

Introduction to Public Investment Analysis

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Key concepts, steps, and tools for evaluating government-level projects and programs

1. What Is Public Investment Analysis?

Aspect	Description
Definition	Systematic assessment of the economic, social, and fiscal impacts of projects funded by the public sector (e.g., infrastructure, health, education).
Purpose	• Allocate scarce public resources efficiently. • Ensure projects deliver net benefits to society. • Provide transparency and accountability to taxpayers and legislators. • Government ministries and agencies.
Typical Users	• Multilateral development banks. • Legislative committees and audit offices. • NGOs and civil society watchdogs.

2. Core Principles

1. **Economic Efficiency** – Choose projects with the highest net social benefit per unit of public spending.
 2. **Equity & Distributional Effects** – Assess who gains and who bears costs (regional, income group, gender).
 3. **Fiscal Sustainability** – Verify that financing (budget, debt, PPP) does not jeopardize long-term fiscal health.
 4. **Transparency & Accountability** – Document assumptions, data sources, and results; enable independent review.
 5. **Risk-Adjusted Evaluation** – Incorporate uncertainty (technical, demand, political) into the decision-making process.
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3. Analytical Framework

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3.1. Project Identification & Screening

Step	Action
Policy Alignment	Verify that the project supports national strategies (e.g., SDGs, climate commitments).
Pre-screening Criteria	Minimum cost/benefit ratio, strategic relevance, legal feasibility.
Stakeholder Mapping	Identify beneficiaries, affected groups, and responsible agencies.

3.2. Data Collection & Baseline Establishment

- **Quantitative data** – Capital costs, operating expenses, projected demand, macro-economic indicators.
- **Qualitative data** – Social context, environmental constraints, regulatory environment.
- **Baseline** – Current situation without the project (counterfactual) to measure incremental effects.

3.3. Economic Evaluation Techniques

Technique	When to Use	Main Outputs
Cost-Benefit Analysis (CBA)	Standard for infrastructure, large-scale services.	Net Present Value (NPV), Benefit/Cost Ratio (BCR), Internal Rate of Return (IRR).
Cost-Effectiveness Analysis (CEA)	When benefits are non-monetary (e.g., lives saved).	Cost per unit of outcome (e.g., \$/DALY averted).
Social Return on Investment (SROI)	Projects with strong social/community impact.	Ratio of social value created per dollar invested.
Fiscal Impact Analysis	To gauge budgetary implications.	Net fiscal cost/revenue over project life.
Multi-Criteria Decision Analysis (MCDA)	When multiple, non-comparable objectives exist.	Composite score reflecting weighted criteria.

3.4. Discounting & Time Horizon

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- **Social discount rate** – Reflects society's time preference (often 3–5% for developing economies, lower for long-term climate projects).
- **Analysis horizon** – Typically the economic life of the asset (20–30 years for roads, 50–100 years for dams).

3.5. Sensitivity & Scenario Analysis

- **One-way sensitivity** – Vary a single parameter (e.g., construction cost) to test impact on NPV/BCR.
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