Economic Analysis: A Project Design and Decision Support Tool

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Economic Analysis: A Project Design and Decision Support Tool

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Session objectives – questions we’re aiming to answer

1. Why is economic analysis important to us as the COS community?

2. How can economic analysis help inform project design and decision-making?

3. How can the COS community support task teams in their economic analysis?
Presentation structure

What is economic analysis and why do we do it?

How can economic analysis help: The Three Questions

How can economic analysis help: The Project Justification Nexus

Going forward
What is project economic analysis?

A **calculation** of the expected stream of benefits and costs and the net impact generated by an investment

A **decision-making tool** that informs investment decisions: What would happen without the project or program? Is the proposed approach the best option?

A **method of assessing** the economic rationale for an investment and its contribution to a country’s welfare
Economic analysis includes a range of possible approaches and tools.
The importance of economic analysis is established in Bank policy

IPF Policy:
- Investment project financing may be extended…with due attention to considerations of economy and efficiency
- The Bank undertakes an economic analysis of the Project, assessing the economic rationale, appropriateness of public sector financing, and value added of Bank support

PforR Directive:
- The task team undertakes an economic evaluation providing the rationale for the public provision of the PforR Program…as well as its expected impact [and] the expected added value of Bank support
Ultimately: help inform decisions about project selection and design

1. Identify where scarce resources can have the most impact

2. Ensure appropriate fiscal impact and financial viability

3. Ensure benefits are accessible by the poor or other targeted beneficiaries

…and many other benefits
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How can economic analysis inform project design and decision-making?

Ideally:

\[
\text{EIRR}_{\text{Project1}} (18.4\%) > \text{EIRR}_{\text{Project2}} (15.2\%)
\]

More practically: answer the three questions guiding economic analysis to present the economic rationale for a project.
Question 1: What is the project development impact?

• Start with the with-project and without-project scenarios

• Identify benefits with the project
  • May be monetizable or not, consider externalities

• Identify project costs
  • Investment costs, recurrent costs, opportunity costs
Cost-benefit analysis:

- Monetizes the flow of project benefits and costs
- Summarizes project returns with a quantitative net present value (NPV) or internal rate of return (IRR)

Enables an informed decision about the overall returns of a proposed project, quantitative and comparable, based on transparent assumptions.
Then apply specific economic analysis tools

Cost-effectiveness analysis:

• Compares different alternative approaches to achieve a given objective

• Appropriate when project benefits are not easily monetizable

Informs selection between different project design options to achieve a targeted development outcome
Then apply specific economic analysis tools

Financial analysis

Fiscal analysis

Distributional analysis
Question 2: Why public sector provision?

- Want to optimally use the scarce public sector resources
- When a project is presented, ask: is there a sustainable private sector solution?
- If not, explain the public rationale: market failures, externalities, addressing redistribution goals

Helps ensure that Bank lending only supports appropriate public sector projects and does not crowd out private sector finance
Question 3: What is the World Bank’s value added?

- The Bank has limited resources
- Other development partners may provide complementary (or duplicative) financing
- What comparative advantage do we bring?

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<tr>
<th>Technical input based on international experience</th>
<th>Introducing innovative solutions</th>
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<td>Support for implementation capacity development</td>
<td>Procurement, financial management, E&amp;S risk management</td>
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<tr>
<td>Convening power</td>
<td>Oversight of quality of project design</td>
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</table>
Question 3: What is the World Bank’s value added?

- The Bank has limited resources
- Other development partners may provide complementary (or duplicative) financing
- What comparative advantage do we bring?

Informs the decision about the appropriate scope of Bank financing of any given project
A stylized example: Rural highway construction project
### A stylized example: Rural highway construction project

<table>
<thead>
<tr>
<th>Economic analysis</th>
<th>Project design implications</th>
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<tbody>
<tr>
<td>Cost-benefit analysis: positive return</td>
<td>Favorable project to support</td>
</tr>
<tr>
<td>Role of public sector: room for private sector provision</td>
<td>Work with Roads Authority to explore possible public-private partnership arrangement</td>
</tr>
<tr>
<td>Financial analysis: not profitable in early years</td>
<td>Not financially viable (for Roads Authority or private sector) in early years; initial public subsidies may be required</td>
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</table>
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Going forward
Economic analysis can also integrate project design

- Teams should present an integrated project appraisal of economic rationale, objectives, risks – avoid fragmentation

- Economic analysis should be linked to (and can help improve) other aspects of design – the ‘project justification nexus’

Assessing the integration of project design helps indicate internal consistency, quality of design
<table>
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<th>Design element</th>
<th>Integration with economic analysis</th>
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<tr>
<td>Theory of change</td>
<td>Economic rationale, incremental project benefits relative to counterfactual should underpin the theory of change</td>
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<tr>
<td>Design element</td>
<td>Integration with economic analysis</td>
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<tr>
<td>Results framework</td>
<td>Outcomes and targets measured by results indicators should be the same or at least consistent with the benefits identified and quantified in the economic analysis</td>
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### Design element

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<th>Risk analysis</th>
<th>Integration with economic analysis</th>
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<tr>
<td>Risks to achieving development objectives identified in SORT should be reflected in economic analysis and considered in sensitivity analysis, and vice versa</td>
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Presentation structure

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Going forward
Critical role for GPs, technical staff, project economists in conducting economic analysis

- Quality economic analysis: a technical task requiring specialized skills!

- Critical to rely on qualified project economists, project finance specialists, GP technical specialists

- Example: recent PG efforts to develop templates, identify qualified economists, to improve quality of economic analysis

\[ y = 1 - \frac{f^n \left[ \frac{s \cdot l}{f} + \left( \frac{20}{f} \right)^w \right]}{20^n} \]
So, what role for COS to support?

- Give attention to economic analysis in reviews
- Are the analytical tools applied well?
- Are assumptions reasonable?
- Is the economic analysis integrated with the rest of project design?
So, what role for COS to support?

- Ensure adequate resources are available for economic analysis, during preparation as well as implementation
- A project economist/project finance specialist should be a core resource, not a luxury…
Thank you