

Infrastructure Prioritization Framework Summary

World Bank Public-Private Partnerships CCSA

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The Infrastructure Prioritization Framework (IPF) is a decision support tool designed to help governments prioritize infrastructure investments under conditions of limited resources, multiple policy goals, and uncertainty. One of the prevalent challenges faced by policymakers worldwide is how to allocate limited public resources in order to achieve development goals. The gap between investment goals and available resources requires governments to discriminate between different investment options and amongst sectors. The challenge is particularly pronounced in the case of infrastructure, where huge financing gaps have been projected for the following decades.

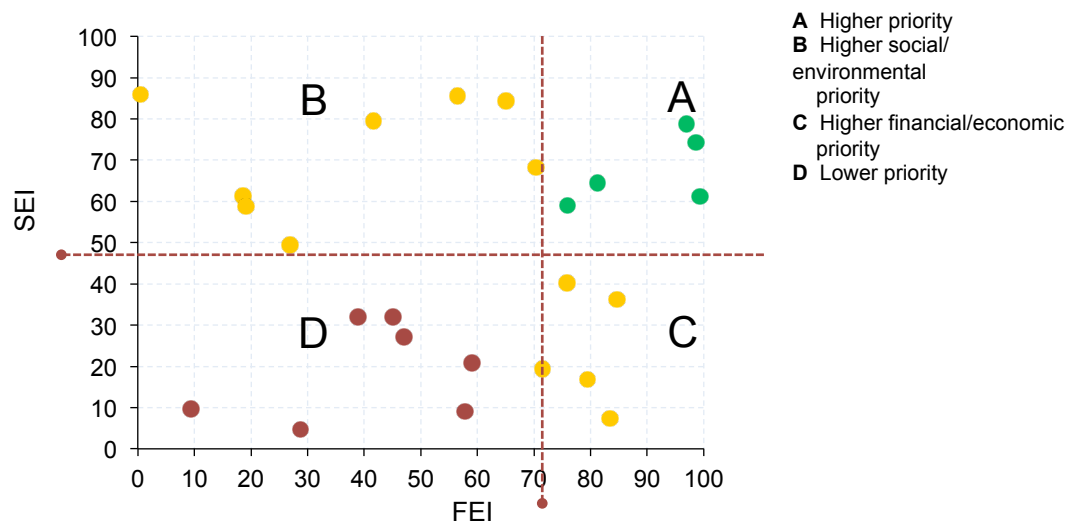
Economic and strategic project appraisals and feasibility studies provide good information for prioritizing investments, but policy makers must also consider indirect effects and development and sector-specific targets when deciding amongst projects. As social and environmental factors gain relevance in the pursuit of shared prosperity and sustainability, these dimensions must be clearly accounted for project selection. Moreover, many governments lack the capacity and resources to provide extensive economic analysis across full project sets, particularly when large sets of small- to medium- size pre-screened projects are submitted for funding to a central funding agency. The IPF is a stepping-stone to project selection based on more sophisticated and extensive economic analyses, progressing governments from ad hoc or political selection to more systematic approaches.

The Infrastructure Prioritization Framework responds to demand for systematic infrastructure decision support that is feasible within the resource means of government and incorporates the key decisions factors for a government and a given sector. IPF is a quantitative, multi-criteria approach to evaluating proposed projects according to government-selected social, environmental, financial, and economic criteria.

In practice, when a number of variables are important to a decision situation, the requirement of considering many informational inputs can hinder decision-making. To solve this problem, composite indicator methods have been developed to synthesize, simplify and appropriately represent more complex information sets. Statistical methods are used to combine indicators into social-environmental index (SEI) and financial-economic index (FEI) scores. The advantage of this approach is that a decision-maker can compare options using two index values rather than reviewing all underlying information.

After the SEI and FEI are constructed, each project's index scores are used as coordinates to plot projects onto a Cartesian plane whose axes represent each dimension (see Figure 1). This creates a visual map of projects' relative expected social-environmental and financial-economic outcomes. Thereafter, the budget constraint for the sector is imposed along each axis. The result is a matrix with four quadrants, which can be used to inform project selection and visualize alternative investment options.

Figure 1. Infrastructure Prioritization Matrix



Each point represents an infrastructure project. The position of a particular project is given by its SEI and FEI scores. Dotted lines represent the budget period’s fiscal limit / budget constraint.

In Figure 1, Quadrant A contains ‘high–priority’ infrastructure projects that simultaneously score high on both the SEI and FEI and are likely the best candidates for implementation. In contrast, projects falling into quadrant D are of lower priority status, since they score lower both indices. Infrastructure projects in quadrants B and C are considered medium–priority for implementation. These projects score relatively high on either SEI or FEI, but not on both simultaneously.

Because projects in Quadrant A do not exhaust all available resources, a subset of the projects in Quadrants B and C may be implemented. For example, all projects in quadrant C could be implemented if priority is only given to FEI. Thus, the IPF approach makes space for professional deliberation in the selection of projects from amongst the mid–priority quadrants. Moreover, it highlights that IPF is not intended as a definitive prescription for selecting infrastructure projects, but rather as a visualization tool to inform discussions of alternative options and consideration of alternative investment scenarios.

The IPF has a number of strengths. For one, via the selection of input criteria to the SEI and FEI, it can be tailored to the unique policy goals and developmental context of a region or sector. Coming to decisions on input criteria also encourages active collaboration and deliberation amongst relevant government units and stakeholders to identify relevant indicators. This process gives the government ownership and understanding of the tool’s moving parts and creates an opportunity to improve data collection associated with project proposal. Another key strength is that it may be flexibly applied to take advantage of available data and account for sectoral and development policy goals.