Assessing Distributional Aspects

All multilateral agencies now insist that socio-economic analysis include distributional analysis for a number of reasons.

Distributional analysis is an interesting component of economic studies, in order to determine the respective share in the distribution of costs and benefits attributed to each of the stakeholders involved.

It should be noted that distributional analysis is not all about poverty. For example the evidence that truckers will record the largest vehicle operation savings may be considered as an opportunity for reducing freight rates and in the mid-term for developing the transport of goods. Generally speaking, showing road users the evidence of significant savings can be an incentive to increase traffic lows relating to one or several vehicle/ road user categories.

Example:

Colombia - Toll road concession project, The World Bank, project appraisal document, (1998)

On the other side, the financial effort made by the Government can be related to 1) the expected benefits for the community, and 2) the overall financing capacity of the State.

Project costs were compared to the current budget levels of the executing institution and of the national government to assess the possible fiscal impact of the project. With no participation by the private sector, the project would represent between 7 and 18 percent of the road sector investment program for the national network during the construction period.

However, with partial private financing, the Government contribution would be reduced to between 4 and 10 percent, and hence the project's fiscal impact from the perspective of the executing agency would be manageable. For the new road, road users will enjoy substantial savings in vehicle operating and travel time costs.

The proposed tolls represent a contribution from users varying between 9 and 36 percent of users' savings (the lowest value corresponding to buses and the highest to medium-sized trucks). In short, the users of the road would be significant beneficiaries of the investment, and the Government's contribution was critical for undertaking the project. Given the limited impact on Government finances, and given the highest priority of the project within the context of the development strategy in Columbia, it is reasonable to assume that the project has generally satisfied the requirements of the general public and the public sector.

Guidelines for Distributional Analysis

Project sustainability is strongly affected by who benefits, and by how much, relative to who pays. In lending to the private sector for provision of public goods and services, for example, the distribution of project benefits among government, consumers, and private investors is a key input in negotiating build-own-operate-transfer agreements, in pricing services, and in the economic return to the national economy. One form of distributive analysis considers the distribution among operators, customers, and government, and how it is affected by different charge levels. This is pertinent to highway projects.

The following sets out some key guidelines for distribution analysis;

- The identity of the groups that gain or lose, and the size of the gains and losses, can be documented during the project design and appraisal process. The analysis of distribution effects begins with analyzing financial benefits and costs. This first step disaggregates the financial impact of the project on the main beneficiary groups. Six groups can be considered:
  - the owners of project operating entity,
  - those working in the project,
  - the government,
  - the consumers of project outputs, and
  - those providing material inputs to the project, and
  - lenders to the project.

- The second step is to account for the distribution of the economic benefits and costs, over and above financial benefits and costs. The differences between financial and economic costs and benefits should be allocated to owners, labor, government, consumers, suppliers, and lenders, or to different categories of producers in agricultural projects. The adoption of the domestic price numeraire enables financial benefits and costs to be compared directly with economic benefits and costs to identify the effects of government policies, externalities, and user charges.

- Distribution analysis can show the extent to which public pricing policy can affect the share of the private and public sectors in the net benefits of a service project. It can also be used to test the extent to which the project design directs benefits to particular income groups. Distribution effects can be important in the economic analysis of private sector projects in which IFIs take equity positions (see ADB reference, Appendix 25).

- A second form of distribution analysis considers the distribution of net benefits among beneficiary groups according to their income level. A particular focus on net benefits going to the poor is pertinent to many agricultural, social sector, urban development and public utility projects that often focus on or at least include the least well-off. A statement can be provided of the incremental financial benefits to different project participants. For road sector projects, the benefits to different final users can be broken down among users with different income levels. Such statements, showing the distribution of financial benefits,

can be the basis of assessing the division of benefits between the poor and non-poor. For several projects, financial benefits cannot be calculated. It is still desirable to obtain information on the income level of different beneficiaries. Where possible, the proportion of benefits, in physical terms, going to the poor and the non-poor should be stated.

- In general, the analysis of the impact of projects on the poor should be based on specific information about direct project beneficiaries, and not merely about the district or province in which a project is located. Poverty reduction will be assisted where projects are targeted in ways that will assist groups of poor people directly. Obtaining information about likely beneficiaries is part of the process of project identification and design, and not just appraisal.

- Project costs and benefits may also have a different gender impact. Where a project generates substantial net benefits and extra incomes for project participants, this will be at the cost of additional work. The burden of additional work rarely falls equally on all members of a household. At the same time, those who benefit or who control the additional financial resources may not be those who contribute most of the extra effort. For some types of project, for example, health, education or agricultural development projects, a distribution analysis can be undertaken on a gender basis, to identify the additional costs and benefits to women in particular.

- A third form of distribution analysis considers the effects of using foreign resources in production and funding. The economic analysis of foreign investment projects should be undertaken from both the project and host country perspective. The use of foreign financing, either equity or loans, results in an initial inflow of capital into the host country, but an outflow in later years to service foreign debt and interest payments and the repatriation of foreign equity, capital gains, and earnings. From these two flows, the net foreign capital flow to the host economy can be calculated.

- More generally, the division of benefits between the host country and the foreign investor typically will depend upon government policies. For example, taxes are a source of revenue to the host country and a cost to the foreign investor, reducing the level of repatriated profits. Subsidies are a cost to the host economy and a benefit to the foreign investor. To encourage foreign investment, protection might be provided to the foreign investor. Tariffs on project outputs will increase the profits of the foreign investor and, therefore, potentially increase the outflow of benefits from the economy. Tariffs on project inputs will increase the benefits to the economy. Fees paid by the government for privately provided services represent a benefit to the investor, but a cost to the national economy.

- Economic prices should be used to estimate net economic benefits of the foreign investment project from the efficiency viewpoint. However, financial prices determine the share of overall benefits that accrue to the foreign investor and to the host country. Changes in financial prices affect the distribution of benefits between the host country and the foreign investor without necessarily affecting

the total economic benefits of the project. Both the underlying economic return and the net benefits to the foreign investor and country should be calculated for such investments, particularly when the Bank both extends a loan and takes an equity position in the project company.

Guidelines for the Economic Analysis of Projects, ADB, 1997

Economic Analysis of Investment Operations: Analytical Tools and Practical Applications.
The World Bank. 2001.