

Session 1.2

Scope of Project Economic Analysis

Introductory Course on Economic Analysis of Investment Projects

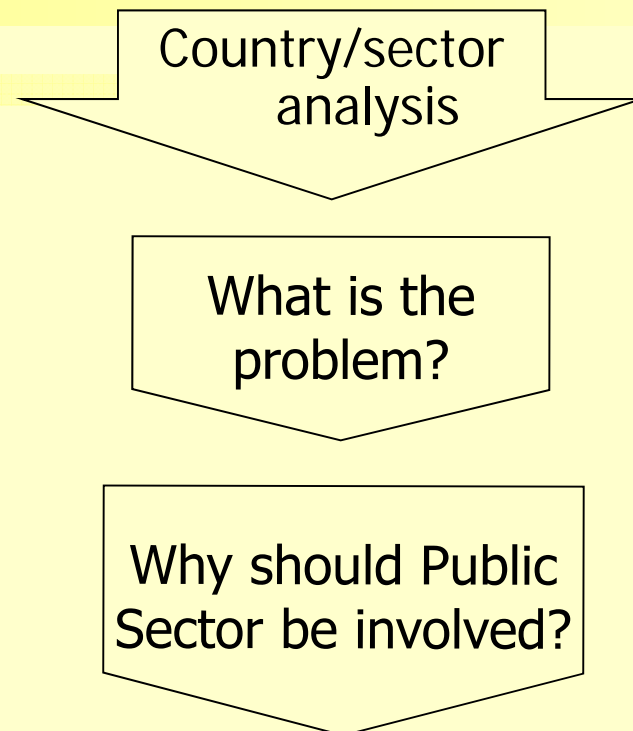
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What Economic Analysis of Project Really is:

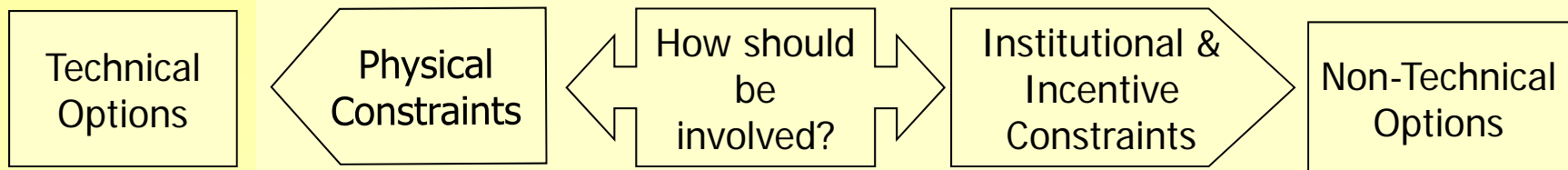
- More than rate of return calculations
- Integrated framework/tool to select and design good projects
 - ➔ relevant and responsive
 - ➔ feasible, result-delivering
 - ➔ ensure welfare improvement

Dimensions of Economic Analysis: Relevance



These questions identify basic problems/needs, underlying causes, and appropriate role of the government

Dimensions of Economic Analysis: Responsiveness



There is a menu of choices for taking actions; one of them would be most appropriate to achieve agreed goals.

Selected Steps in Project Economic Analysis

1. Macro Economic Context
 2. Sector Analysis
 3. Economic Rationale for Public Sector Involvement
 4. Choice of Modality
 5. Demand Analysis
 6. Alternative and Least Cost Analyses
 7. Cost Benefits Analysis
 8. Financial & Institutional Sustainability
 9. Risks and Sensitivity Analysis
 10. Distribution Analysis
- Validating the Economic Rationale
- PROJECT Economic Analysis

Macroeconomic Context

A project cannot be designed in isolation from the rest of the economy. Economic outlook of the country is an important determinant of success/failure.

- Projects work best in healthy economies
- Unhealthy economies are a risk
- Macroeconomic distortions affect projects
- Key macro economic policies: monetary policy; trade policy; fiscal policy; other interventions
 - General economic outlook, growth potentials
 - Exchange rate changes,
 - Competitiveness, comparative advantages
 - Fiscal management, financial sustainability
 - Taxes, subsidies
 - Governance issues



Sector Analysis

Identify binding constraints for efficient and equitable provision of goods and services in the Sector

- Sector context directly affects the project
- Project should be part of a plan

Sector Analysis

- Assess Sector performance and constraints
 - Binding constraints
 - Market / non-market failures
- Assess sectoral policies, institutional capacity, regulatory mechanism
- Review government's plan
- Relevance of ADB strategy
- Identify a set of actions



Economic Rationale

Why should there be public sector intervention?

Government should intervene only when market fails

- Market failures
- Equity issues

Market failures – necessary condition for public interventions

Governments also fail to intervene optimally

Government (Non-market) Failures:

- Non-optimal interventions
- Disrupt efficiently functioning markets
- Merit goods

Choice of Modalities

Aid Modalities

- Project loan
- Sector loan
- Financial intermediation loan
- Program loan
- Sector development program
- Private sector loan
- Multi-tranche financing facility



Relative Characteristics of Aid Modalities

	Project	Sector	SDP	Program	GBS
Scale-Up Potential	Low				High
Donor Control	High				Low
Policy Change Prospects	Low				High
Implementation Failure Risk	Low				High
Fiduciary Risk	Low				High
Political Risk Vulnerability	Low				High
Cross-Cutting Benefits	Low				High
Donor Harmonization	Low				High
Recipient Ownership	Low				High
Transaction Cost	High				Low
Fungibility Risk	Low				High
Corruption Vulnerability	Low				High

Transition from yellow to red represents rising intensity from low to high

Demand Analysis

How much of the output is wanted? How much are users willing to pay for it?

- Project design should be demand-driven
- Assess demand for product or service
- Identify demand shifting factors
- Project growth rate of demand, influence of demand shifters (size of project)
- Demand and tariff

 basis for identification of project size, timing and overall benefits, tariff and financial sustainability

Alternative and Least Cost Analysis

What is the most efficient way of addressing the problem at hand?

- Can the objective be achieved by policy reforms?
- Evaluate alternative project design in terms of lending modalities, financial arrangements, scale and timing, location, technical designs, etc.
- Explain why proposed alternative is chosen (least cost alternative)

Benefit-Cost Analysis

Provides objective framework, employs consistent and predictable analytical structure to examine the ability of a project to improve social welfare – a decision making tool

STEPS:

- Identification, quantification and valuation of project benefits & costs
- Discounting cost and benefits
- Economic viability: $\text{Benefits} > \text{Costs}$
- NPV, B/C ratio, IRR



Discounted cash flow techniques

- Future costs and benefits converted to present values
- Discount factor for year $t = 1/(1 + i)^t$
- Where i reflects cost of waiting
- NPV is the surplus a project could generate if it borrowed all its capital cost at i

Discounted cash flow techniques

- IRR is equivalent to the percentage return on project capital over project life
- A 'good' project has $NPV > 0$ and $IRR > i$
- Normally the two criteria are consistent
- ADB uses IRR as test and looks for 12% for productive projects

Financial and Institutional Sustainability

Are there enough resources to ensure flow of benefits?

- Assess financial performance of project entity for revenue generating projects
- Assess self-financing capacity of project entity
- Fiscal impact (implicit or explicit subsidy)
- Sources of funds to meet net financial requirements
- Institutional capacity assessment

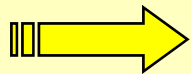
Financial and Economic analysis

- Technique for calculating NPV/IRR is same for both
- But values of benefits and costs are normally different for the two analyses
- Hence there will be separate NPV and IRR values
- FNPV and FIRR and ENPV and EIRR

Distribution Analysis

Who benefits and by how much?

- Identify groups that gain or lose
- Assess size of gains and losses
- Target groups (poor, women, etc.)



sheds light on likely impact of project,
sustainability

Sensitivity and Risk Analysis

What are the chances that benefits & costs will be realized as anticipated?

- Identify variables to which project is sensitive
- Assess change in parameters required to change project decision
- Assess likelihood of these changes occurring
- Consider mitigating actions against main sources of uncertainty

Overall Assessment

- Is project relevant in country/sector context?
- Has rationale for public/private sector intervention been clearly established?
- Does project incorporate best alternative design?
- Is project economically sound?
- Is project feasible/sustainable?

Key Areas of Analysis in ADB's Project Processing Cycle

Step	A. Country Strategy and Programming	B. TA Fact-Finding	C. TA Implementation	D. Loan Fact-Finding	E. MRM, SRC
Activity	1. Macroeconomic context assessment 2. Sector context assessment 3. Demand Analysis 4. Identification of economic rationale and operation prospective	1, 2, 3. Update of macroeconomic, sector context, demand analyses 4. Confirmation of economic rationale 5. Identification of project alternatives 6. Preliminary identification of benefits and costs, and distributional issues 7. Identify fiscal and financial sustainability issues	2, 3. Sector and project demand analysis 5. Confirmation of the optimal project alternative 6. Full identification of costs and benefits, including methods of measuring benefits and costs 1-7. Expectations/overall assessment of the proposed project investment	1-5. Overall Assessment of developing project investment 6. Validation of cost-benefit analysis 7. Financial and institutional sustainability analysis 8. Distribution analysis 9. Sensitivity and risk analysis 10. PPMS	1-10. Full confirmation of the project's economic viability and resolution of outstanding economic issues
Output	CSP/Project Concept Paper	TA Paper	Interim/Draft Final Reports	Draft RRP with Supplementary Appendixes	RRP



Thank you

