

5 Advantages and Limitations of the Analysis

Improving Project Quality at Entry

There are several advantages in carrying out distribution and poverty impact analysis of projects that are relevant regardless of project classification. First, the analysis forces a more thorough cost-benefit analysis. For example, in the analysis of agricultural projects, focusing on distribution and poverty impact forces separate consideration of different farm sizes when preparing farm-income statements, which in turn may lead to a more detailed analysis of the rate of adoption of technology, contributing to better accounting for

differences in expected productivity increases among farmers (Londero 1995). Second, the estimation of net benefits accruing to different stakeholders will help clarify who are the major beneficiaries and losers of the project and sharpen the judgement of project sustainability from the financial and political economy perspective. The analysis can assess the consequences of different financial and institutional arrangements on the incidence of net economic benefits on the poor. By establishing the link between financial and economic analysis and rigorously eliciting the transfer payments, especially direct and indirect subsidies entailed, such analysis will highlight financial sustainability issue in a much stronger manner (Case 2 in Appendix 6). Third, the analysis brings up policy questions in an illuminating way. For example, a noncompetitive market structure may prevent adequate benefits from reaching the poor (Case 5 in Appendix 6).

Complementing the Inadequacy of Headcount Approach

The World Bank and Inter-American Development Bank (IDB) use project classification systems similar to ADB's, in which a category of targeted projects is given unique attention under a poverty reduction objective. Criteria for this category of interventions rely crucially on the beneficiary headcount approach. The World Bank's criteria rely either on beneficiary headcount or a specific mechanism of targeting the poor (World Bank 2001), while IDB's criteria are based on the combination of three criteria: sectoral, geographical and headcount (IDB 2001). In the case of ADB, the classification (November 2000, page 3) states, "The criteria used for poverty classification for loans are (i) the proportion of poor among the beneficiaries, and (ii) impact or benefit analysis." This foresees that both headcount and money-metric measure of net benefit incidence are applicable. This is based on the recognition that a headcount beneficiary measure is a blunt and often misleading measure of poverty impact. It fails to capture the depth of poverty impact and can either overstate or understate the money-metric measure. For example, overstatement occurs when project net benefits are spread thinly over a large number of threshold-poor, while understatement occurs when project net benefits are concentrated on a small number of hard-core poor. Therefore, one would prefer to apply the money-metric measure of poverty impact wherever technically feasible and practicable under available data and resources.

There are some obvious inadequacies with the headcount approach: beneficiaries must include those affected negatively as well as those who are targeted for service delivery. In many projects that are net users of public funds, the population outside the projects' influence areas are the losers. Should the number of such losers be deducted from the number of gainers according to poverty level? This will not likely be done in practice. This vagueness remains in defining what is meant by beneficiaries itself when looking at the cost side of the project (Londero 1999). Furthermore, the headcount approach tells nothing about **efficiency of delivering poverty impact**. While some targeted projects may provide tangible benefits to the identified beneficiaries, the question remains whether their delivery mechanism is cost-effective. A full poverty impact analysis set out in this Handbook can check the efficiency of poverty reduction in this regard. By using the information obtained in the poverty impact analysis, the indicator for efficiency of poverty impact can be calculated as the net benefits going to the poor per unit project cost. This can be a ranking index among, for example, alternative subprojects (this point is illuminated in the discussion in Case 2 of Appendix 6).

With care and qualifications (page 27), poverty impact analysis can be used to provide economic underpinning of Poverty Interventions. Provided that PIR estimation has been judged practical and carried out, the requirement of a project disproportionately benefiting the poor translates into **an EIRR of 12 percent or above plus a PIR significantly greater than the poor's share in GDP**. Here the PIR works as a money-metric counterpart of headcount poverty incidence among the project beneficiaries, while the poor's share in GDP works as a money-metric counterpart of national headcount poverty incidence. Appendix 7 provides a list of approximations for the poor's income share in GDP for selected DMCs. Depending on the agreed poverty line to be used in the analysis, the figure for the poor's share in GDP may be excessively low or high. Where the figure for this parameter is unavailable or unreliable for one reason or another, **10 percent could be used as a rule of thumb**. As in the headcount approach, how to interpret "significantly higher" is open to discussion and review.

For many Poverty Intervention projects it may not be possible to monetize benefits and hence an EIRR is not calculated. For example, in many social sector projects, benefits will be identified in quantity form (e.g., patients, years of life, pupils, years of schooling, number of dwellings). Where benefits are not in money-metric terms, the twin requirements of efficiency and poverty impact must still be applied, but in a different manner from that described

above. Here efficiency requires that the project be cost-effective in providing the service concerned, e.g., in cost per patient, cost per year of life saved, or cost per slum dwelling cleared. Cost-effectiveness should in principle be calculated by taking the ratio of the discounted stream of project costs over its operating life to the discounted stream of physical output. Hence the unit cost of service provision must be derived in discounted terms as an average incremental economic cost (AIEC). The comparator for testing whether a cost is excessive will have to be built up from experience of similar project interventions in the country and elsewhere, as is recommended for health sector projects (ADB August 2000). For such projects where project benefits are not monetized, full PIR analysis is impossible and poverty impact estimation would be limited to a headcount basis (Case 4 in Appendix 6).

Variety of Projects

One obvious limitation of the distribution and poverty impact analysis is that it cannot be expected to cover all types of projects and comparability across projects cannot be any better than that of conventional project economic analysis as it is practiced. This limitation is nothing new and is a carryover from the limitation in the current practice. At one end of the range are projects in sectors such as power, water and irrigation, where full benefit-cost analyses are regularly applied and where the use of distribution and poverty analysis may be a natural extension of current work. At the other end of the range are projects in social sectors such as health and sanitation and primary education, for which EIRRs are rarely calculated for practical purposes. Such projects can be subject to cost-effectiveness analysis and increasingly a form of such analysis is being applied. As explained above, alternative criteria can be applied for poverty-focused projects where monetary estimation of benefits is not possible and beneficiaries may be, for example, in terms of number of poor patients or poor pupils. Between these extremes will be a range of intermediate situations, such as in roads, where there may be technical difficulties relating to distribution and poverty analysis. However, it is encouraging that ADB's recent transport projects are testing the methodology (see Appendix 8). Projects for which the methodology is very difficult to apply will be, for example, in relation to institution building and private sector development, since it will be difficult to relate investment expenditures to tangible outputs and income flows.

Caution on Interpretation of PIR Index

Early experience at ADB has provoked two concerns. First, some may hastily interpret that the PIR index is a summary indicator for poverty impact as the EIRR is a summary indicator for project economic viability. This is not the case. The PIR by itself is merely the proportion of the NPV accruing to the poor against the total project NPV and does not inform poverty impact ranking or efficiency of poverty reduction among alternative projects (designs). It is conceivable that in some cases, a deliberate attempt to raise the PIR would reduce poverty impact in absolute terms and defeat the purpose. What projects should be maximizing is not the PIR index but the NPV going to the poor (absolute poverty impact), or the NPV going to the poor per project cost (efficiency of poverty impact).

Second, while in principle the PIR is a superior index to the headcount poverty index in interpreting the meaning of “disproportionately benefiting the poor,” it is often an uncertain point estimate. As explained in Chapter 4 (Box 5), the PIR is usually sensitive to crucial parameters, assumptions for which are uncertain. Therefore, the analyst needs to use a sensible judgement on whether the full poverty impact analysis makes sense and avoid mechanical application of the PIR. When it is calculated, sensitivity tests are strongly recommended with respect to uncertain parameters such as the poor proportion of net benefits accruing to the government. Sensitivity test on the PIR can be useful in illuminating policy discussion if it is done on policy parameters such as utility pricing (Appendix 1) and market competitiveness (Case 5 in Appendix 6).

Risk for the Poor

Poverty is normally associated with vulnerability, so that unexpected unfavorable outcomes may have very serious consequences for those at or below the poverty line. ADB project appraisals in the past have rarely addressed issues of risk of project failure with a few exceptions in the energy sector. ADB Guidelines (1997, Appendix 21) have only a brief discussion on risk analysis. The possibility of pooling risk across projects provides a rationale for omitting risk calculations from the decision criteria, but it does not apply

when one is considering particular groups. Fujimura and Weiss (2000) illustrate how in principle a risk of failure, defined as the probability that a project makes the poor worse off, can be estimated. The idea is to replace point estimates of project net benefits accruing to particular groups of beneficiaries by their probability distribution. This subject is taken up in a subsequent EDRC study (ADB 2001).