Session 5.1
Distribution Analysis

Introductory Course on Economic Analysis of Investment Projects
3 July 2009
Why Distribution of Project Effects?

Equity Considerations
• Who benefits from the project, by how much?
• Is distribution of effects consistent with project objectives?
• How do benefits reach target groups?

Incentive Considerations
• Who receives, by how much?
• Who pays, by how much?
Examples of Distribution Analysis

• Understand effects of price changes on stakeholder groups, net benefits of service projects

• Assess effects of foreign resources such as BOT projects with foreign sponsors - net capital flows, host country and foreign investor benefits division

• Assess the distribution of economic and financial costs and benefits, and net benefits between poor groups and other stakeholders

➔ Poverty reduction addressed where components effectively reach poor groups
Analytical Focus of Distribution and Poverty Impact Assessment

- Channels of effect: access to employment, markets, resources and assets, services, transfers
- Distribution effects: who receives, who pays
- Time dimensions and directness of effect: short to longer run and direct and indirect effects
- Design implications: mitigation and enhancement measures
Start Distribution Analysis During Sector Work

- Assess without project access to employment, markets, resources and assets, services, transfers
- Assess differences in access by group (such as income) and geographic location
- Identify stakeholder groups that stand to gain or lose by investments
- Assess alternatives that are likely to be effective and sustainable in increasing access, benefit incidence
During Feasibility and Appraisal

- Have the channels of effect been identified to see how costs will be incurred and benefits realized?
- How much are gains/losses from distributing project effects? Do they provide an incentive for response?
- How much is the cost burden to those who will pay? Is the burden acceptable?
- How do targeting/equity considerations affect the overall project performance and returns?
- Can the project and component design be modified and/or complementary measures be taken to enhance impact on target beneficiaries, minimize effect on efficiency?
How Far Can We Take Distribution Analysis?

- Revenue generating projects with quantitative financial/economic analysis
  - quantitative distribution analysis and poverty impact ratio
- Non-revenue generating projects with quantitative benefit analysis
  - quantitative benefit incidence analysis
- Limited quantitative analysis
  - qualitative channel of effect analysis
Stakeholder Groups Analysis

- Owners, operators of project enterprises
- Consumers, users of project outputs
- Goods and service suppliers to the project
- Hired workers, labor for the project
- The government
- Rest of the economy
- Lenders to the project
Distribution Tree: Example From Road Project

Cost Savings

- Passenger Vehicles
  - Transport Users
    - Private
    - Government
  - Owners
    - Private
    - Government

- Freight Vehicles
  - Transport Users
    - Private
    - Government
  - Owners
    - Private
    - Government
Poverty Impact Tree: Example From Road Project

- Private Sector Benefits
  - Non-Poor
  - Poor
- Government Benefits
  - Transfers to Non-Poor
  - Transfers to Poor
Linking Distribution and Poverty Analysis to Cost Benefit Analysis

- Estimate the economic costs and benefits relative to financial costs and benefits, i.e., EPV-FPV
- Distribution Analysis: Distribute differences between financial and economic costs and benefits between project stakeholders
- Poverty Impact Ratio: Estimate the proportion of the net economic benefits designed to go to the poor compared to total project net economic benefits