section 7.2):

- participation in PRS coordination and working groups;
- representation by private sector foundations, or umbrella or network groups, such as chambers of commerce, manufacturers' associations, farmers' associations, professional bodies, cooperatives;
- focus discussions;
- perception surveys; and
- workshops, as in the case example of Uganda below.

Inclusion of the private sector as an active participant in a national dialogue for poverty reduction increases the ownership of the strategy by the private sector and increases the likelihood of working in partnership with government and raises consciousness concerning the concerns of the poor.

Box G.2. Uganda: Workshop with the Private Sector

In Uganda, the Manufacturers' Association, the Ministry of Finance and Economic Planning, and the World Bank organized a workshop to

1. review survey results of 105 businesses and 265 private investors;
2. introduce a private sector development strategy to a broad constituency of private sector, government, and donors;
3. achieve agreement of fundamental elements; and
4. identify a private sector task force to begin preparation of a possible participatory project in this area.

The workshop design used public involvement methods to bring in large numbers of stakeholders in building agreements about policy, strategy, and execution. The method integrated more than 70 participants in a series of small group discussions designed to identify issues, resolve conflicts, and build understanding about a proposed program design. Summary responses from participants indicated that they believed the workshop demonstrated the government's commitment to a collaborative, demand-driven process.

Source: *World Bank Participation Sourcebook*, World Bank, Washington, D.C. (1996, p. 190).

Technical Note G.13 Workshop Methodology

This technical note provides a brief overview of participatory workshop methods. It offers ideas on how to design a workshop and some guidance on timing preparatory steps.

Stakeholder workshops, sometimes called action-planning workshops, are used to bring stakeholders together to design development projects. The purpose of such workshops is to begin and sustain stakeholder collaboration and foster a learning-by-doing atmosphere. A trained facilitator guides stakeholders, who have diverse knowledge and interests, through a series of activities to build consensus. Appreciation-Influence-Control (AIC), and Objectives-Oriented Project Planning (ZOPP), are two such methods.

When working within a constrained timeframe, sequencing and timing for national consultations are key. The table below has illustrative timeframes, which may be useful for planning.

Box G.3. Practice Pointers: Designing a Workshop

- **Only plan what you can plan**
Leave room in your planning for making continual changes.
- **Don't plan further ahead than what can be overseen**
It is necessary to think ahead and plan a broad outline of each session, but keep in mind that the process can develop in different ways. Therefore, detailed planning is usually unnecessary.
- **Plan as much as possible with the involvement of the participants**
Because it is their learning experience, participants can become involved in deciding the purpose, direction, and possibilities of the course.
- **Move from the general to the particular, then back to the general**
This will keep the participants' attention if they move from the larger picture to more specific issues. It is important at the end, however, to come back to larger principles and to summarize what they have learned.

Box G.4. Practice Pointers: Designing a Workshop (continued)

- 3 **Stay close to reality**
The more realistic the exercises, the more likely it is that learning will be integrated into the participants' future behavior.
- 3 **Always consider participants' energy levels**
Provide variety and regular, well-timed breaks. Participants will enjoy the experience more if there is varied subject matter, roles, and types of learning situations.

Source: Pretty and others (1995).

Table G.12. Sequencing and Timing for National Consultations

<i>Stage and activity</i>	<i>Timeframe</i>
Identify and invite possible participants	One month prior
Chose a neutral venue and a professional facilitator	One month prior
Prepare materials for distribution	Two weeks prior
Distribute materials to participants	One week prior
Describe the objectives and scope of the consultation	Day of (should also be in invitation letter)
Feedback results to invited participants	Between two week and one month afterwards
Reconvene consultation	As PRS process progresses

Technical Note G.14 Methods for Consulting the Poor

Direct consultations with the poor can obtain views and priorities that would not otherwise be heard. This technical note provides guidance on sample selection and methods, as well as pitfalls to avoid.

At every site it is vital to ensure adequate consultations with the poor. Teams should use their judgment about the best sequences and with whom it is best to start. In some communities it may be sensible and tactful to start with mixed groups, including the nonpoor, and to meet and consult with different categories of people and households. There may also be key initial informants among the nonpoor. A range of people may be involved in the process of social mapping, household listing and well-being ranking to identify the poorer households and people. Meeting a mixture of people initially can also help in triangulation. Focus groups of the poor can then be invited for consultation. In other cases, it may be easy to work directly with groups of poor after going through the appropriate process and informing local authorities and leaders about the purpose of the study.

Within a community, separate discussions need to be held with groups of poor men, poor women, youth and with other key vulnerable groups identified in the community. The results from discussions with these different focus groups in a community may vary. It is important to bring out these differences within a community. Ultimately, the team should be confident that the findings are representative of the poor in that community because the study team has met with enough poor people in the community that the findings have been sufficiently cross-checked.

To summarize, there are a series of practice pointers for increasing the impact of consulting the poor.

1. Understand the political environment
 - 3 Undertake the PPA only after potential political implications have been thought through.
2. Create a conducive policy environment if possible
 - 3 Build consensus among various government branches. The value of conducting a PPA where there is limited government support will be compromised.
 - 3 Build dialogue to create a more open climate so that ministries feel included in analyzing the resulting data.
 - 3 Maintain a policy dialogue through continuous follow-up with various stakeholders.
 - 3 Use personal judgment and attune stakeholder involvement to the overall political, social, economic, and institutional environment in the country.

Box G.5. Consulting the Poor about Poverty: Summary Checklist

The following fundamental tasks need to be addressed in designing a PPA process:

- Identifying the central institutional location for the PPA (seeking commitment, access to policy information, and influence)
- Finding technical assistance (seeking experience, flexibility, capacity to deal with different areas and functions—training, analysis, and so on)
- Identifying implementation partners for different functions (financing, policy influence, design and analysis, training, dissemination, logistics, field management, and so on)
- Agreeing on objectives and research agenda (seeking shared commitment among key partners, clarity, manageable scope)
- Identifying members for field teams (according to agreed-on criteria, which may include openness to change in values/attitudes, flexible availability for follow-up, expertise and experience, understanding and access to policy debates, area/linguistic/cultural familiarity)
- Identifying sources of financial support (seeking flexibility, long-term commitment)
- Selecting field research sites and participants—geared to representing the social and livelihood conditions in poor communities in the country/state/province (seeking credibility for results, a manageable scale for fieldwork, appropriate disaggregation to investigate causal links, enhanced value for policy analysis)
- Developing an integrated methodology for field research, synthesis of findings and policy analysis using results (seeking an appropriate balance between standardization and flexibility for the goals of the PPA; a guiding conceptual approach; methods that allow for comparison, aggregation, and synthesis of diverse materials).
- An implementation plan for fieldwork (which allows space for reflection, sharing of experiences, recording, reporting, and analysis)

The following are key lessons from the experience and practice of PPAs:

- Gear the timing of the design process to building ownership and commitment in key partners.
- Set clear objectives and establish a flexible structure for support.
- Work with key stakeholders to establish the thematic focus for the PPA.

Finally, the following potential pitfalls should be borne in mind during consultations with the poor:

- When facilitated by outsiders, participatory approaches can raise expectations of local people for future involvement.
- The outcome depends on the attitude and vision of the persons facilitating the process.
- If carried out too quickly, consultations can lead to incorrect conclusions.
- The choice and sequence of methods needs to be adapted to fit each situation.
- In most cases, consultation with the poor will not lead to quantifiable results.

Source: Andy Norton and others, “A Rough Guide to PPAs: An Introduction to Theory and Practice,” draft (Jan. 2001, p. 43).

3. Ownership

- Key policymakers should lead the process from the beginning. Develop relationships with and understanding of the key players.
- Know how to organize workshops with appropriate follow-up. Workshops are not the end of a process of participation. Final consensus might not be achieved, so the documents should reflect the differing views. If people’s views are not included, that should be explained. The quality and follow-up of workshops will affect the impact of the PPA and the relationship among participating stakeholders.

4. Strengthen the policy delivery framework

- Identify a credible institution where participatory research could be analyzed, coordinated, and disseminated.
- Investigate provincial capacities.
- Work with institutions (universities, networks of social scientists, and so forth) already undertaking social research to ensure that research is not duplicated and the PPA becomes part of the body of social knowledge.

Table G.13. Cost and Duration of PPAs

Cost	US\$75–US\$125,000
Number of communities selected for research	40–60
Time spent on training	2 weeks
Time spent on field research	3–6 months
Time spent on analysis	2–3 months
Size research team (including team leaders and trainers)	10–20 people
Composition of research team	Nationals of country, half men and half women, ability to speak local languages, representatives from various ethnic groups, and a cross-section of age groups.
Typical agency conducting the fieldwork	Government extension workers; local and international NGOs; academic institutions; independent consultants and firms
Examples of donors who have contributed to government-led PPAs	DFID, World Bank, Action Aid, Oxfam, UNDP, UNICEF, DANIDA, Asian Development Bank

Technical Note G.15 Can the Poor Influence the Budget? Case of Uganda

G.15.1 Case Example: Uganda Participatory Poverty Assessment Process

The Ugandan PPA is a unique ongoing process to incorporate the perspectives of the poor into the policy and planning dialogue for poverty reduction. The Uganda Participatory Poverty Assessment Process (UPPAP) is a three-year initiative located in a small, dedicated unit within a key central ministry of the government—the Ministry of Finance, Planning and Economic Development (MFPED).

To date, the *Voices of the Poor* from the recent PPA have been strategically disseminated to enable the information to influence the budget-making processes and resource allocation priorities at the national government level, in the following manner:

1. The PPA findings served as input to the Mid-Term Expenditure Framework (MTEF) process (see Technical Note 7), such that the Poverty Working Group used the findings briefings extensively, and briefings were prepared for thematic groups and presentations made at retreats.
2. Additional focus and resources were allocated to the clean water sources.
3. The requirement for flexibility in the utilization of conditional grants paid to districts from the central government was realized so that local government could adapt its spending to meet location-specific needs.
4. The expenditure monitoring of funds disbursed to district authorities from the Poverty Action Fund was strengthened at local levels to increase the effective utilization of conditional grants and the impacts on local people.
5. The perspectives of the poor featured in the *1999/2000 Background to the Budget* and the Poverty Status Report, among other government publications.

In addition to these impacts on resource allocation, the perspectives of the poor contributed to the following:

1. Poverty indicators identified by poor people were included in recent national household surveys.
2. Basis of the revision of the Uganda PRS—the Poverty Eradication Action Plan (PEAP).
3. Creation of the mandate of the Plan for the Modernization of Agriculture to focus on the poor farmer.
4. Raising awareness of local and central government politicians and civil servants and refocusing the poverty dialogue in terms of the poor man and the poor woman.
5. Utilization of participatory methods by local authorities to consult at the local level.

The success of UPPAP has been attributed to the following:

1. Conducive environment for poverty reduction
 - Macroeconomic stability

- 3 Established system of decentralized governance
 - 3 Efforts to promote good governance
 - 3 National vision for poverty reduction
 - 3 Commitment to poverty reduction formalized in comprehensive strategy
 - 3 Mechanisms for setting budgetary priorities in line with poverty reduction objectives
 - 3 Commitment of government resources to poverty reduction
 - 3 Poverty monitoring system in place
2. Characteristics of UPPAP process that maximize the scope for policy influence
- 3 Ownership of the PPA by government
 - 3 Location of the PPA process within government
 - 3 Careful design that built upon previous participatory studies and with specifically trained local researchers
 - 3 Implemented in partnership with local government authorities, CSOs, and donors
 - 3 Strategic methods of dissemination of PPA findings
 - 3 Flexible, reflective mechanisms of policy review
 - 3 Institutionalization of consultations with the poor at national and local levels
 - 3 Strategies to ensure sustainability of the PPA process

Sources: Ministry of Finance, Planning and Economic Development 2000, Personal communication; McClean and Muhakanizi (1999); Robb (1998).

Technical Note G.16 Participatory Policy Formulation and Implementation: Poland's Pension Reform

In January 1999 Poland launched a new pension system that was the result of several years of broad outreach campaigns and complex negotiations within government, and between government and key stakeholder groups.

An ongoing debate on pension reform quickly spread from experts to policymakers as pension spending almost doubled between 1990 and 1994, to 15.5 percent of gross domestic product in 1994. Fiscal conservatives pushed successfully to limit deficit spending. Through a series of ad hoc measures, policymakers began to chip away at pension benefits in an effort to close the gap between contributions and benefits.² This avoided an immediate fiscal crisis, but it provoked strong criticism from pensioners and unions and may have contributed to the collapse of the post-Solidarity government in 1993.

A new labor minister appointed in February 1996, Mr. Baczkowski, built a team of experts and began working quietly on a significantly revised program; he described this program as an update and expansion of the previous proposal, which was viewed as too conservative. The revised program, entitled "Security through Diversity," was completed in February 1997, three months after Baczkowski's sudden death.

In May 1997, as Parliament considered the Security through Diversity program, the Office for Pension Reform (OPR) launched a public relations campaign that stressed the long-term insolvency of the current system and the necessity of comprehensive reform. The office conducted public opinion surveys and widely publicized the results, organized seminars, developed a recognizable logo for the office, held training programs for OPR and ZUS (Social Insurance Institution) staff in communications techniques and the principles of the proposed new system, maintained a Web site, and produced thousands of brochures targeted to employers, unions, and different age groups. Members of the media joined parliamentarians and government officials on a study tour to four countries that had undertaken comparable reforms, and this greatly informed their reporting.

Early press releases outlined experiences with pension reform in other countries and developments in the legislative process, while later ones explained the specifics of proposals adopted in Poland. However, by the end of 1998, polling clearly indicated the need to shift from opinion leaders to the general public. Only 30 percent of people surveyed said they had heard of the pension reform and

Box G.6. Key Stakeholders: Pension Reform in Poland

- 3 Alliance of the Democratic Left (SLD) government 1993-97 (left-centrist)
- 3 Solidarity Electoral Action government 1997-present (right-centrist)
- 3 Trade unions, including “old” OPZZ and “new” Solidarity federations
- 3 Pensioners and workers nearing retirement (close to 50 percent of eligible voters)
- 3 Middle-aged and young workers paying into the system
- 3 Social Insurance Institution (ZUS)

understood the changes proposed. Some 55 percent had heard of a reform but did not know the specifics. Some 83 percent felt they were not sufficiently well informed, and 77 percent said they would like to learn more.

In March 1999, a second, broader campaign launched with objective of explaining the new system and the different options open to different age groups. Conflicting information was put out by various pension funds with massively larger advertising budgets (US\$100 million compared to US\$5 million spent by the government). Software for estimated pension benefits could be downloaded from the OPR website. A call center was created and handled 200,000 inquiries from March to December 1999; press, television advertisements, and brochures promoted the call center and the new ZUS; four televised spots reached an estimated 96 percent of urban adults; booklets were included with monthly telephone bills.

With outside consultants, OPR used focus groups to track the effectiveness of outreach efforts and, where necessary, make midcourse corrections. Initial results were disappointing. People could recall slogans but did not understand what they meant. Focus groups indicated that the key sources of information for people were conversations with friends, press articles, and literature produced by private pension funds. ZUS was a last resort and associated with old system.

Additional focus groups indicated that people realized that pension funds were providing inadequate information and that information from the Office of the Plenipotentiary was considered more reliable than information from ZUS.

Public education efforts continued, and the UNFE also ran a limited information campaign and held visitors’ hours in its offices. Officials appeared on radio and TV programs and joined debates and conferences, mostly aimed at supporting employers and unions in setting up voluntary “third pillar” schemes. Rather than producing easy-to-use explanatory tables, the UNFE proposed new cost structures that created new confusion. But, as noted, they played a very constructive role in monitoring the advertising and sales blitz conducted by private pension funds in 1999.

This Polish experience suggests the following conclusions:

- 3 Special offices created early in the process were very important in coordinating reform and signaling high-level commitment.
- 3 The government built support outside its own governing coalition that was essential for sustaining reforms. The support of opposition deputies was essential to approval of key aspects of the first-pillar law.
- 3 The government effectively reached out to trade unions and business associations before finalizing legislation for Parliament.
- 3 The broad consensus carefully constructed during the reform process slowed the pace and content of reform but contributed significantly to implementation.
- 3 Important concessions made to build support will significantly increase transition costs but do not undercut the essential objectives of the reform.
- 3 Not only the government but trade unions and other organizations faced difficult tradeoffs. The loss of early retirement options and other occupational privileges and a decline in the level of pensions from 1994 levels was a difficult blow. But there was an assessment that the relatively exceptional circumstances in the mid-1990s were not sustainable over the long term, and the trade unions are now a full partner in the new system.
- 3 New stakeholders created during the reform will play an increasingly important role.
- 3 In general, public outreach and communications efforts were effective. Opinion polls taken at this time indicated that the proportion of people who felt their information was adequate or improved had increased from less than one-half in late 1998 to nearly 80 percent. Just 16 percent said they

felt they lacked information, compared to nearly one-half earlier. Approximately 50 percent of respondents thought information was easy to find, and by March 2000, this proportion had risen to 70 percent.

- 3 The media played a key role throughout the reform process, and one of the most effective investments of government resources was in media outreach and education.

Source: "Participation in Macroeconomic Policymaking & Reform—Case of Poland." Prepared as part of the Action Learning Program. Participation Thematic Group. World Bank, Washington, D.C. (2000).

Technical Note G.17 Participatory Monitoring of Public Services— Indonesia: Community-Based Monitoring of Social Safety Net Programs

G.17.1 Background³

Following a dramatic drop in incomes in 1997–98, the Indonesian government began implementing social safety net (SSN) programs targeting the adversely affected—those who became poor after the crisis and those already living in poverty. These were aimed at supplementing their purchasing power through the Special Market Operation (OPK) of subsidized rice distribution, preserving access to critical social services such as education through student scholarships, and augmenting incomes through labor-intensive employment opportunities. To monitor the implementation of these SSN programs and to provide donors and government with qualitative information about the social impacts of the 1997 financial crisis, the Social Monitoring and Early Response Unit (SMERU) was formed with external assistance from AusAid, Asia-Europe Meeting Fund, and the U.S. Agency for International Development. SMERU has five different units⁴ with tasks of (a) building local capacity for rapid assessments of potential "danger" situations in the field, (b) forming a network of NGOs for information exchange at all levels, (c) building capacity of communities to do their own monitoring, (d) storing and analyzing quantitative and qualitative data, and (e) conducting a study on the impact of provincial trade deregulation. Community-based monitoring (CBM) is thus just one of the five units responsible for one of the core mandates of SMERU. With an authoritarian regime in place for much of the past 30 years, Indonesia did not have a strong tradition of civic participation in public life, let alone open scrutiny and monitoring of government programs. CBM under SMERU thus started in October 1998 by declaring that not much was known in the country about how monitoring of government programs ought to proceed. Hence an action research project was initiated in three areas, one urban and two rural. Based on these findings, a full-fledged guideline on CBM was to be prepared.

G.17.2 Process

The three areas that were chosen by SMERU in September 1998 for pilot monitoring were Bandung City in *kelurahan* (village-level) Cibangkong, and Gangga and Sekotong in Kabupaten Lombok Barat. In Bandung, the process began with a team from SMERU introducing the program to the mayor and officials from local government agencies in the city. After the mayor endorsed the idea of monitoring the flow of funds intended for the targeted beneficiaries, SMERU and its civil society partners undertook social mapping, identified local stakeholders, and invited their representatives to attend an inclusive community workshop. SMERU was, however, only facilitating the process. The real hosts were the people from RW 11—one of the sections of *kelurahan* Cibangkong—who in turn invited representatives from 12 other residential wards (RWs) in the *kelurahan*. This workshop paved the way for the formation of a forum of RWs in the region. People attending the workshop democratically elected community volunteers to lead the *kelurahan* forum. SMERU similarly introduced the program in other areas.

Within the respective forum, several task forces were formed with representation from across the city (all 13 RWs) and all the villages in the rural regions, to look at specific aspects of the SSN programs. It was agreed that monitoring would be done through a "multi-layered problem-solving approach," beginning at the level of the *kelurahan* and *kecamatan* (district) forums. Complaints about specific programs would first be directed to the respective task force; for example, complaints about cheap rice not reaching the neediest would be handled by the OPK task force at the village forum level. Problems that could not be solved here would then be forwarded to the task-actors forum that facilitated open meetings among community representatives and government officials. If problems remained unresolved even at this "meso" level, they would then be put forth for resolution at the level of the line ministries.

This multilayered approach was introduced to ensure that the central government was not inundated with complaints that could be best verified and taken care of by empowered bodies at lower tiers. The forums also have a task force responsible for the community's general development needs, resources, and constraints that serves to support bottom-up development planning. As these discussion forums were institutionalized, SMERU worked to create a transparent information system that allows the public to access data on budget allocation, criteria for target group identification, and disbursement mechanism, so that the task of community monitoring would be easier.

G.17.3 Results

The forums have become effective venues for local conflict resolution. Some examples of problems addressed include delays in delivery, inclusion of nonpoor beneficiaries, and fictitious names on beneficiary lists.

While the forums in the city and the villages were originally created to specifically discuss SSN programs, this space has already been broadened to discuss wider community issues such as land disputes, local public services, local sanitary conditions, and so forth. In a country with weak democratic traditions, these forums allowed people to come together and debate their rights and discuss their legitimate entitlements, enriching local social infrastructure, which means that these could be sustained as active, self-governed community organizations.

Local monitoring served to highlight subtle but serious flaws in the targeting and design of SSN programs, such as their failure to take into account local conditions. It was found that when one of the national criteria for identifying the poor was by looking at whether houses had a dirt floor, in regions like Lombok Barat, where having a dirt floor was part of the way people lived irrespective of their wealth, even rich people qualified for SSN programs, while in some other parts, where even the poor lived in elevated houses with wooden floors, they were not be included as targets.

SMERU's experience in community monitoring complements numerous other initiatives by the government and other donors in this field. While there does not yet exist a rich pool of evidence and experience with which to draw far-reaching conclusions from the successes or failures of these initiatives, initial signs are promising, and all actors seem to realize that community-based activities will continue, even after the SSN programs cease to be implemented, presently justifying multiple interventions at institutionalizing these nascent efforts.

Source: <http://www.smeru.or.id>

Technical Note G.18 Definitions

G.18.1 Participation

Participation is a process through which stakeholders influence and share control over development initiatives and the decisions and resources that affect them.

Participation occurs in four distinct ways:

- **Information sharing:** one-way flows of information to the public
- **Consultation:** two-way flow of information between the coordinators of the consultation and the public and vice versa
- **Collaboration:** shared control over decisionmaking
- **Empowerment:** transfer of control over decisionmaking and resources to all stakeholders

Dimensions of participation

- **Scope** of participation encompasses the diversity of government processes in which different stakeholder groups are involved.
- **Extent** of participation involves the diversity of stakeholder groups participating.
- **Level** of participation equates to the level of government operations—national or local level.

Table G.14. Examples of Methods

Information sharing	Consultation	Collaboration
<ul style="list-style-type: none"> ➤ translation of official documents into local languages ➤ dissemination of written material through newspapers, magazines, and pamphlets ➤ distribution of documents through local government ➤ televised or radio broadcast discussions ➤ poster campaigns 	<ul style="list-style-type: none"> ➤ participatory assessments ➤ beneficiary assessments ➤ consultative meetings ➤ field visits and interviews 	<ul style="list-style-type: none"> ➤ participatory planning ➤ workshops to discuss and determine positions, priorities, roles ➤ joint committees, working groups, and task forces with stakeholder representatives ➤ joint work with user groups intermediary organizations, and other stakeholders ➤ stakeholder groups given principal responsibility for implementation ➤ meetings to help resolve conflicts, seek agreements, engender ownership ➤ public reviews of draft documents and revision

- *Quality of participation* signifies the depth and diversity of views expressed, incorporation of these into strategy formulation, consensus building, establishment of partnerships for delivery of the strategy, and information sharing amongst the stakeholder groups involved.

G.18.2 Stakeholder Group Definitions

Civil society, at its simplest, is the arena in which people come together to pursue their common interests, not for profit or for political power, but because they care enough about something to take collective action. In this sense, all organizations and associations outside the family and state are part of civil society, except firms, including religious and professional organizations, labor unions, the media, grassroots associations, NGOs of different kinds, and many others. Because civil society is a very broad term, it refers to different interests, types of associations, and expressions of values, some of which will conflict with others; the profile of civil society is different in every context.

Civil society organizations (CSOs) include both local and international nongovernmental organizations (NGOs), community-based organizations, grassroots organizations, business and professional associations, chambers of commerce, groups of parliamentarians, media, policy development and research institutes. The following chart shows some of the different types of CSOs that exist in each of these categories.

Representative authorities are elected bodies of the government; for example, Parliaments and assemblies at the national and state levels, district and municipal assemblies and elected councils, and elected community leaders.

The public consists of several groups of people, including the following:

Those who are directly affected by the policies under discussion, such as individuals and families, indigenous groups, women's groups and so forth, who will feel the impact of the policies immediately.

Table G.15. Diversity of CSOs

Representation	Technical expertise	Capacity-building	Service delivery	Social functions
<ul style="list-style-type: none"> ➤ Membership organizations, e.g., labor unions ➤ NGO federations and networks ➤ Churches and faith-based organizations ➤ Organizations of indigenous people 	<ul style="list-style-type: none"> ➤ Professional and business associations ➤ Advocacy NGOs ➤ Think tanks and research groups ➤ News media groups 	<ul style="list-style-type: none"> ➤ Foundations (local and international) ➤ NGO support organizations ➤ Training organizations 	<ul style="list-style-type: none"> ➤ Implementing NGOs (local and international) ➤ Credit and mutual aid societies ➤ Informal, grassroots, and community-based associations 	<ul style="list-style-type: none"> ➤ Mosque or prayer groups ➤ Sports clubs ➤ Migrants' associations ➤ Choral societies

Those who are indirectly affected by the policies under discussion, such as the private sector, which may have more or fewer customers as a result of the policy, religious groups, community associations, and networks and local NGOs.

Interested parties who have the ability to influence the policy outcomes, both positively or negatively, such as donors, public sector representatives, national and international NGOs, universities, and research centers.

Notes

1. Ceilings given to local government are based on conditional allocations for the priority poverty areas and unconditional grants.
2. Steps included reversal of benefits for special groups, such as those undertaking hazardous jobs, under-indexing so that benefits lagged behind rising prices, changes in tax treatment of pension benefits, changes in the wage base for calculating pensions, and a reduction in minimum guaranteed benefits.
3. This section draws heavily on material posted at www.smeru.or.id.
4. Crisis Impact and Program Monitoring, Community-Based Monitoring, Otonomi Daerah, Data Analysis, and NGO Liaison and Partnership.

Annex H

Governance: Technical Notes

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Technical Note H.1 Recent Research¹

“Good governance” in the form of public institutions and policies that enforce property rights and contracts while restraining corruption is now widely viewed to be a *necessary condition* for long-term economic growth. Douglass North (1990) and many others have generated a growing body of work that combines rational choice theory, information economics, game theory, law, and organization theory to focus on the incentives that shape decisionmaking by public and private players. The recent empirical work corroborates these theoretical arguments, quantifying the costs of overregulation, corruption, and other manifestations of bad government in terms of forgone investments and growth (Mauro 1995; Knack and Keefer 1995). Because increases in per capita income are usually, although not always, accompanied by reductions in poverty rates (Bruno, Ravallion, and Squire 1998), there is a strong presumption that good governance—through its impact on growth—alleviates poverty. Knack and Anderson (1999) provide a more direct analysis of the governance-poverty link. Examining growth in incomes for the poorest quintiles of income earners, they find that good governance is progressive in that it is associated with larger growth rates in incomes for the poor than for the population overall. Gupta, Davoodi, and Alonso-Terme (1998) find a large and statistically significant positive association between corruption and poverty rates.

Higher per capita incomes seem to be linked to improved health and education outcomes, for example, reductions in infant mortality and in illiteracy (Filmer and Pritchett 1998; Pritchett and Summers 1996). Because of the demonstrated effects of good governance on income growth, there exists a strong presumption that good governance improves health. Kaufmann, Kraay, and Zoido-Lobaton (1999) provide some evidence of direct links between governance and health and education outcomes. They show that countries scoring higher on their indexes of such areas as rule of law, graft, and voice and accountability tend to have lower infant mortality and higher literacy rates as well as higher per capita incomes. Norton (1998) finds that countries scoring higher on indexes that rank the security of property rights also fare better on a human poverty index, constructed from longevity, literacy, child nutrition, and access to health services and safe water.

There is some evidence that democratic institutions have a positive effect on poverty, as measured by infant mortality rates, literacy rates, and other objectively measurable outcome indicators. Amartya Sen (1999) argues that democracy can make a positive contribution to development by creating political incentives for rulers to respond positively to the needs and demands of their citizens. There is reason to assume that the architecture of the state, including the relationships between the executive, legislative, and judiciary branches and other institutional arrangements for the transfer of power between governments, including voting arrangements and electoral laws, affect the performance of the public sector in responding to poverty.² Dreze and Sen (1982) assert that the openness and accountability of democratic societies explain why India, but not China, has managed to avoid large-scale famines. Kaufmann, Kraay, and Zoido-Lobaton (1999) find that an index of “voice and accountability” is associated with lower infant mortality and illiteracy across countries. There is also some evidence that participating in local and national decisions helps to improve the quality of projects (Isham, Kaufmann, and Pritchett 1997) and the welfare of vulnerable groups such as women and their children (Narayan 1999).

Technical Note H.2 Measuring Governance

In recent years, the number and type of governance indicators has increased dramatically (see table H.1). However, there is little agreement about their use and there are few examples of governance indicators having a substantial impact on the policy actions of governments or on specific reforms proposed by donors and international financial institutions.³ Most governance indicators have become available only in the last few years, and the limited coverage over time makes it more difficult to convincingly demonstrate causal relationships between governance and measures of well-being. Studies using these indicators confirm that development has occurred where there is now good governance⁴—but it does not necessarily follow that they reliably point to where development will occur in the future.⁵ The only conclusions arising from most of this research is that the “black box” of governance in some way affects public sector performance, which in turn affects poverty or other outcomes. This finding has dramatically altered perspectives on the process of development, but it does not offer any firm prescriptions about what should be done. There are no firm grounds on which to assert, for example, that decentralization or improved budgetary arrangements will improve some particular aspect of public sector performance.

This illustrative list, of course, could have been considerably larger. It is not clear where to draw the line between governance indicators and the growing number of political economy indicators that illuminate aspects of the checks and balances on government. Lijphart's recent work (1998) in developing measures of the degree to which power is tightly held by the executive branch, and the degree to which power is dispersed among different levels and organizations of government, is a case in point.

Table H.1. Selected Sources of Governance Indicators

(“Single” means that the dataset contains just one indicator, “multiple,” that the dataset includes many individual variables.)

I. Indicators of institutional arrangements		
Sources	Datasets	Concept measured
Policy and public spending management		
World Bank (as calculated from IMF, Government Finance Statistics)	Policy volatility (single)	Calculated as the median percentage difference from year to year in government spending, by functional classification, over the last four years
U.S. State Department	Compliance with auditing standards for military spending	Compliance with new U.S. legislation on transparency in budgeting
Public employment		
World Bank (Schiavo-Campo, de Tommaso, and Mukherjee 1997)	Aggregate wage bill totals and employment totals of civil and public servants (multiple) Civil service pay relative to private sector pay	Public officials are categorized to allow for cross-country comparability Average salary for civil service divided by average worker income
II. Indicators of government performance.		
Sources	Datasets	Concept measured
Business Environment Risk Intelligence	Political Risk Index (multiple) Operation Risk Index (multiple)	Sociopolitical conditions Bottlenecks for business development
<i>Wall Street Journal</i>	Annual survey of business analysts (multiple)	Attractiveness of the business environment
Standard & Poor's	Country Risk Review (multiple)	Risk to the profitability of investments
European Bank for Reconstruction and Development	Transition indicators (multiple) Legal reform survey (multiple)	Progress toward a market economy Effectiveness of the legal framework
Economist Intelligence Unit	Country Risk Service (multiple) Country forecasts (multiple)	Risk ratings for investors Attractiveness of the business environment
Freedom House	Freedom in the World (multiple) Nations in Transit (multiple)	Political rights and civil liberties Progress toward democracy and a market economy
World Economic Forum	Global Competitiveness Survey (multiple)	Business environment
Heritage Foundation	Index of Economic Freedom	Prospects for growth
Political Risk Services	<i>International Country Risk Guide</i> (multiple)	Political, economic, and financial risks for investors

Table H.1. Selected Sources of Governance Indicators (continued)

Sources	Datasets	Concept measured
Political and Economic Risk Consultancy	<i>Corruption in Asia</i> (multiple) Transparency in Asia (multiple) Quality of the media (multiple)	Quality of the legal system Business environment Censorship and access to foreign media
Institute for Management Development	<i>World Competitiveness Yearbook</i> (multiple)	Business environment ^a
World Bank	1997 <i>World Development Report</i> survey (multiple)	Business environment
Transparency International	Corruption Perceptions Index, aggregation of many indicators (single)	Corruption perceptions
World Bank (Kaufmann, Kraay and Zoido-Lobaton 1999)	Aggregating governance indicators (multiple)	“Government effectiveness,” rule of law, voice and accountability, and graft
International Telecommunications Union	Waiting time for telephone line (single)	Waiting for key service generally provided through government
Contract-intensive money (as calculated from International Financial Statistics)	Contract-intensive money: noncash share of the money, from IMF, International Financial Statistics	Proxy for contract enforceability/trust in government
Private-sector credit (from IFS data)	Private sector credit/GDP, from IMF, International Financial Statistics	Financial sector development

Note: This table draws from, among others, Kaufmann, Kraay and Zoido-Lobaton (1999).

Notes

1. The World Bank research findings on governance can be searched by accessing <http://wbln0018.worldbank.org/research/workpapers.nsf/SearchForm?OpenForm&F0N=Governance^F0V=^Op1=^>.
2. Some argue that the empirical evidence that democracy reduces corruption is weak. In studies by Paldam (1999) and Treisman (2000) that investigate this relationship while controlling for the level of development as depicted by GDP per capita, democracy does not significantly affect levels of corruption (as measured by the Transparency International Index). The two authors therefore argue that the effect of democracy is ambiguous. There appears to be only a small but significant influence when testing for countries that have been democracies without interruption since 1950. The only tentative conclusion possible is that although the current degree of democracy is not significant, a long period of exposure to democracy is associated with less corruption. Lijphart (1998) provides further evidence from a 36-country study.
3. One exception is the use of indicators to identify countries where a governance discount in International Development Association allocations should apply.
4. See the list of research studies demonstrating that measurements of governance do indeed correlate with measurements of development provided in Burki and Perry (1998).
5. Exceptions are the Business International, Business Environmental Risk Intelligence, and International Country Risk Guide indicators, which became available in the early 1970s (BI and BERI) and early 1980s (ICRG). The BI indicators were used by Mauro (1995). The BERI and ICRG indicators were used by Knack and Keefer (1995). Several researchers have tried to resolve the causality problem using two-stage least-squares methods. See Mauro (1995); Hall and Jones (1999), and Kaufmann, Kraay, and Zoido-Lobaton (1999). For an investigation of causality exploiting time-series variation in the BERI and ICRG data, see Chong and Calderon (2000).

Annex I

Gender: Technical Notes

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Technical Note I.1 Engendering Participation

Participatory consultations are an essential part of the Poverty Reduction Strategy Paper (PRSP) methodology, and chapter 7, "Participation," clearly demonstrates that consultation with intended beneficiaries and with other stakeholders is essential to the identification, design, implementation, and evaluation of the PRSP actions. There are four levels of intensity of participation and citizen involvement:

1. information sharing;
2. consultation;
3. collaboration; and
4. empowerment.

Although the need for beneficiary consultations is now widely acknowledged and is a required part of the preparation of every PRSP, experience has shown that socially and economically weak and voiceless groups will frequently be excluded from the consultation process. In societies where community councils and local political bodies are largely run by men, or where men are considered to speak for the

The authors would like to recognize the invaluable research assistance received from Beatriz Leilana Martinez and Chandraa Bhattacharya of the Gender and Development Group in the preparation of these technical notes.

Box I.1. Barriers to Women's Participation and Voice

The following are examples of cultural, institutional, and logistical barriers that constrain the participation of women in the PRSP consultation processes.

- Often only men are invited to meetings arranged by government authorities. In many cultures, it is assumed that important visitors should meet only with community leaders and high-status officials, and it can be difficult for those planning the visit to understand why visitors might wish to meet with lower-status people of either sex.
- Women frequently do not attend or do not speak out in community meetings.
- Cultural traditions may limit the extent to which women can meet with outsiders. This is obviously more of a problem for male government officials and World Bank staff, but foreign female visitors may also face similar (although more easily resolvable) difficulties.
- Meetings may be arranged at a time and place convenient for outside visitors and for male community members but not convenient for women.
- Visitors may be told what it is assumed they want to hear. This means they only receive information that reinforces culturally acceptable stereotypes.
- In many countries, most extension workers are men, and during field visits they normally meet with male community members. They are often trained mainly in a project's technical aspects and see their role as selling technically sound projects to uninformed or reluctant villagers rather than as listening to, and receiving feedback from, the community.

Note: For more information, see the section on facilitating women's participation in *World Bank Participation Sourcebook* (1996).

whole family, it will frequently be the case that most women will have little involvement in the selection, design, or management of projects. Box I.1 describes some of the cultural, logistical, and other barriers to the participation of women in community decisionmaking and in social and political activities inside and outside the community. It should be emphasized, of course, that other vulnerable and voiceless groups such as ethnic or religious minorities, the landless, the poorest households, or people of either sex under a certain age may also be excluded.

Despite the extensive evidence showing that women frequently are excluded from, or have very little voice in, community decisionmaking, few of the PRSPs or Interim Poverty Reduction Strategy Papers (I-PRSPs) completed by January 2001 acknowledge the special problems affecting the participation of women, and even fewer refer to measures that had been taken to ensure the adequate representation of women.

Experience from the first 30 I-PRSPs and PRSPs shows that in order to ensure the active participation of women, it is essential to have a gender-sensitive participatory strategy, with specific measures to overcome the cultural, political, logistical, and economic barriers to women's participation that exist in different countries. If such proactive measures are not taken, it is very likely that women will be largely excluded from the PRSP process and, consequently, the poverty reduction strategies run the danger of ignoring the priorities of at least one-half of the target population.

The Gambia I-PRSP (box I.2) illustrates some of the practical measures that countries can take to ensure the participation of women. A number of countries, such as Cameroon and Tanzania, also adopted measures, such as quotas for women in the consultative processes, to ensure that women were represented.

Chapter 7, "Participation," identifies seven guiding principles for participation in PRSPs: country ownership, transparency, inclusion, feasibility, sustainability, continuous improvement, and outcome orientation. Each of these principles requires attention to the gender dimension (box I.3). Given that participatory consultation is a new concept in many countries, which must still overcome many

Box I.2. Engendering the Participatory Process: The Gambia I-PRSP

These measures were taken to ensure the active participation of both men and women in the design and implementation of the I-PRSP:

- An operational principle of the PRSP was to use affirmative action to ensure the participation of women and youth.
- A study was commissioned to recommend ways to strengthen gender participation.
- Measures were taken to improve gender representation in local decisionmaking.
- Women's councils were involved in local decisionmaking
- A stated goal of the 1999–2000 Participatory Poverty Assessment was to take into account gender dimensions.

For more information, see "The Gambia I-PRSP," November 27, 2000. Available at www.worldbank.org/poverty.

Box I.3. Guiding Principles of Gender-Sensitive Participation in Poverty Reduction Strategies

Country ownership. Government commitment and leadership and broad country ownership are critical for effective formulation and implementation of PRSs. Ensure that government agencies responsible for gender and women's affairs, and leading nongovernment women's organizations, are also fully involved.

Transparency. Transparency of the consultative process and in reporting outcomes at the national and local government levels builds trust, ownership, and support among civil society. Ensure that women's organizations are fully informed.

Inclusion. The PRS process will be more effective if the knowledge and experience of a range of stakeholders, including the poor and vulnerable groups—especially women—are tapped and their perspectives systematically incorporated into the design and implementation of the country's PRS.

Feasibility. Participatory processes ought to build as much as possible on existing governance and political systems. Special attention must be given to the representation of women in countries where their representation in the governance structure is weak.

Sustainability. Participatory processes that build on existing mechanisms are more likely to be institutionalized and sustained over time. Similarly, policy reforms are more likely to be adopted if they are informed by, and consistent with, a widely shared understanding of poverty and its causes. Capacity building and organizational development may be required to strengthen women's organizations and to gain acceptance for women's participation in community councils.

Continuous improvement. The PRS is an iterative process of participation, feedback, planning, implementation, and assessment of set targets and indicators. Regular participatory processes will play a key role in continuously improving the design and implementation of public actions to reduce poverty. Monitoring indicators must be developed and used to ensure the continued participation of women and other vulnerable groups.

Outcome orientation. Participatory processes for the PRS can be designed and conducted with specific outcomes in mind (such as to fill critical information gaps or to engage specific groups such as women and other vulnerable groups that have previously not been in a position to contribute). This will yield more focused information for planning and implementing PRSs.

Source: Adapted from material in chapter 7, "Participation."

constraints, it is particularly important that strategies are in place to ensure that the participation of women is not overlooked.

Getting started

Chapter 7 also provides guidelines for engendering the participatory process:

- 3 Build on and enhance existing processes of participation. With respect to gender, this will often involve developing new ways to integrate both women and men into the existing processes. A strategic issue in many communities is whether to encourage or require the inclusion of women in previously male-dominated community councils and similar bodies, or to create parallel consultative mechanisms for women. While the latter option is often the most viable, it is essential to develop mechanisms for reconciling any differences in the priorities identified by women and men. (See box I.4 for an example of a traditional community-conflict resolution mechanism in Angola.)
- 3 Ensure that all key stakeholders are involved.
- 3 Design a structured participation plan. This should spell out the strategy for ensuring that participatory approaches are built into all stages of the PRSP, including poverty diagnostics, identification of priority actions, resource allocation, and budget preparation, implementation, and monitoring (see box I.5).
- 3 Address conflicting interests and develop tradeoff strategies.
- 3 Permit participation in implementing and monitoring interventions, not just in their formulation, to reduce poverty.

Box I.4. Using Traditional Mechanisms for Reconciling Different Priorities of Men and Women: The Angola Social Fund

The Angola Social Fund (FAS) has developed mechanisms in cooperation with community leaders for reaching agreement on the choice of projects. In the Caponte Pequena community in South Angola, the majority of men indicated that the construction of a school was their top priority. However, most of the women favored a community wash-house, as women had to walk several kilometers to the river to wash clothes. The *soba* (traditional community leader) called both women and men to a meeting and listened to their arguments. He then indicated that the wash-house should be the first priority, given the very considerable time saving to women and the indirect benefits to men as well. The community accepted this judgment and the *lavanderia* was constructed. The second project, which has now also been completed, was the school.

Box I.5. Common Elements of a Gender-Sensitive Participation Action Plan

- **Objectives** of the participatory process in the context of the PRS and the starting point in the country (for example, civic engagement nationally, understanding of the key public action choices, and enhancing the participation of both women and men).
- **Institutional arrangements** for coordinating and facilitating the formulation of the PRS—that is, location and composition of the coordinating committee and strategies for ensuring the representation of the interests of both sexes.
- **Key stakeholder groups** to be involved and the purpose of their participation. This will include an analysis of the key gender dimensions of the PRSP and the groups best qualified to address these issues. Particular attention will be given to ensuring the representation of the poorest and most vulnerable groups of women, men, and indigenous populations.
- **Participatory approaches**, including specific methods, to be used to involve stakeholders. This will include proposals for ensuring the representation of women in traditionally male-dominated sectors as well as conflict resolution strategies for reconciling different priorities identified by men and women.
- **Milestones** for assessing the progress of participatory processes. Recommendations must be included on how to monitor the level of participation of women. For example, it is insufficient to record the number of women attending meetings; it is also necessary to report on the extent to which they participated in the discussions and in the selection of priority PRSP actions.
- **Capacity development** is required for organizing and strengthening participatory processes. This must include an analysis of the special capacity-building needs of women and how they will be addressed.
- **Cost implications and any financing gaps.** The budget estimates must include any funding required to fill in data gaps with respect to sex disaggregation of key statistics and gender assessment studies to fill gaps in information on women's priorities.

Source: Adapted from material in chapter 7, "Participation."

Some of the first steps for integrating gender into the participation process include

- Identifying the key stakeholders and ensuring they will all be invited to participate in the consultations.
- Assessing the current scope, level, and quality of participation. To what extent are organizations representing both women and men involved, and what are the factors limiting their fuller participation?
- Identifying and putting in place measures to strengthen the capacity of weak and vulnerable groups (including but not limited to women) to participate.
- Assessing the existing capacity of government and other agencies to organize participatory processes. Where necessary, rapid capacity-building activities, such as training, study tours, or technical assistance, may be required to ensure that the capacity exists to manage the participatory processes.

Ensuring the participation of both women and men in the PRSP participatory process

Where participatory consultation mechanisms are used, it is essential that they be designed to ensure the full participation of women (and other vulnerable and voiceless groups). Men and women contribute in different ways to poverty reduction and are affected differently by poverty reduction measures—consequently, the participatory processes for preparing and implementing the PRSP, for prioritizing key actions, and for defining and monitoring performance indicators needs to be explicitly gender inclusive so as to capture and act on these key differences.

In some communities, it may be necessary to have separate sessions for women and men, while in other cases, special techniques must be used to ensure that women are actively involved. Some steps that can be taken to promote women's participation include

- Assessment of existing consultative mechanisms to evaluate the extent to which different groups of women (single, married, and widowed; young and old; poor and less poor; and so forth) are represented. In many cultures, the most important kinds of consultation are face to face, so the assessment must capture the dynamics of traditional culture as well as observing what happens in formal meetings.
- Assessment of the barriers to women's participation. In some cases, the barriers may be cultural, but in many others, the reasons are more because meetings are held at times and places convenient to men, and the level of women's participation could be significantly increased simply by consulting them on when and where to hold the meeting.

- 3 Assessment of the extent to which women feel that their views and priorities have been reflected in the choice of projects (even if they were not directly involved in the formal consultation process).
- 3 Experimentation with, and evaluation of, different mechanisms to increase women's participation.
- 3 Holding meetings at a time and place convenient for women. In some cases, it may be necessary to provide or pay for transport so that women can attend. Childcare arrangements may also be required.

Listening to women

The importance of listening to and consulting with groups that may be affected by project activities has been documented by the Bank's Southern Africa Department that explores the significance of, and methodology behind, "systematic client consultation." The word "systematic" describes the need to consult and listen on a continual basis, and the term "client consultation" refers to open communication between the Bank and government agencies, service providers, and beneficiaries. Box I.6 presents additional evidence from a survey of women's participation in 121 rural water supply projects in 49 developing countries in Africa, Asia, and Latin America, confirming the need to listen to women (Narayan 1995). According to the survey, only 17 projects achieved high levels of women's involvement.

While the measures of women's participation and overall participation were correlated, achieving high levels of beneficiary participation does not necessarily result in high levels of women's participation, because the determinants of women's participation are different. Women in most rural areas face many constraints to participating in development projects: unless women's involvement was specifically targeted and resources invested, it did not happen. (Narayan 1995, p. 5.)

Barriers to listening

The participation learning project has amply documented the difficulties for government and international agencies in communicating with intended project beneficiaries and involving them in design and implementation. This technical note makes continual reference to additional cultural, political, administrative, and economic factors that can make it even more difficult to communicate with women (see box I.7).

Other approaches include

- 3 use of stakeholder analysis to ensure that all groups affected by the project are identified and contacted;
- 3 use of culturally appropriate participatory assessment methods that permit women and other economically and socially vulnerable groups to express opinions and concerns;
- 3 use of gender analysis to ensure that the needs, resources, and constraints of different groups of women are understood and considered;
- 3 understanding and use of women's communication networks;
- 3 ensuring that all communications are available in local languages; and
- 3 working with and through nongovernmental organizations (NGOs) and other local intermediary organizations.

Box I.8 gives guidelines for listening to women, ensuring that their perspectives are understood, informing them about proposed projects, and involving them fully in project selection, design, and implementation.

Box I.6. The Need to Specifically Target Women with Strategies Developed for Their Empowerment

In most rural societies, poor women are more disadvantaged than poor men. Women work longer hours and have less free time; they have less income; they are more isolated; they receive less information; they have poorer nutrition; and they have less education and are more often illiterate than poor men. Women are rarely community leaders and do not participate in community decisionmaking bodies. Women are the primary carriers of water, but have limited power, access, and control over most resources. In this context, how can women possibly be reached without special support and investment in their development?

Source: Narayan (1995).

Box I.7. Getting Beyond the Cultural Stereotypes

Visitors to communities and project sites are frequently misled by well-meaning people concerned about making a culturally proper impression. For example:

- 3 In many cultures, parents do not wish their daughters to attend mixed schools or schools with male teachers. In some traditional cultures, parents may not wish their daughters to attend school at all after a certain age. Beneficiary assessment studies have found situations where parents ask the school to record their daughter as attending (to comply with the law) while she is in fact kept at home.
- 3 In Balochistan, Pakistan, large numbers of girls were attending boys' schools, the only ones available. However, the girls did not appear on school attendance records because it was assumed that education authorities would disapprove.
- 3 In some cultures, a stigma is attached to working women because it is assumed that the husband should support his wife or wives. Consequently, a woman may tell outsiders that she is a housewife even though she works regularly at farming or other economic activities.

The importance of women's groups

Women's groups play a significant role in promoting project participation by women as well as men in many traditional male-dominated societies in which women are inhibited from freely voicing their opinions.

- 3 In many cultures, women prefer to meet in women-only groups because they feel this gives them more freedom of expression (see box I.9 for an example from Malawi).
- 3 In agriculture, women's groups provide a socially acceptable way for male agents to work with female agents.
- 3 Groups provide a safe and familiar forum for women to express their concerns.
- 3 Training, service delivery, and credit are often more readily accessible to groups.
- 3 The rate of information sharing and dissemination is usually highest when new knowledge is presented to groups rather than to individuals.
- 3 Women perform many of their multiple tasks, such as fetching water or fuelwood, in the company of others.

In The Gambia's Women in Development (WID) project, one method of promoting community participation has been to replicate Save the Children's use of traditional women's groups to identify high-risk pregnancies for referral to medical centers. Simple pictorial cards enable the women to assist traditional birth attendants in the identification. Because most of the women were illiterate, Save the Children training sessions incorporated formal training with traditional birthing and healing knowledge and were conducted in groups to encourage oral exchange of experience and information. As a result of this process, the task manager reported a significant increase in referrals.

Box I.8. Checklist: Listening to Women and Facilitating Their Participation

Listening to women

- 3 Do women have access to resources and benefits?
- 3 What role do women play in the community or a given sector? Do they have separate needs and distinct constraints?
- 3 Do women have the opportunity to voice their opinions freely?
- 3 How is information on women's roles obtained (from women's groups, interviews with village women and local women leaders, extension workers, female staff resident in the project area, NGOs working with women)?

Informing women

- 3 Where and when do women meet? Will they meet and discuss issues freely in the presence of men?
- 3 How is information about meetings, projects, and other community activities disseminated?
- 3 Is information dissemination by word of mouth, newspaper, radio, or nontraditional forms of information sharing? Or via males of the community?
- 3 Are education and literacy levels barriers to women's participation? What is the most effective means for removing these barriers?

Involving women

- 3 What influences the nature and extent of women's participation?
- 3 Do women have special capacity-building needs?
- 3 Do community meetings consider women's schedules? Are meeting sites accessible to women? Is it safe to travel to meetings? Is transport provided?
- 3 Should separate meetings be organized for women or should they be encouraged to participate alongside men?

Box I.9. Using Traditional Women's Groups in Malawi

Women unanimously preferred meeting in women-only farmers' groups over mixed-sex groups in Malawi's Phalombe Rural Development Project. When meeting with extension agents, women felt freer to discuss and develop their ideas. In mixed-sex groups, the men delayed repayment and used the money for other businesses. Women, who have better repayment rates than men, preferred to obtain credit in women-only clubs.

Source: Saito and Spurling (1994).

Gender and participation issues in the project cycle

The project cycle concept was developed to ensure uniformity of approach and accountability and to provide a rigorous procedure for project identification, appraisal, and design. It has been called the "blueprint" approach, meaning that a high proportion of resources are invested in preparation for a project before it begins. Implementation then proceeds in a very structured manner, with predetermined time schedules, objectives, and indicators of performance.

Participation requires much greater flexibility in project preparation, resource use, implementation schedules, and even definition of objectives. These socially responsive approaches are variously known as process and participatory planning/management approaches. The following paragraphs illustrate some of the issues involved in promoting the participation of women during project identification and design. Table I.1 presents a checklist of gender and participation issues at each stage of the project cycle.

Gender and participation issues in project identification and preparation

- Has stakeholder analysis ensured that all groups of men and women potentially affected by the project have been identified?
- Have the needs and opportunities for increasing women's productivity been studied? What are the opportunities, and to what extent could and should they be incorporated into the project?
- Has an analysis been conducted of the needs and opportunities for increasing women's access to and control of productive resources? To what extent could and should these be incorporated into the project?
- How is the project likely to affect women's and men's property rights and access to natural resources?
- To what extent can available data be disaggregated and analyzed by sex? Has this been done? What are the major gaps, and what could be done to fill them? Have available data been analyzed by gender?
- Has gender analysis been used to disaggregate the household group in order to understand the access of different household members (particularly women and girls) to resources and decision-making? Have time use studies assessed the likely response of women to increased income-earning opportunities in agriculture or off-farm employment?
- Have gender-appropriate communication methods been used to ensure that all potentially affected and interested groups are aware of and understand the project? What are the main gaps, and how could they be filled?
- How do women's and men's needs and opportunities relate to national development priorities?
- Have major women's and men's stakeholder groups been identified and consulted?

Gender and participation issues in project planning and design

- Do designs specifically consider women's as well as men's roles, constraints, and needs?
- Have potential negative impacts on women as well as men been identified and measures taken to overcome them?
- Has full advantage been taken of women's as well as men's indigenous knowledge?

Table I.1. Gender Issues in Participatory Approaches to the Project Cycle

<i>Project cycle phase</i>	<i>Gender issues</i>
Project identification	<ul style="list-style-type: none"> What needs and opportunities exist for increasing the productivity of both women and men?
Selection and preparation	<ul style="list-style-type: none"> What might increase women's access to and control of resources? Will full use be made of gender-disaggregated data? Have gender-appropriate communication methods been used? How do both women's and men's needs and opportunities relate to national development priorities? Have major stakeholder groups representing both women and men been identified and consulted?
Appraisal and negotiation	<ul style="list-style-type: none"> Is social analysis built into conventional project analysis? Are both women's and men's organizations as well as NGOs involved in dialogue?
Planning, design, and procurement	<ul style="list-style-type: none"> Are process designs used instead of blueprint approaches? Do designs specifically consider the roles, constraints, and needs of both sexes? Have potential negative impacts on both women and men been identified and measures taken to overcome them? Is both sexes' indigenous knowledge seen as a resource and used fully? Are flexible financial structures designed to be accessible to both sexes? Are project designs simple with relatively short implementation periods?
Implementation	<ul style="list-style-type: none"> Are community management structures established to ensure representation of both sexes? Is the involvement of both sexes in community project monitoring ensured?
Monitoring and evaluation	<ul style="list-style-type: none"> Are implementation processes as well as input and output fully monitored? Does participatory monitoring specifically involve both sexes? Are data disaggregated to project impacts on individual household members? Are proper baseline studies built in to ensure that impacts on nonbeneficiaries are also studied?
Operations management, ensuring sustainability, and new project generation	<ul style="list-style-type: none"> Have agreements been reached at an early stage on responsibility for maintenance? Are both women's and men's groups built up to ensure project sustainability and expansion?

		Level of analysis				can be measured		
		Macroeconomic	Sector	Project	Household	Short term (within 2 years)	Medium term (2-5 years)	Long term (5-10 years)
Opportunities								
Time budget and time poverty: Comparison of time use by women and men.	Hours per day women spend collecting water and fuel and on reproductive and household management tasks.		X	X	X	X	X	
<i>Source:</i> Sometimes available in poverty assessments of household surveys (such as Living Standards Measurement Surveys [LSMS]). The information can also be collected from rapid community surveys or through focus groups.	Comparison of time women and men spend on different tasks and total hours per day on all tasks.		X	X	X	X	X	
Employment and labor force participation: Comparison of male and female workers.	Unemployment rates.	X	X			X	X	X
	Labor force participation rates.	X	X			X	X	X
<i>Source:</i> Basic information usually available from national labor statistics. Additional information may require firm-level surveys.	Gender segregation in the work place.	X	X				X	X
	Comparison of earnings by sex.	X	X				X	X
	Wage discrimination (gender comparison of wages for the same job, controlling for experience and education).						X	X
	Gender discrimination in labor legislation.	X	X				X	X
Capital and assets: Comparison of male- and female-headed households and of individual males and females.	Comparison of capital and assets owned by women and men.	X	X	X	X		X	X
<i>Source:</i> Sometimes available in Participatory Poverty Assessments and household surveys	Changes in women and men's capital following different kinds of economic and other crises.		X	X	X		X	X

		Macroecon	Sector	Project	Household	Short term (within 2 years)	Medium term (2-5 years)	Long term (5-10 years)
Capabilities and Human Capital								
Demographic: Comparison by sex.	Infant mortality rate.	X		X			X	
Source: Available from demographic statistics.	Under-five mortality rate.	X		X				X
	Life expectancy at birth.	X		X				X
	Maternal mortality rate.	X		X			X	X
	Proportion of women in the over-50 population.	X		X				X
	Proportion of widows.	X						X
Education: Comparison by sex.	Gross primary school enrollment rate.		X	X		X	X	
Source: Ministry of Education.	Gross secondary school enrollment rate.		X	X		X	X	
	Progression to grade 5.		X	X		X	X	
	Household expenditure on girls' and boys' education.	X		X	X	X	X	
	Adult literacy.	X	X	X			X	X
Health and nutrition comparison by sex.	Proportion of under-five population underweight.	X	X			X	X	
Source: Ministry of Health (household expenditure, poverty assessments, and household surveys; follow-up household surveys may be required).	Proportion of under-five population stunted.		X	X		X	X	
	Proportion of under-five population wasted.	X		X		X	X	
	Adult HIV rates.	X					X	X
	Prevalence of tuberculosis.	X					X	X
	Household expenditure on girls' and boys' health.	X		X	X	X	X	

		Macroecon	Sector	Project	Household	Short term (within 2 years)	Medium term (2-5 years)	Long term (5-10 years)
Security								
Economic vulnerability: Comparison of male- and female-headed households and of males and females.	Proportion of time below the poverty line during the previous month and year.	X		X		X	X	X
	Likelihood of moving out of poverty.	X		X		X	X	X
<i>Source:</i> Sometimes available from household surveys. Participatory research may be required in a sample of communities. A number of qualitative survey methods, such as the Social Weather Surveys in the Philippines, have been developed for this purpose.	Exposure to (gender-based) violence:							
	➤ Incidence of domestic violence							
	➤ Exposure to violence and sexual harassment in public	X		X		X	X	X
	➤ Exposure to violence in military conflict situations.							
Social capital: Comparison of male- and female-headed households and individual men and women.	Amount of income, goods, and services given and received through interhousehold transfers.	X			X	X	X	X
	Number of households or individuals with whom the household maintains an exchange network.				X	X	X	
<i>Source:</i> Transfer data included in some household surveys. Special surveys will often be required.	Participation in formal and informal organizations.				X	X	X	
Empowerment								
Political empowerment: Qualitative examination of women's status and comparison with men for different elected and appointed offices.	Constitutional and legal guarantees on women's right to own property.	X					X	X
	Gender discrimination in labor legislation.	X					X	X
	Gender discrimination in marriage and family law.	X					X	X
<i>Source:</i> Information will often be available from women's organizations and legal associations. The Humana Institute has collected information on gender differences in rights for more than 100 countries.	Women's right to vote.	X					X	X
	Proportion of women in Parliament and other elected offices.	X					X	X

		<i>Macroecon</i>	<i>Sector</i>	<i>Project</i>	<i>Household</i>	<i>Short term (within 2 years)</i>	<i>Medium term (2-5 years)</i>	<i>Long term (5-10 years)</i>
Empowerment (<i>continued</i>)								
Control over household resources by sex.	Consumption by individual household members of food and other basic essentials.	X		X	X	X	X	
<i>Source:</i> Some gender-disaggregated expenditure data is often available from household surveys such as LSMS. Special studies combining quantitative and qualitative methods may be needed to complement these surveys.	Role of individual household members in control over money and other household resources.	X		X	X	X	X	
	Contribution of different household members to the household economy.				X	X	X	
	Decisionmaking authority in key areas (household consumption expenditures, household capital expenditures, children's education).				X	X	X	

Technical Note I.3 Using Poverty Diagnostics to Identify Gender-Responsive Policy and Project Options

Options	Opportunities
Issue: Women's time burden	
Option 1. Provision of intermediate means of transport	South Africa. AFRIBIKE Project: In 1998, the Institute for Transport and Development Policy (ITDP) joined with the Africa Cultural Center to launch a bike project that teaches self-employed women to ride, repair, and maintain bikes so they can improve their businesses. The women do not pay for the bikes, but the US\$75 course fee covers the training, workshops, repairs, and the African instructor's and mechanic's salaries. When the course ends, each participant receives the bike she worked on for free. Plans are under way for the replication of the AFRIBIKE experience in national rural infrastructure projects in Guinea and Senegal.
Option 2. Bringing services closer to the community	Morocco. A recent World Bank study found that the lack of adequate potable water figured as women's highest-ranking problem in many Moroccan villages. Fetching water is a woman's task, and young girls often are expected to help out, which keeps them out of school. Based on the results of this study, the Morocco Rural Water Supply and Sanitation Project placed its highest priority on infrastructure to improve access to drinking water. This intervention has resulted in increased school attendance among girls.
Option 3. Labor-saving devices	
Issue: Insecure property rights	
Option 1. Property rights legislation	Tanzania. The Land Act of 1998 and the Village Land Act of 1998 included specific measures to protect women's access to land. The provisions included (a) family land is protected by a presumption of co-occupancy; (b) married women must give their consent before their husbands can dispose of land; (c) women must be represented equitably on the National Land Advisory Council; (d) discrimination against women is prohibited whenever a village council reviews an application for a customary right of occupancy; (e) village councils are restricted from allowing land assignments that would defeat a woman's right to occupy land under a customary right of occupancy; and (f) any provision of customary law that supports discrimination against women is declared void and inoperative.
Option 2. Legal literacy	Eritrea. A new Community Development Project proposes to include a vocational training and microcredit program for women entrepreneurs. This may include legal literacy training for women, particularly with respect to rights affecting marriage, property, and employment.
Issue: Gender wage gap	
Option 1. Labor legislation	Philippines. The Labor Code is the primary legislation governing labor and employment relations in the Philippines. It affects sectors that employ a high proportion of women, such as the garment, footwear, and textile industries. The provisions affecting subcontracting and home-based work are of particular benefit to women (see http://www.ilo.org).
Option 2. Vocational training	India. The Vocational Training Project, World Bank, supports the long-term program of the Ministry of Labor to modernize and restructure the National Vocational Training System. A major component is modernizing craftsman and apprenticeship training through re-equipping selected Industrial Training Institutes (ITIs) and developing related training systems, extending trade coverage of the National Apprenticeship Training Scheme, and increasing women's access to training in modern sector and high-tech trades by constructing new ITIs for women and adding women's wings to existing ITIs.

Options	Opportunities (continued) Examples
Issue: Lack of access to credit and other productive resources	
Option 1. Microcredit programs	<p>Bangladesh. The Grameen Bank was established in 1976 to examine the possibility of designing a credit delivery system that would provide banking services targeted at the rural poor. It currently reaches over 2 million people, with cumulative lending of about US\$2.1 billion. The bank's main activity is making small loans (usually a few hundred dollars) to small enterprises in agriculture, distribution, crafts, trading, and similar activities.</p> <p>India. The Self-Employed Women's Association (SEWA) is an organization of poor, self-employed women workers. SEWA's main goals are to organize women workers for full employment and self-reliance so they can obtain work security, income security, food security, and social security (health care, childcare, and shelter). Many of the organizations within SEWA are savings and credit organizations formed by women in urban and rural areas who need banking and credit services. These women have formed their own savings groups, which in turn have formed their own district-level associations and include women workers of varied trades in many villages.</p> <p>Latin America. ACCIÓN International is a nonprofit organization dedicated to reducing poverty by providing loans and other financial services to poor and low-income people who start their own small businesses. ACCIÓN is an umbrella organization for a network of microfinance institutions in 14 Latin American countries and 10 U.S. cities. ACCIÓN seeks to bring this opportunity to as many of Latin America's poor as possible by developing microcredit institutions that are financially self-sustaining and jointly capable of reaching millions of people.</p>
Option 2. Hiring and training female agricultural extension workers	<p>The Gambia. The percentage of female agricultural extension workers grew from 5 percent in 1989 to 60 to 70 percent in 2000 as a result of the World Bank's multisectoral WID project. The Gambia makes a special effort to encourage women's participation in small ruminant and poultry extension services.</p>
Option 3. Targeting resources and services to female as well as male producers	<p>Kenya. The Intensified Forestry Extension Project used an extension project to implement a reforestation program and develop microenterprises. Gender was given special importance in self-help groups and participatory processes because 40 percent of smallholder farmers were women. Women's groups were identified for delivering project inputs because women are increasingly taking up men's tasks. Rapid gender analysis, used to identify men's and women's roles and assess whether only men or only women should be involved in the project, revealed the following gender differences: (1) men decide where trees should be planted on the farm, and carry out silvicultural practices where they reside, while women look after on-farm tree nurseries; (2) trees often belong to men, women do not fell trees, and trees are rarely harvested; and (3) women weed trees as well as agricultural crops and handle men's responsibilities when men are away in off-farm activities.</p>
Issue: Constraints on women's access to employment and income-earning opportunities	
Option 1. Public works programs	<p>Lesotho. More than 60 percent of all workers in the road sector are female. The Ministry of Works (MOW) is the implementing agency for an International Development Agency-financed road in Lesotho. The chief engineer of the Labor Construction Unit of the MOW is a woman, as are some MOW road engineers and contractors. There is strong evidence that the participation of women in Lesotho's road sector has a substantial social as well as economic benefit in the longer term because women are frequently promoted to supervisory positions. The women were found to be good team leaders in handling selection of workers, upkeep of the hand tools, and fair distribution of food, and were promoted to supervisory positions.</p>

Opportunities (continued)	
Options	Examples
Option 2. Microcredit	Kenya. The Kenya Women Finance Trust (KWFT), an affiliate of Women's World Banking, works toward strengthening women's participation in the economic mainstream by focusing on women who have little access to formal credit, and has emerged as a reliable source of quick credit to rural women. KWFT initiatives include (a) the Biashara Scheme, a group-based model of intermediation similar to the Grameen Bank in Bangladesh, adopted by the Kenya Rural Enterprise Program; (b) the Uaminifu Scheme, which wholesales unit loans to existing groups for retail to their members; (c) the Small Enterprise Professional Service Organization (SEPSO), which provides training to bigger clients; and (d) the "best practice learning and market linkages" program, which supports successful women entrepreneurs in acting as mentors for other women.
Option 3. Apprenticeship programs	India. The Vocational Training Project, World Bank, is modernizing craftsman and apprenticeship training through re-equipping selected ITIs and developing related training systems, extending trade coverage of the National Apprenticeship Training Scheme, and increasing women's access to training in modern sector and high-tech trades by constructing new ITIs for women and adding women's wings to existing ITIs.

Capabilities and Human Capital	
Options	Examples
Issue: Lack of access to contraception	
Option 1. Access to prenatal care	Argentina. PROMIN—Maternal and Child Health and Nutrition Project, World Bank. Argentina's highly developed health system still faces significant problems, such as high rates of maternal and infant mortality. Because many of these problems could be prevented by access to good quality health care, PROMIN strategies and project components consist of (a) placing a high priority on lowering infant mortality and morbidity rates, (b) providing coverage in municipalities in which the poor represent at least 30 percent of the population, (c) improving primary service delivery, (d) modernizing and financing primary health care and improving hospital efficiency, (e) using integrated management of childhood illnesses, (f) improving equity in access to health care, (g) strengthening community participation, (h) establishing indicators to monitor the population covered by the program, (i) decreasing adverse outcomes related to poor prenatal care by increasing the number of checkups during pregnancy, and (j) providing nutrition interventions for the most vulnerable mothers and children.
Option 2. Girls' education	Pakistan. Service rules were modified to allow women educators to take leadership positions at the central and district levels in Balochistan. In addition to senior policy-level positions within the Department of Services and General Administration, a position was created for a female district education officer (DEO) within each of Balochistan's 26 districts, with full staff and resources. This expanded the number of female education administrators at the local level from two to 26. Additional positions for female administrators at the subdistrict level were created to closely manage and support rural and far-flung girls' primary schools and teachers. Currently, one-half of the region's 26 districts have fully operational female DEO offices.

Issue: High female mortality rates

Option 1. Maternal and child care	Argentina. PROMIN—Maternal and Child Health and Nutrition Project, World Bank. Argentina's highly developed health system still faces significant problems, such as high rates of maternal and infant mortality. Because many problems could be prevented by access to good quality health care, PROMIN aims to (a) provide coverage in municipalities in which the poor represent at least 30 percent of the population, (b) improve primary service delivery, (c) modernize and adequately finance primary health care and improve hospital efficiency, (d) use integrated management of childhood illnesses, (e) improve equity in access to health care, (f) strengthen community participation, (g) establish indicators to monitor the population covered by the program, (h) decrease adverse outcomes related to poor prenatal care by increasing the number of checkups during pregnancy, and (i) provide nutrition interventions for the most vulnerable mothers and children.
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Capabilities and Human Capital (<i>continued</i>)	
Options	Examples
Option 1. Maternal and child care (<i>continued</i>)	Chad. Safe Motherhood Project. Maternal mortality in Chad is among the highest in the world. In response to this challenge, the government and donors developed a National Health Development Plan to increase access to quality basic services in health, nutrition, and family planning. The World Bank has provided financing for the complementary Health and Safe Motherhood Project, which is designed to (a) enhance capability at the central level to support regional health services, (b) ensure accessibility to low-cost essential drugs, and (c) improve access to basic health services in two specified regions.
Issue: Girls not attending school	
Option 1. Toilets and separate washing facilities for girls	Bangladesh. The Female Secondary School Assistance Project (FSSAP), World Bank, represents an integrated package approach incorporating multiple interventions. One component consists of building and improving toilets, tubewells, and water supply and sanitation programs at schools.
Option 2. Scholarship programs for girls	Bangladesh. The specific economic, cultural, and religious environments in Bangladesh combine to depress demand for girls' education, so that girls either never enroll in school or withdraw earlier than boys. The situation becomes considerably worse at the postprimary level as the direct costs of schooling rise. This project illustrates how monetary incentives can reduce the direct cost of schooling and encourage participation. A major component of a World Bank project is the provision of stipends for girls attending secondary schools. These stipends cover nearly half of a girl's annual direct educational costs, including tuition, textbooks, supplies, uniforms, and transportation. The project includes five additional components that address out-of-school and in-school constraints to enrolling girls in secondary education and promoting positive community values about educating girls. Since the project's inception, the number of girls enrolled in the program has increased each year.

Security	
Options	Examples
Issue: Insecure property rights	
Option 1. Property rights legislation	Rwanda. Under an Economic Recovery Credit, World Bank, is designed to promote legal and institutional changes in the agricultural sector and labor market that will foster economic growth and reduce rural poverty, and support legislation to eliminate discrimination against women. Amendments to the civil code will give women the rights to inherit and own property, and a new land law will be adopted and implemented that will provide security of land tenure and equal rights of land ownership regardless of gender. The government also will adopt a comprehensive action plan to eliminate discrimination against women and enhance their access to social and economic opportunities. A nationwide campaign will sensitize the population to the changes in the law to ensure its effectiveness. See Tanzania. The Land Act of 1998 and the Village Land Act of 1988 above.
Issue: Violence against women	
Option 1. Community capacity building	Zimbabwe. The Mussassa Project works with local police and prosecutors to sensitize them to issues of domestic violence and rape (for more information, see Stewart 1992). Costa Rica. El Instituto Legal de las Naciones Unidas y Desarrollo (ILANUD) offers gender sensitivity training, emphasizing violence against women, to prosecutors, judges, lawyers, and other professionals. In 1992, the project conducted 32 workshops throughout Latin America (Programa Mujer, Justicia y Género, ILANUD, San Jose, Costa Rica).

Security (continued)

Options	Examples
Option 2. Police reform	Latin America. Creation of women-only police stations, which have spread from Brazil to Colombia, Uruguay, Peru, and Costa Rica. Data from Brazil's special police stations show that women-only units have greatly facilitated the reporting of abuse. In São Paulo, for example, reported cases went from 67 in 1985 to 841 in 1990. These stations registered 79,000 of the 205,000 crimes against women reported nationally between July 1991 and August 1992. This suggests that the number of reported cases would be much higher if women's police stations were more widely available in other states (for a list of programs in Latin America, see "Programa de Atención y Prevención de la Violencia Familiar y Promoción de la No Violencia" [InterAmerican Development Bank, available at http://www.tadb.org/sds/doc/2253spa.pdf]).
Option 3. Safe transport	Peru. An assessment of the microcredit component of the Lima Urban Transport Project, World Bank, identified the dangers of sexual harassment and robbery facing women cyclists. The study also documented the dangers to female passengers on public transport and recommended a pilot project to promote women-only taxis and minibuses. See www.worldbank.org/gender/transport (under "Grants and Pilots").

Issue: Female-headed households

Option 1. Targeted transfers	Honduras. The Bono Madre Jefe de Familia Program was targeted to female-headed households that met an income criterion and had children attending primary schools. Teachers determined who was eligible for food coupons. Recognizing that many women are in unions not legalized by formal marriage but in which the male contributes to the household welfare, and that not all legal husbands are present and contributing to the economic welfare of the household, the project considered "real" union status to be a more accurate reflection of poverty than "legal" union status (<i>Source:</i> Grosh [1994])
Option 2. HIV/AIDS prevention programs	Argentina. The AIDS and Sexually Transmitted Diseases Control Project, World Bank, aims to reduce the number of HIV/AIDS cases (particularly mother-child transmissions of HIV) among high-risk and vulnerable males and females. While the incidence of HIV/AIDS has decreased among homosexual/bisexual men, it is steadily increasing among heterosexual individuals, including female sexual partners of infected drug users and their newborns. The project targets specific male and female focus groups, including at-risk pregnant women and commercial sex workers, with communication campaigns and expanded adoption of effective preventive measures, and enhances the diagnosis, treatment, and care provided to AIDS sufferers in the at-risk categories. Legislation will be introduced to include diagnosis and treatment of HIV for pregnant women in the government social insurance system and in prepaid health services. The project will pay special attention to the catastrophic economic impact of AIDS on lower-income families.

Empowerment

Options	Examples
Issue: Lack of participation in decisionmaking	
Option 1. Quotas for female council members	East Timor. Community Empowerment and Local Governance Project (CEP), World Bank. This reconstruction program will deliver community grants directly to the subdistrict level for projects proposed by individual villages and hamlets. The grants will have a special window targeting the most vulnerable social groups, including war widows, handicapped resistance veterans, and the elderly. In addition to these grants, the CEP will address the reconstruction of cultural heritage and civil society. Because the loss of so many male combatants created a large number of extremely vulnerable female-headed households and widows, the CEP includes a requirement that 50 percent of the elected hamlet representatives who will form the new local governance structure be female. To accomplish this unprecedented political gender equality goal, each citizen is granted two votes, one for each gender.

Empowerment (<i>continued</i>)	
Options	Examples
Option 2. Participatory planning to ensure the involvement of women	Malawi. The Social Action Fund Project (MASAF), World Bank, funds the upgrading and construction of community infrastructure such as schools, health facilities, community water points, rural and urban markets, and granaries to help women gain better access to health and education facilities and employment opportunities. MASAF is designed to ensure that female-headed households, poor women, and other disadvantaged groups benefit fully from the project. Promotional activities focus on women's priorities and needs and support women's involvement in the design, implementation, and management of subprojects. Women's representation in Community Project Committees (CPCs)—which are formed at the community level through public and democratic processes and are responsible for identifying community priorities and coordinating cooperative efforts for cash or in-kind contributions—is emphasized. As a result, an average of 30 percent of CPC members are women, and women often hold key positions within the committee. A MASAF monitoring and evaluation system will track the participation of women in community projects and will assess the impact of these projects on female beneficiaries, especially in areas and types of projects where opportunities to reach women have previously been missed.
Issue: Constraints in access to the legal system	
Option 1. Improving access to legal services	Ecuador. The Judicial Reform Project, World Bank, includes a Program for Law and Justice that provides small grants to groups in civil society, with emphasis on improving access to the judicial system. The majority of these activities serve women's legal needs, including four pilot legal services centers in urban areas that provide legal services for low-income women, many of whom have been underserved by the judicial system because of excessive delays in family law cases. Through mediation, the centers have been able to improve the efficiency of the court system as well as women's access to it. Child support cases that previously languished in the courts for several years are resolved in three to eight weeks, and child custody cases are usually decided within 48 hours. The centers also provide consultations on issues such as child support, domestic violence and sexual violence against children, land disputes, and inheritance.
Issue: Disempowerment of widows	
Option 1. Reforming succession laws.	Zimbabwe. Customary laws govern the bulk of personal relationships in Zimbabwe. Most marriages are not registered but are, rather, governed by customary rules. A married woman is assumed to work for her husband, and all property acquired in the marriage, apart from household property such as kitchen vessels, belongs to the husband. Upon termination of a marriage, division of property is dependent upon whether or not the marriage has been registered under the Matrimonial Causes Act, and most are not. The enactment of the Maintenance Amendment Act (No. 6/97) has been an important step in requiring a husband to maintain his ex-wife and her minor children in cases of divorce, and it supersedes customary law. The Administration of Estates Act has also introduced a measure of security for women by providing that the surviving spouse and children of the deceased have the right to inherit the deceased's property. Previously, customary law prevented a woman from inheriting her deceased husband's property. (Source: World Bank [1999]).

Technical Note I.4 Checklists and Promising Approaches for Incorporating Gender

Most PRSPs have identified their priority investment sectors from among the economic and social sectors presented in this technical note, which identifies potential gender issues in each of these sectors and recommends some of the promising program approaches that have been used to address these issues. Using these approaches will help the PRSP to respond to the needs of both sexes and help both women and men to share in the program benefits.

This technical note borrows extensively from “Key Questions in Gender Analysis: Sectoral Reference Guides,” produced by the World Bank, Latin America and Caribbean Region Gender Team, which can be found at www.worldbank.org/lacgender.

I.4.1 Agriculture, land rights, and rural development

Checklist of issues

- What are the differences in the food and cash crops grown by men and women?
- How do men’s and women’s distinctive roles in agriculture and livestock production contribute to development goals, such as improvement of household nutrition and welfare and internal and external growth of the agriculture and livestock sector?
- How have new investments and growth in agriculture and livestock production affected men’s and women’s labor supply and earnings?
- What agricultural technology services are available to male and female farmers? Do these services consider gender-differentiated roles and corollary agricultural technology needs in agriculture? Is information and advice on agricultural technology targeting the right gender?
- Do women and men work jointly or separately in agriculture and livestock production? What are the implications of these patterns for the type of agricultural technology services they require?
- Are men and women organized to increase their agricultural productivity, and if so, how are they organized? What are the implications of men’s and women’s different forms of organization for providing agricultural technology services to them?
- What different constraints do women and men face in using services—for example, conflicts with other activities such as domestic chores? How could services be provided to take into account these gender constraints—for example, timing and location of services and mechanisms for transmitting information?
- How would targeting of agriculture technology services to either men or women affect their productivity, earnings, and family welfare? How would that, in turn, alter decisionmaking and expenditure patterns in the household?
- Are there gender differences in the constraints to land ownership?
- What is the relationship between men’s and women’s land ownership and agricultural production and productivity by gender?
- What is the interaction with land markets? What are the gender-differentiated barriers to participating in credit programs as they relate to land? Have provisions been made to allow spouses of household heads to use titles for credit purposes?
- How has land affected household bargaining power, intrahousehold resource allocation, and corollary household welfare?
- How have land programs affected men and women differently? What is the resulting impact on the household in bargaining power and household welfare and security? What are the implications for designing future land programs?

Promising approaches

See technical note I.3 for examples of projects strengthening women’s property rights (under “Opportunities”).

- The decisionmaking role of women farmers can be strengthened by working through traditional women’s organizations—for example, in Malawi.

- 3 Reforming land laws can remove discrimination against women and permit them to use property as collateral for loans in, for example, Tanzania. Experience has shown that these laws require rigorous implementation to raise legal literacy and ensure that women's rights can be enforced.
- 3 Microcredit programs are an effective instrument for opening up new economic opportunities for women, but they need to be complemented by supporting extension and marketing services.
- 3 Improving access to rural transport for farmers of either gender is an important way to remove a major constraint to the sale of agricultural produce.

I.4.2 Environment and natural resource management

Checklist of issues

- 3 What are the gender differences in responsibility for cutting and transporting fuel?
- 3 Who is responsible for the management and maintenance of community water supply?
- 3 What are the gender differences in responsibility for terracing, tree planting, and other environmental protection measures?
- 3 What are the gender differences in responsibility for grazing and watering cattle and for ensuring cattle do not damage drinking water or vegetation?

Promising approaches

- 3 Training both women and men for environmental management and using this as a source of income generation.
- 3 Designing for women and men intermediate means of transporting fuel and water that save time and energy but do not damage footpaths and vegetation.

I.4.3 Education

Checklist of issues

- 3 What are the gender differences in literacy rates, educational enrollment, and attainment (by career choice and number of years of schooling), dropout and retention rates, and reasons for school dropout?
- 3 What are the implications of gender differences for programs designed to increase boys' and girls' educational achievement levels? Do programs need to be tailored to the needs and circumstances of boys or girls?
- 3 Are gender stereotypes transmitted through teaching methods and materials?
- 3 How do teaching methods and learning environments affect boys' and girls' educational achievement differently? What are the implications for teacher training programs?
- 3 How do differences in educational achievement affect labor market opportunities for men and women? What is the effect of education interventions such as career guidance and peer programs?
- 3 Do the types and quality of informal and formal training available to women and men differ?
- 3 Does the household structure and income differentially affect boys' and girls' school attainment? Could educational programs be designed to keep girls and boys in school and target families by household structure and income?
- 3 Do changes in household wealth affect boys' and girls' schooling differently?
- 3 Is there a tradeoff between school and market or home-based work for boys and girls?
- 3 Does lack of childcare differentially affect boys' and girls' school attendance? What are the implications of boys' and girls' market and home-based work for programs designed to increase educational attainment and achievement?

Promising approaches

See technical note I.3 for examples of projects that strengthen girls' school enrollment and educational performance (under "Capabilities and Human Capital").

- 3 Scholarship programs to encourage girls to enter, continue in, or remain in secondary school have proved an effective way to reduce families' opportunity costs of sending girls to school. These programs can also be structured so that parents must agree that the girls will not be married before they complete their education.
- 3 Access to transport through travel vouchers or through encouraging the private sector to provide transport services for girls has also been effective.
- 3 The provision of culturally acceptable school environments—separate toilets, female teachers, and physical separation of female and male students—is often a constraint, particularly as it may increase the costs of providing education.

I.4.4 Health and violence

Checklist of issues

Gender differences in health risks and access to health services

- 3 What differences exist in the health risks faced by men and women? How do these differ in timing, severity (incapacitating or not), prevention, and treatment? What are the implications for health service delivery?
- 3 What are the differing disease profiles for men and women at all stages of the life cycle?
- 3 Does availability of and access to health services differ by gender? Does gender-based streaming within the medical and allied health professions affect male and female use of health services? Are men and women treated differently because of social perceptions?
- 3 What are the gender-differentiated effects of health care reform?
- 3 Within the family, does gender affect health care and nutrition levels?

Reproductive health and sexually transmitted diseases

- 3 What are the reproductive health needs—such as family planning, prenatal care, diagnosis and treatment of sexually transmitted disease (STD), and infertility treatment—of women and men? Are reproductive services addressing these needs, and in what ways may they be different for women and men?
- 3 How are men's and women's roles in reproduction changing? How do reproductive health programs take men's roles and needs into account?
- 3 What is the incidence of induced abortion? What are the characteristics of women who have abortions? What is the incidence of mortality and morbidity due to postabortion complications? What are the health costs involved?
- 3 What is the incidence of adolescent pregnancy? What are the characteristics of those who do and do not become pregnant? In both instances, was sex education provided in school? What was the quality of the program offered?
- 3 What is the incidence of AIDS and STDs by sex? What are the trends? How do AIDS and STD programs take gender into account?
- 3 How do gender roles affect the ability to prevent adolescent and unplanned pregnancy and STDs? Do information campaigns address gender differences?

Gender and violence

- 3 How does gender violence affect reproductive health behavior and contraceptive decisionmaking?
- 3 What is the prevalence and magnitude of different types of violence—for example, political, economic, and social violence—by gender?
- 3 Who, by sex, are the perpetrators and victims of the violence types?
- 3 What are the challenges associated with effectively measuring prevalence and magnitude of violence—for example, share of women and men reporting all incidence types? Do violence indicators appropriately measure gender impacts?
- 3 What are the violence risk factors for men and women? Are men and women affected differently by certain types of violence perpetration and victimization?

- What are the links between violence types and gender roles, relations, and stereotypes?
- How do economic cycles and unemployment affect violence, by gender?
- How might violence affect the implementation of a proposed project or policy? For example, does violence result in gender-differentiated access to and control of resources or project participation and vice versa?
- How are issues of violence being addressed by the judicial, health, NGO, education, private business, and police or military sectors? Are gender differences in the perpetrators and victims of violence taken into account by these sectors?

Promising approaches

See technical note I.3 for examples of projects providing access to contraception, caring for maternal-child needs, and combating violence against women (under “Capabilities and Human Capital,” and “Security”).

- Health sector budget planning should be based on a consultative process that considers the views of women and men, young and old. Because of biological differences, women and men have very different health needs, and it is essential to ensure that adequate resources are allocated in the budget to cover women’s health needs. There are many cost-effective health sector investments—such as STD and HIV/AIDS prevention, family planning, and prenatal and postnatal care—that can have a significant impact on women’s health at a very low unit cost. It is essential to monitor the budget to ensure that these resources are actually allocated and used in an effective way.
- There are a number of cost-effective ways to improve women’s health, including preventing unwanted pregnancies, supporting safe pregnancies and birth, providing good care for pregnant women, providing food support to people in weak positions, testing for breast and cervical cancer, and preventing STDs. Providing primary health facilities in close proximity to where people live is one of the most effective ways to make health services accessible to women.
- It is essential to ensure that enough women are trained as doctors and health specialists and that necessary provisions, such as adequate transport and housing allowances, are made to allow them to work in rural as well as urban areas.

I.4.5 Transport

Checklist of issues

- What are the gender differences in the time and distance traveled?
- What are the main transport needs of men and women? Are present travel and transport services adequate for each of these needs?
- What are the main economic, time, and cultural constraints on men’s and women’s access to transport?
- Are both men and women involved in the selecting and designing transport projects? How effectively do projects respond to the needs of both sexes?
- Do men and women differ in their willingness to pay for transport? How does this affect the availability of services?

Promising approaches

See technical note I.3 for examples of projects reducing women’s time burden, providing microcredit for acquiring transport facilities, and generating employment for women through road maintenance.

- In many rural and urban contexts, bicycles offer a cost-effective way to increase women’s access to employment, markets, and public services. Bicycles can also be modified for use as rural ambulances and for transporting goods and passengers.
- Microcredit programs can provide an effective means of helping both women and men to acquire bicycles and other intermediate means of transport.
- A number of model approaches have been developed for increasing women’s access to public transport. These include women-only buses, separate entrances for women, separate seats for women, and improving security at bus stops.

- Labor-intensive road construction is becoming a major source of employment for women in many countries in Africa and Asia.
- Community focus groups have proved an effective way to raise men’s awareness of the excessive time and energy burden that water and fuel collection impose on their wives and children. These discussions have often resulted in men assuming more responsibility for these activities.

I.4.6 Energy

Checklist of issues

- What are the gender differences in time and distance for collecting fuel?
- What are the gender differences in the mode of travel or transport used for collecting fuel?
- What are the health impacts of wood- or oil-burning stoves?
- What are the gender differences in demand for and uses of electricity?
- What are the gender differences in access to electricity?
- Who is responsible for the maintenance of off-grid electricity?

Promising approaches

- Introduction of intermediate means of transport to reduce the time and energy burden of fuel collection.
- Introduction of more fuel-efficient stoves.
- Off-grid power generation (solar panels, wind pumps, and so forth).

I.4.7 Water supply and sanitation

Checklist of issues

- What are the gender differences in the demand for and use of water and sanitation?
- How does the availability of water and sanitation affect men and women differently?
- In communities where piped water is not available, who is responsible for collecting water? How long does it take and what impact does it have on the ability to participate in income-earning or other activities? If children miss school to help collect water, is it usually girls or boys who miss? What impact does this have on their education?
- Do women and men differ in their willingness to pay for services? How does this affect the availability of the services?

Promising approaches

See technical note I.3 for examples of projects to bring water closer to the community (under “Opportunities”).

- Women are beginning to play an important role in managing and maintaining community water supply and are often getting their first experience in administering money.
- Community focus groups have proved to be an effective means of raising men’s awareness of the burdens imposed on their wives and children by the excessive time and energy required in water collection. These discussions have sometimes resulted in men assuming more responsibility for collecting water.
- Participatory planning methods are now available to ensure that both women and men are consulted in project selection and design. The significance of this is that when men only are consulted, they frequently give water a low priority.

I.4.8 Labor markets, employment, and microenterprise development

Checklist of issues

Labor markets

- 3 Are there gender differences in the legal or customary rights to own land or other real property, to sign contracts, or to engage in independent financial transactions (obtain loans, and so forth)?
- 3 Is there a high degree of occupational gender segregation, that is, most women and men are employed in different occupations and most occupations are heavily composed of workers of one gender only?
- 3 Is there harassment or other sanctioning of workers who cross gender lines to work in occupations dominated by the opposite gender?
- 3 Are wages lower in gender-concentrated occupations than in less concentrated occupations, or is it only in the heavily female occupations that they are lower?

Earnings and employment conditions

- 3 Are there gender differences in the legal or customary right to own land or other real property, to sign contracts, or to engage in independent financial transactions (obtain loans, and so forth)?
- 3 Are there gender differences in access to the Internet or other information sources?
- 3 Is there protective labor legislation that contains gender-differentiated restrictions on formal sector employment (for example, with respect to total hours, schedule, place of employment, or type of work or requirements to provide special facilities or benefits to one gender, such as for maternal leave)?
- 3 Are there gender differences in the number of hours worked per day, week, month, or year (both market and nonmarket work)?
- 3 Are there gender differences in the proportion of individuals employed in the unpaid family or informal sectors?
- 3 Within the formal sector, are there gender differences in employment in managerial and professional positions?
- 3 Are there gender differences in the proportion of workers covered by (a) labor unions, (b) formal pension schemes, or (c) other fringe benefits?
- 3 Are there gender differences in the proportions working in public sector jobs?
- 3 Are there gender differences in education- and experience-adjusted wages?
- 3 Are there gender differences in unemployment rates?

Microenterprises

- 3 What is the proportion of women and men who are self-employed or operate microenterprises?
- 3 What are the different reasons men and women choose self-employment over wage work?
- 3 How do men's and women's participation differ in scale, sector of operation, earnings, and risk aversion? What accounts for these differences—for instance, firm failure rates, expectations, gender roles within the household?
- 3 Do gender differences exist in availability and use of credit by women and men and in interest rates charged? What accounts for these differences?
- 3 How do the characteristics of men's and women's microenterprises vary by rural and urban location?
- 3 What is the prevalence of boys and girls working in a parent's microenterprise as a supplement to family income? Does their participation affect their educational attainment and achievement?
- 3 What are the implications of men's and women's different microenterprise characteristics and credit demands for what type of credit is required and how credit services are provided?
- 3 Are there gender differences in ownership of bank accounts, savings, or access to credit?

Promising approaches

See technical note I.3 for examples of microcredit programs for women (under “Opportunities”).

- Microcredit has proved to be one of the most effective ways to promote women’s economic empowerment. Effective programs now exist in many countries, and training and technical assistance are widely available to agencies wishing to develop microenterprise programs.
- Increasing access to transport, both motorized and IMT can greatly improve both women’s and men’s ability to market their produce and to travel farther to seek employment.
- Training programs for community groups and women entrepreneurs are now widely available. A recent development is the use of the Internet to market handicrafts and other products produced by women’s cooperatives and individual enterprises.
- Small businesses often fail because of major illness or natural calamities, such as flooding, which exhaust the businesswoman’s resources. Many women’s credit programs, such as the Grameen Bank, in Bangladesh, and SEWA in India, now provide health insurance as well as emergency loans to help recover from natural calamities.

I.4.9 Safety nets and food security**Checklist of issues**

- Do targeting mechanisms for food and other essential supplies reach both men and women, as well as boys and girls?
- What are the gender differences in access to food-for-work and other public employment schemes?
- How is food distributed among families members during times of crisis and famine?

Promising approaches

See technical note I.3 for examples of public works programs providing employment and income during times of economic crisis (under “Opportunities”).

- Gender-based quotas for employment in public works programs.
- Improved methods for targeting vulnerable groups.
- Distribution of food and emergency supplies through women rather than through male household heads.

I.4.10 Urban development**Checklist of issues**

- What is the proportion of female-headed households in urban areas?
- What are the gender differences in formal and informal sector employment?
- What are the legal, cultural, and economic constraints on the ability of women to own property?
- What are the gender differences in access to credit in urban areas?
- What is the level of sexual harassment and violence against women?
- What are the gender differences in constraints on mobility in cities?

Promising approaches

- Microcredit programs designed to be accessible to both sexes.
- Self-help housing programs designed to be accessible to both sexes.
- Female-staffed police posts and other measures to protect women from domestic and public violence.
- Women-only buses and taxis and other measures to increase security on public transport.

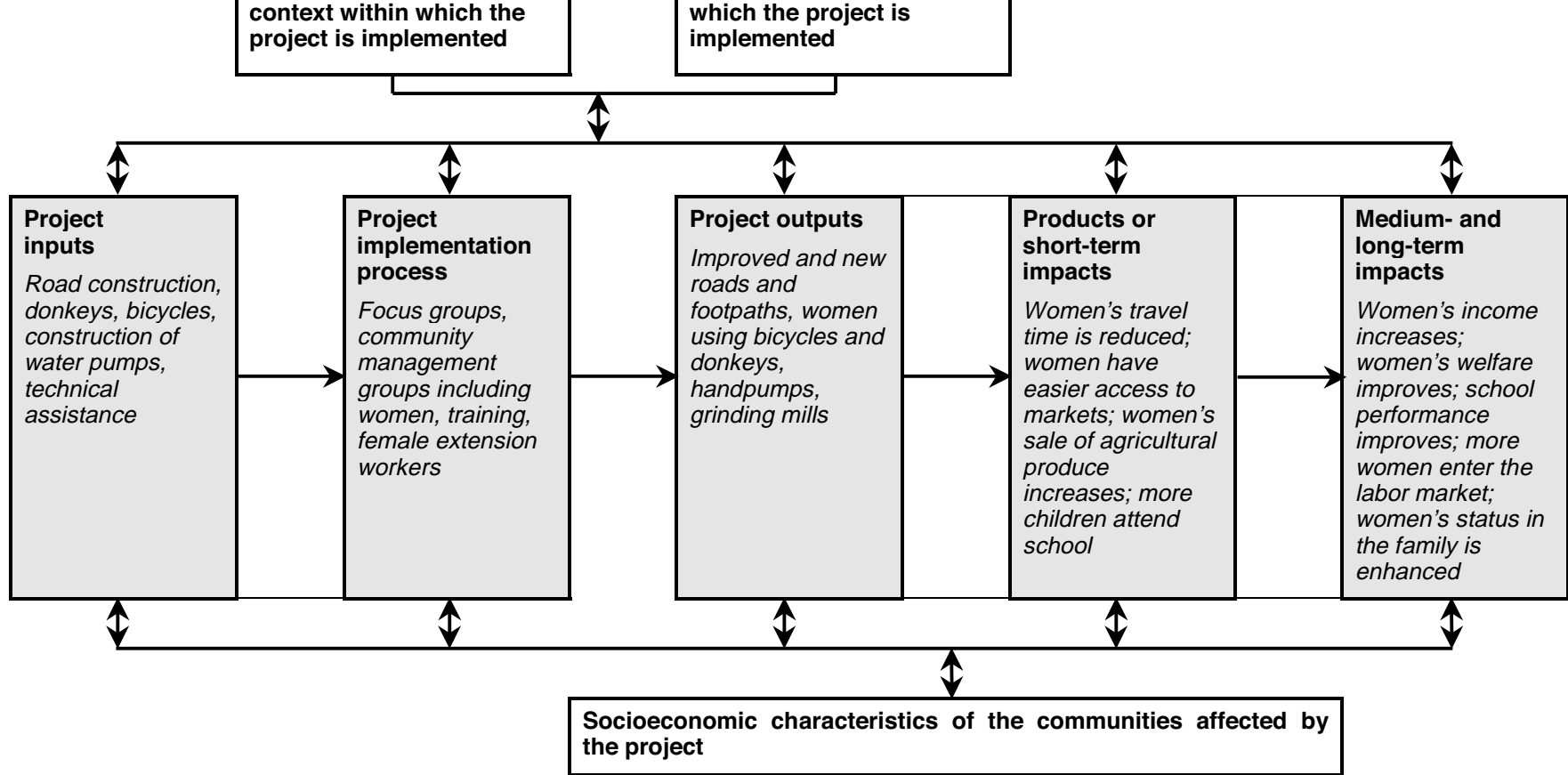
Technical Note I.5 Project-level Gender Indicators for Monitoring and Evaluation

To carry out monitoring and evaluation at the project level, it is helpful to develop a model of the project implementation process, describing and specifying indicators for

- **Project selection and design.** What were the criteria on which the project was selected, who was involved in the selection process, and to what extent were women involved?
- **Use of project inputs,** such as money, staff, vehicles, consultants, agricultural inputs. Were the resources used? Did they reach the intended target groups?
- **Project implementation.** How were the resources made available to the target groups? Did women have equal access? Were participatory processes used that included intended beneficiaries?
- **Project outputs.** These are the immediate outputs, such as school construction, training delivery, credit approval, and road construction. The evaluation needs to check how outputs were distributed between women and men or girls and boys. Were there gender differences in such considerations as the number of farmers receiving loans, the number of farmers receiving agricultural extension services, and the number of male and female teachers hired?
- **Project impacts.** These are the short-, medium-, and long-term effects of the project. In most cases, it is not possible to make precise estimates of the project impacts because a controlled experiment cannot be conducted. The best that can often be done is to estimate likely impacts.
- **Contextual factors.** The monitoring and evaluation model could include some of the community-specific contextual factors that can help explain differences in outcome among different communities. These factors can include
 - socioeconomic characteristics of community households;
 - local economic conditions;
 - characteristics of local agencies involved in project implementation; and
 - local political context.

Figure I.1 shows how this model was applied in evaluating the gender impacts of a village travel and transport project in Tanzania. This kind of model has several advantages for evaluating the social and gender impacts of projects:

- The simple graphical format makes it easy to explain the evaluation design and findings to government policymakers and line ministries, many of whom are not research specialists and often are not familiar with econometrics.
- The model helps define exactly what indicators are needed at each stage of the project cycle and how they will be used.
- The model's simple structure makes it possible to pinpoint aspects of the project and its environment that have contributed to failure to achieve intended objectives or to unintended outcomes. This information can be useful in designing future projects.
- Perhaps most important, the model helps policymakers assess whether the failure to achieve some of the objectives suggests some fundamental weaknesses in the project assumptions, or whether the problems were more the result of weaknesses in the way the project was implemented or of particular contextual factors, such as a local election or a downturn in the economy.



Technical Note I.6 Country Gender Assessment (CGA) Guidelines

The CGA is a collaborative process by which the World Bank and borrowing countries (a) analyze the gender dimensions of development; and (b) identify gender-responsive policies and actions important for poverty reduction, economic growth, human well-being, and development effectiveness of the country.

CGAs provide a basis for integrating gender issues into policy dialogue with governments and into other elements of the Bank's country assistance program, including further analytical work, policy design, advisory services, partnerships, and project activities.

A CGA normally comprises: (a) a country gender profile; (b) a review of the country's institutional and policy context and its gender implications; and (c) a set of suggested policy and operational interventions.

CGAs include a *profile* of:

- ⊃ the different socioeconomic roles of males and females, including their participation in both the market and household economies;
- ⊃ gender disparities in access to, control over, and use of assets and productive resources;
- ⊃ gender disparities in human development indicators;
- ⊃ inequalities between males and females in the ability to participate in development decisionmaking at the local and national levels; and
- ⊃ laws, institutional frameworks, norms, and other societal practice that lead (implicitly or explicitly) to gender discrimination and/or gender inequality.

Because gender issues cut across virtually all aspects of the economy and society, CGAs examine a range of substantive areas (for example, agriculture, education, energy, the environment, the financial sector, health, infrastructure, the labor market, social protection, the private sector, rural development, transport, and water and sanitation) to ensure that priority gender-related development issues are equally identified.

Although human development issues (for example, education, health, and nutrition) may be among the priority issues identified in many countries, gender and development issues vary tremendously across regions and countries. This makes analyzing a range of substantive areas beyond the human development sectors very important.

CGAs also examine gender issues across different socioeconomic groups (for example, across poor and nonpoor, ethnic groups, castes, and so on) to ensure that issues identified as priorities are inclusive and adequately focused on poverty reduction.

CGAs review the country's *institutional and policy context* with respect to gender, including discussion of:

- ⊃ the country's policies, priorities, legal and regulatory framework for implementing its gender and development goals and commitments (for example, the Millenium Development Goals, CEDAW the Beijing Platform for Action, and national gender plans of action);
- ⊃ the country's institutional arrangements for implementing its gender and development goals and commitments (for example, relevant ministries and agencies, government initiatives and cross-agency collaboration, partnerships with civil society and donors, and relevant budgetary resources);
- ⊃ the effects of the country's broader institutional environment (for example, development policies, laws, and regulations) on gender (in)equality; and
- ⊃ the country's recent progress and current and emerging challenges in implementing its gender and development goals and commitments.

CGAs include a set of *suggested priority policy and operational interventions* that the evidence in the gender profile and review of institutional and policy context indicates are important for poverty reduction and development effectiveness. These recommendations provide the basis for dialogue with government and other development partners, as well as for determining how to integrate gender into other aspects of the country assistance program.

Annex J

Environment: Technical Notes

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Technical Note J.1 Poverty Outcomes, Causes, and Potential Public Policy Actions

<i>Examples of causes</i>		<i>Public action</i>
Economic opportunities – reducing barriers to access		
Private consumption per capita	(1) Income and investment: macroeconomic stability, agricultural productivity, quality of governance, sectoral composition, and patterns of growth	Macroeconomic, financial, and trade policies
Poverty incidence, depth, and severity		Microfinance
Inequality, including within specific groups—regional, ethnic, and gender	(2) Distribution of assets: distribution of income, distribution of, for example, land, human capital	Reform distortionary pricing policies
		Improve rule of law, governance
	(3) Factors impeding access: infrastructure, for example, roads, gender-based impediments to access to land, credit	Clarify land tenure and improve distribution
		Improve or conserve the productivity of the natural resource base (land, forests, fisheries, and so forth)
		Provide urban and rural Infrastructure
		Increase spending on and targeting of safety net programs
		Improve environmental planning systems, for example, Environmental Impact Assessment
		Prevent environmental damage where cleanup costs are prohibitive (for example, pollution of the water source for a large population center)

<i>Examples of causes</i>		<i>Public action</i>
Capabilities – access to essential services		
Literacy	Quality of schooling, private costs of education, early childhood development	Spending/policies on primary education Action to reduce gender discrimination
Infant mortality rate	Mother's education; access to safe water and sanitation; breastfeeding; access to health services, including immunization; household poverty rates; HIV infection rates	Immunization AIDS programs Increase access to safe drinking water and private toilets Reduce indoor and urban air pollution Spending and policies on curative health for the poor Improve coverage of pre- and postnatal care Integrated programs to combat vector-borne diseases
Under-five mortality rate		
Maternal mortality ratio		
Underweight children under five	Household poverty rates, intrahousehold resource allocation practices	
Empowerment – good governance and participation		
Participation in decisionmaking	Ability to monitor and influence public resource allocations, social cohesion, inequality	Transparency, accountability; improve judicial system Effective decentralization Developing local institutions for communities to manage and use natural resources Actions on gender discrimination
Security – reducing vulnerability		
Security against physical shocks, economic shocks, and personal violence	External economic and climactic shocks, crop failure, macroeconomic instability Household-level shocks, such as accidents, disablement, and debilitating illnesses	Access to risk management mechanisms, for example, microcredit Measures to mitigate environment disaster risks (for example, better designed infrastructure, better planning processes) Disaster prediction and prevention mechanisms Ensure availability of natural resources to smooth consumption in times of shock

<i>Source of health damage</i>	<i>Associated public action</i>	<i>Health outcome affected</i>	<i>Monitorable health indicators</i>	<i>Proxy sector indicators</i>
Indoor air pollution	Energy (cleaner fuels, improved stoves)	Mortality	Deaths (child)	Number/share of households using clean fuels/improved stoves
	Rural development	Chronic lung disease	Symptom days/chronic lung disease	Type of housing
		Acute respiratory infections (ARIs)	Cases of ARIs	
Outdoor air pollution	Energy/heating	Mortality	Deaths (adult)	Annual mean levels of PM10 [ug/m ³]
	Transport	Chronic lung disease	Symptom days/chronic lung disease	Lead level in blood (children) [mg/dl]
		ARIs	Cases of ARIs	
		Respiratory hospital admissions (RHAs)	RHAs	
		IQ impairment (lead)		
Vector-borne disease	Irrigation	Malaria mortality	Deaths due to malaria	
	Reforestation	Malaria morbidity	Malaria cases	
	Infrastructure (drainage)			
	Health (vector control)			
Lack of water and sanitation (W&S)	W&S Infrastructure	Diarrhea mortality	Deaths due to diarrhea (child)	Access to sanitation (percentage of households, urban/rural), community coverage (percentage of households in a community), access to water (percentage of households, percentage of households with in-house connections, local, urban/rural)
	Social funds	Diarrhea morbidity	Diarrhea cases (child)	
Pesticide residues	Agriculture	Acute poisoning	Cases of acute poisoning	Application norms
		Cancers	Cases of cancers	Storage and handling practices
		Fetal defects	Spontaneous abortions	
Other toxic substances	Industrial pollution control	Cancers	Cases of cancers	Environmental performance
		IQ impairment (lead)		Waste management codes

Policy distortions, ineffective institutions, imperfect property rights	Policy reforms (pricing, subsidies, and so forth)	Sustainable livelihoods	Productivity, nutrition	Natural and social capital (e.g., resource productivity, water scarcity, security of tenure)
-------------------------------------------------------------------------	---------------------------------------------------	-------------------------	-------------------------	----------------------------------------------------------------------------------------------

This is one of many possible examples of links between economic opportunities and environment interventions. There is no generic relationship between outcomes related to economic opportunities and environmental interventions. Causal effects do not follow any patterns that can be generalized, nor are they unidirectional. They will always depend on specific national or regional circumstances.

J.2.3 Vulnerability outcomes

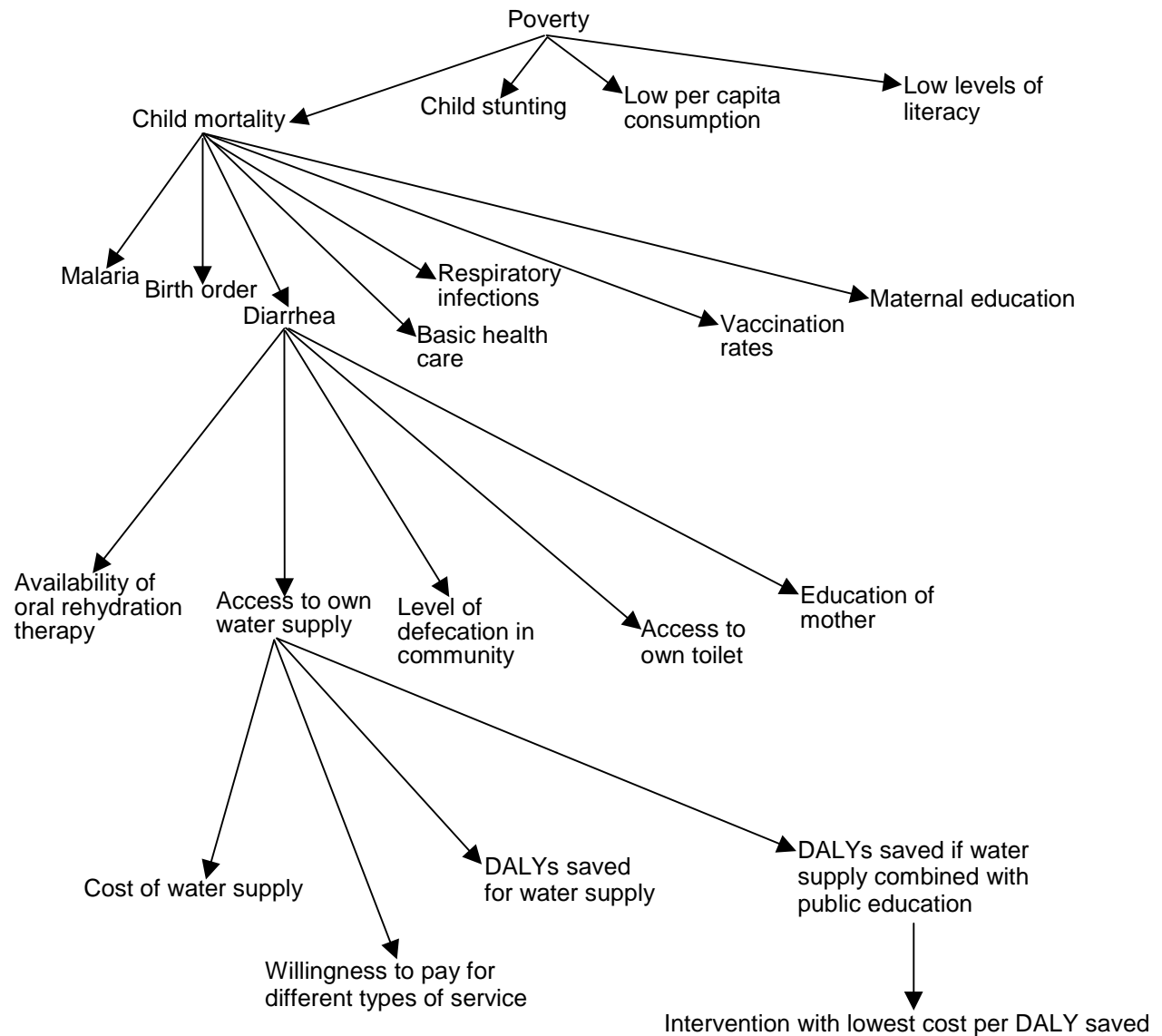
<i>Source of vulnerability</i>	<i>Associated public action</i>	<i>Security outcome affected</i>	<i>Monitorable security indicators</i>	<i>Proxy sector indicators</i>
Natural disasters,a immediate threat to life	Improve prediction and emergency preparedness	Death (human and animal)	Number of deaths in equivalent disasters	Existence of and capacity to use prediction equipment
Natural disasters—temporary loss of livelihood	Improve access to insurance	Loss of income	Stunting before and after disasters	Malnutrition
Natural disasters—loss of savings	Improve access to insurance, microcredit	Lack of education	Enrollment before and after disasters	Ability to restore savings
Natural disasters—permanent loss of livelihood	Improve disaster relief	Displacement	Number of environmental refugees in equivalent disasters	Capacity to channel relief aid and to rebuild affected areas quickly

a. We include without further distinction droughts, floods, hurricanes, earthquakes, landslides, and cyclones.

Technical Note J.3 Examples of Decision Trees

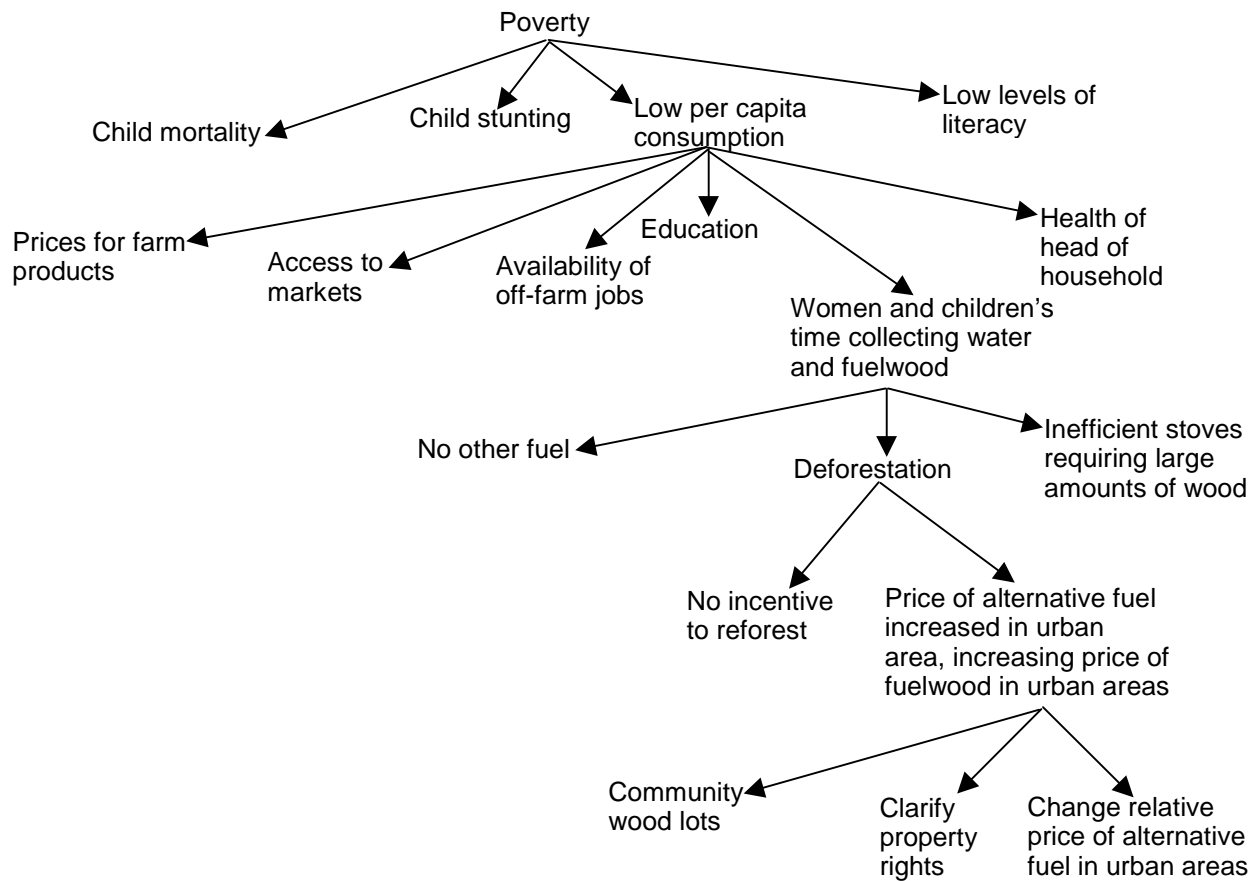
The two decision trees in this note show examples of the ideal process for arriving at priorities for public action. The objective should generally be to put numbers against each of the arrows. With the exception of some health interventions, however, this is unlikely. It may, though, be possible to rate them as high, medium, or low.

Figure J.1. Decision Tree for Environmental Health



DALY = Disability-adjusted life-year.

Figure J.2. Decision Tree for Opportunity and Environment: Focus on Reducing Time Women Spend Gathering Fuelwood



Household surveys		
Existing Demographic and Health Surveys (DHSS) and some other specific health surveys These have no income data, but we can calculate “wealth” or asset quintiles for these data for all countries with DHSS. These data are summarized in the country reports on health, nutrition, population, and poverty. Now available for 44 countries, they can be found on http://www.worldbank.org/poverty/health/data/index.htm .	Child mortality	Captures respiratory infections and water-borne diseases. Under-five mortality is a better measure of outcomes relating to environment than is infant mortality, as it is more influenced by nutrition, diarrhea, and so forth. Infant mortality is more influenced by problems relating to birth and congenital problems.
	Child malnutrition	This captures the effects of diarrhea, problems with some natural resource management and the effects of natural phenomena, such as drought. Stunting (height for age) captures the effects of chronic malnutrition and is a good indicator of persistent diarrhea, lack of economic opportunity relating to natural resources, and so forth. Wasting (weight for height) is relevant where people are vulnerable to climatic shocks and natural disasters.
	Incidence of diarrhea	Clearly captures the effects of inadequate water and sanitation access and hygiene practices. It does not capture whether or not the problem had long-term effects (whether, for example, the problem was cured quickly).
	Incidence of respiratory infection/coughing	Captures indoor air pollution as well as urban air pollution in some places.
	Incidence of fever	Captures malaria and some other vector-borne diseases.
	Type of fuel used for cooking	High prevalence of wood or dung can indicate likelihood of indoor air pollution.
	Type of water supply (river, stream, public well, private well, shared standpost, private outside tap, tap inside house, tanker, bottled water)	Prevalence of safe water, to test for mortality/morbidity related to diarrhea.
	Type of sanitation (no facility, shared latrine, private latrine, flush toilet)	As above.
	Lead levels in blood	Indicates problems of urban air pollution.
	Prevalence of vector-borne diseases	Points to the need for control of habitat where vectors thrive, and measures to limit human exposure to vectors (for example, treated bed nets to reduce exposure to malarial mosquitoes).
Household budget survey or equivalent	Expenditure on water, sanitation, energy Expenditure on, or consumption of,	Describes the level of dependence on natural resources and the standard achieved. High willingness to pay is also an indication that certain improvements could possibly be market driven.

Living Standard Measurement Study (LSMS), household survey	Health data (as above)	As above.
	Household facilities (water, fuel, sanitation), including behavioral information such as how the household treats its water before drinking	Provides guidance for potential interventions in natural resource management.
	Extent of dependency on agriculture either directly as farmer or as farm laborer. Land area worked. Property rights over land. Number of animals, use of chemical fertilizer and pesticides.	Poorly defined or enforced property rights may lead to short-term exploitation of natural resources rather than sustainable use. Significant pesticide use poses health problems for the farming population, as well as concerns about negative natural externalities.
	Gathering fuelwood or wild products or animals for sale or own use/consumption	These data raise issues of sustainability: Are these products harvested beyond their regenerative capacity? If so, what are the coping mechanisms? Will some species become extinct?
LSMS community questionnaire, if available	Extent of community involvement in decisions or collective works	Can indicate likelihood of community-based contracting or resource management.
	Whether household has been affected by a natural shock and, if so, what coping method they used	Indicates need for forecasting information, productive measures, and/or insurance provisions.
	Opinions about local infrastructure, condition of land, tree cover, and so forth	The local perceptions about environmental quality are a natural starting point in a consultative process to design interventions.
Sector reports and statistics at the national level		
National environmental action plans, state of the environment report	Data on forest cover, water quantity and quality, land quality, erosion, and rainfall	These data give an overview of <i>priority problems</i> . Further research and discussions are needed to drive <i>priority interventions</i> .
	Occurrence of natural disasters and extreme events and impacts	Both prevention (forecasting, physical measures, and so forth) and recovery (insurance, emergency relief, and so forth) should be considered.
Energy statistics	Coverage of water supply, sanitation, and solid waste	These data provide signals about where interventions to enhance environmental health are most needed.
	Use of coal, oil, gas, diesel, and petroleum within a jurisdiction	Can be fed into a rapid assessment model to estimate priorities for reducing air pollution.

Technical Note J.5 Project-Specific Indicators: Well-Being Variables

Table J.2, from a World Bank water resources project in India, shows how the success of environmental interventions can be measured by nonenvironmental indicators (agricultural yields rather than river water quality). A project aiming for poverty outcomes would want to use indicators like these along with additional indicators specifically linked to poverty. We do not suggest that these indicators are perfect, but they do show that indicators can be combined.

Tables J.2 and J.3 provide detailed examples of indicators that can be used to evaluate the impacts of interventions in water and sanitation and in environmental health generally.

Table J.2. Indicators for World Bank Water Resources Project, India

<i>Narrative summary</i>	<i>Key performance indicators</i>	<i>Sources of information for monitoring and evaluation</i>	<i>Critical assumptions</i>
Sector-related goal: Foster faster and more sustainable agricultural growth and rural development through improvements in water resources management.	1. Broad increases in the value and contribution of agriculture to economic growth 2. Effective management of withdrawal to safe yield levels in surface and groundwater	1. Government statistics; periodic World Bank studies 2. Periodic reports of the state water department	Goal of Bank mission: Improvements in agricultural growth and rural development in targeted interventions assist in poverty alleviation.
Project development objective: Sustainable improvement of agricultural productivity among low-income farmers in selected irrigation and drainage schemes.	1. Verifiable evidence of progressive and sustainable improvements in crop yields in project areas above baseline levels through remote sensing (for example, year 1: X percentage increase, ...) 2. Verifiable evidence of widespread and progressive substitution of higher value crops by farmers (for example, year 1: X percentage increase, ...) 3. Progressive improvements in farm income levels above baseline (for example, year 1: X percentage increase, ...) 4. Progressive improvement in production per unit of water used (for example, year 1: X percentage increase, ...)	1. Periodic reports, Agriculture dept. statistics, supervision mission reports, evaluation mission report (mid-term and final) 2. Agriculture department statistics, supervision mission reports, evaluation mission report (midterm and final) 3. Annual project monitoring and evaluation reports from project unit, World Bank supervision reports 4. Annual project monitoring and evaluation reports from project unit, World Bank supervision reports	Effective management of salinization and waterlogging is brought about by additional investments. Higher farm incomes in targeted areas will lead to general improvements in rural development. Other supporting infrastructure does not become limiting (e.g., rural electricity, transport facilities).

Source : Extracted from project documentation.

**Table J.3. DANIDA (Danish Agency for Development Assistance): Volta Region
Community Water and Sanitation Program**

<i>Indicator/indicator definition</i>	<i>Unit of measurement</i>
Sanitation and hygiene	<p>Absence of feces and urine from latrine floors and compound</p> <p>Absence of cleansing materials on latrine floors</p> <p>Absence of odor and flies in the latrine</p> <p>Evidence of hand washing after using latrine</p>
Water and hygiene	<p>Water fetching points are free from dirt</p> <p>Water transported in clean vessels</p> <p>Water storage containers free from dirt, placed in clean environment, and covered</p> <p>Use of cup with long handle for collecting water</p>
Health	<p>Percentage of population that can demonstrate new knowledge of hazards associated with water, sanitation, and health of each target community.</p> <p>An existing agenda on hygiene education with data on activities such as the number of hygiene education meetings held and the number of women attending the meetings and follow-up activities.</p> <p>Target schools that have in existence a hygiene education plan, data on the number of meetings held by the school health committee, x number of trained school health coordinators, a hygienically kept latrine with hand-washing facilities, and a clean school environment.</p> <p>A hygiene education program involving the whole community and emphasizing:</p> <ul style="list-style-type: none"> ➤ proper disposal of refuse; ➤ proper disposal of wastewater; ➤ penning of animals; ➤ x number of meetings held on hygienic activities; and ➤ environmental cleanliness and human excreta disposal. <p>At least 4 out of 10 households have some mechanism of hand washing.</p>

Source: Ho, Ghana. "Evaluation of Hygiene Education Component of the Volta Region Community Water and Sanitation Program." Community Water and Sanitation Division, VRCWSP.

Table J.4. Environmental Health Project

<i>Indicator/indicator definition</i>	<i>Unit of measurement</i>
Priority behavioral indicators for diarrhea disease prevention	<p>Cleansing of hands: Indicator definition and unit of measurement</p> <p>Proportion of households</p> <ul style="list-style-type: none"> ➤ where the mother (or caretaker) reports washing her hands at least once within the previous 24 hours on each critical occasion, and ➤ where the mother (or caretaker) demonstrates all elements of adequate hand-washing technique. <p>Sanitary disposal of feces: Indicator definitions and units of measurement</p> <p>Proportion of households</p> <ul style="list-style-type: none"> ➤ where all family members three years or older usually use a sanitary facility for defecation (report), ➤ where the feces of children under three are disposed of in a sanitary fashion (report), and ➤ where the house area and yard are free of human fecal contamination (observation). <p>Proportion of sanitary facilities</p> <ul style="list-style-type: none"> ➤ that appear to be in use (observation), and ➤ that are free of soiling with human feces (observation).

Table J.4. Environmental Health Project (EHP) (*continued*)

<i>Indicator/indicator definition</i>	<i>Unit of measurement</i>
Priority behavioral indicators for diarrhea disease prevention (<i>continued</i>)	<p><i>Drinking water free of fecal contamination:</i> Indicator definition and unit of measurement</p> <p>Proportion of households</p> <ul style="list-style-type: none"> ➤ that use water from an acceptable source for cooking and drinking, and ➤ that have either in-house piped water or a system of water collection, transport, storage, and access that maintains water free of contamination. <p><i>Food free of fecal contamination:</i> Indicator definition and unit of measurement</p> <p>Percentage of infants aged six months and under</p> <ul style="list-style-type: none"> ➤ that are exclusively breastfed. <p>Proportion of households</p> <ul style="list-style-type: none"> ➤ where the mother reports washing her hands before preparing or serving food or feeding children, ➤ where food is eaten within three hours of cooking, and ➤ where cups and spoons rather than bottles are used to feed infants and small children (report, observation).
Other W&S-related indicators: Access	<p>Continuous access to safe water at household level</p> <p>Access to devices for water collection, transport, storage</p> <p>Access to sanitary excreta disposal; access to soap or ash for hand washing</p> <p>Access to sufficient water quantity (20 liters per capita per day)</p>
Other W&S-related indicators: Quality	<p>Water supply: collection time, continuous availability, level of potability</p> <p>Sanitary excreta disposal: odors/aesthetics, durability of solution, ease of maintaining cleanliness, cultural appropriateness of design</p> <p>Behavior change: locally appropriate design, use of participatory processes</p>
Other W&S-related indicators: Demand	<p>An understanding that diarrhea is preventable</p> <p>Knowledge of the causes of diarrhea and the means to prevent it</p> <p>Willingness to pay for adequate water supply, sanitation, soap, or ash and willingness to participate (money or in-kind contribution)</p> <p>Functioning community environmental health committee</p> <p>Community norms supportive of appropriate behavior</p>
Other W&S-related indicators: Sustainability	<p>Effective policies and institutions that support access and quality</p> <p>Percentage of costs recovered from users</p> <p>Evidence that operation and maintenance are taking place</p> <p>Availability of capacity financing; adequately trained personnel</p> <p>Functioning community environmental health committees</p>
Other W&S-related Indicators: Hygiene education (these indicators were found in an environmental health project in Thailand)	<p>Percentage of the village population with access to a latrine for everyday use</p> <p>Percentage of households with latrines kept clean on a regular basis</p> <p>Percentage of school latrines kept clean and without smell every day</p> <p>Percentage of school and household latrines with water and a dipper inside for flushing</p> <p>Percentage of households and schools with soap or detergent available for washing hands</p> <p>Percentage of households and school latrines with new picture stickers inside</p> <p>Percentage of children aged four to six who are trained to use a latrine at all times.</p> <p>Percentage of households and village schools with access to clean drinking water</p> <p>Percentage of rainwater jars that have covers</p> <p>Percentage of rainwater jars that are always covered</p>

Source: Bendahmane, D. B. 1997. "Indicators for Programs to Prevent Diarrhea Disease, Malaria, and Acute Respiratory Infections: Activity Report No. 46." Environmental Health Project.

Contributors to Volume 1: Core Techniques and Cross-cutting Issues

Bahjat Achikbache, Consultant, Development Data Group, World Bank

Sabina Alkire, Research Writer, Commission on Human Society, Washington, D.C.

Michael Bamberger, Consultant, Operations Evaluation Department, World Bank

Anthony Bebbington, Consultant, East Asia & Pacific Regional Office, World Bank

Misha Belkindas, Lead Statistician, Development Data Group, World Bank

Mark Blackden, Lead Economist, Africa Regional Office, World Bank

Jan Bojö, Lead Environmental Economist, Environment Department, World Bank

Julia Bucknall, Senior Environmental Specialist, Europe & Central Asia Regional Office, World Bank

Luc Christiaensen, Economist, Africa Regional Office, World Bank

Aline Coudouel, Senior Economist, Poverty Reduction and Economic Management Network, World Bank

Mustafa Dinc, Consultant, Development Data Group, World Bank

Paula Donnelly-Roark, Senior Social Scientist, Africa Regional Office, World Bank

Philippe Dongier, Manager, South Asia Regional Office, World Bank

Graham Eele, Consultant, Development Data Group, World Bank

Talib Esmail, Senior Rural Development Specialist, Africa Regional Office, World Bank

Lucia Fort, Gender Specialist, Poverty Reduction and Economic Management Network, World Bank

Adrian Fozzard, Senior Public Sector Specialist, East Asia & Pacific Regional Office, World Bank

Navin Girishankar, Senior Public Sector Specialist, Africa Regional Office, World Bank

Kirk Hamilton, Senior Environmental Economist, Environment Department, World Bank

Linn Hammergren, Senior Public Sector Management Specialist, Latin America & the Caribbean Regional Office, World Bank

Jesko Hentschel, Lead Economist, Africa Regional Office, World Bank

Malcolm Holmes, Public Management Specialist, Independent

Nalin Kishor, Consultant, Latin America & the Caribbean Regional Office, World Bank

Jeni Klugman, Lead Economist, Poverty Reduction and Economic Management Network, World Bank

Steve Knack, Senior Research Economist, Development Research Group, World Bank

Christiane Kraus, Economist, Africa Regional Office, World Bank

Brian Levy, Sector Manager (Public Sector Reform & Capacity Building), Africa Regional Office, World Bank

Jennie Litvack, Senior Country Economist, Middle East & North Africa Regional Office, World Bank

Nicholas Manning, Lead Public Sector Management Specialist, South Asia Regional Office, World Bank

Violeta Manoukian, Consultant, Social Development Department, World Bank

Richard Messick, Senior Public Sector Specialist, Poverty Reduction and Economic Management Network, World Bank

Elinor Ostrom, Professor, Indiana University

Poonam Pillai, Consultant, Environment Department, World Bank

Margaret Polski, Senior Research Fellow, Institute for Development Strategies, Indiana University

Giovanna Prennushi, Lead Economist, Poverty Reduction and Economic Management Network, World Bank

Jeffrey Rinne, Consultant, South Asia Regional Office, World Bank

Gloria Rubio Soto, Consultant, Latin America & the Caribbean Regional Office, World Bank

Andrea Rizvi, Engineer/Economist, South Asia Regional Office, World Bank

Christopher Scott, Senior Lecturer in Economics, London School of Economics & Political Science

Parmesh Shah, Participation Coordinator, Social Development Department, World Bank

Kalanidhi Subbarao, Consultant, Africa Regional Office, World Bank

Helen Sutch, Sector Manager (Public Sector Management), Poverty Reduction and Economic Management Network, World Bank

Eric Swanson, Program Manager, Development Data Group, World Bank

Seema Tikare, Participation and Institutional Development Consultant

Julie Van Domelen, Senior Human Development Economist, Africa Regional Office, World Bank

Wendy Wakeman, Senior Community Development Specialist, Poverty Reduction and Economic Management Network, World Bank

Kathleen Withers, Statistician, The Wharton School, University of Pennsylvania

Quentin Wodon, Senior Economist, Latin America & the Caribbean Regional Office, World Bank

Shlomo Yitzhaki, Head, Statistical Institute of Israel; Professor, Hebrew University

Deborah Youssef, Consultant, Social Development Department, World Bank

