Towards More Efficient Public Investment Management

Sungmin Han

Associate Fellow
Public and Private Infrastructure Investment Management Center(PIMAC)
KDI
Most infrastructure investment projects had been evaluated by foreign organizations or experts.

Implementation of new infrastructure investment as suggested by the Five-year Economic Development Plans

As the nation began to expand steadily at an unprecedented rate financially and economically, the number of projects and their value increased, rendering effective analysis increasingly difficult.

Review of the feasibility of investment projects costing over 10 billion Korean Won (KRW)

Review of projects with total investment of KRW 50 billion or more; Internal review of projects with KRW 10 billion to just under KRW 50 billion by an “operating division”

Difficult to review the results of feasibility assessments of major projects submitted by each operating division

Introduction of preliminary feasibility study

The Public Investment Management Center (PIMA) at the Korea Development Institute (KDI) to undertake pre-feasibility studies was established (2000)

Total Projects Cost Management (TPCM)

The Act on Private Participation in Infrastructure (MPB); the amendment of PPP Act

The “Regulations on the Major Investment Project Review” amended (EPB dir.)

The Budget Office in MFE

The “Regulations on the Major Investment Project Review” (EPB dir.)

Investment Project Deliberative Committee (IPDC) (Economic Planning Board (EPB))
A Need for Effective PIM System (I)

Considerable increase in government expenditure for social welfare and physical Infrastructure

Consolidated Fiscal Expenditures and Net lending by Central Government

Criticism against Feasibility Studies by Line Ministries:

Lack of Objectivity and Reliability in FS

- The baseline cost of the Seoul-Busan High Speed Rail (KTX) project has more than tripled from 5.5 trillion KRW ($5.5 billion USD) to 18.5 trillion KRW ($18.5 billion USD).
  - A feasibility review committee investigated the FS.
- Thirty-two out of thirty-three projects (1994-98) were evaluated as feasible in FS.
  - Serious flaws in terms of transparency, credibility and objectivity.
What went wrong and why?

- Polluted by interested groups
- No independent review process
- Economic value isolated from social value
- Lack of standardized guidelines and databases
- Capital project budgeting inconsistent with the Medium Term Expenditure Framework (MTEF) budget
- Ex ante appraisal, and nobody cares thereafter
Evolution of PIM System

- TPCM (Total Project Cost Management)
- PFS (Pre-Feasibility Study)
- RSF (Re-assessment Study of Feasibility)
- IEBP (In-Depth Evaluation of Budgetary program)
- RDF (Re-assessment of Demand Forecast)
- PE (Performance Evaluation)
- VE introduced in 2000 and reinforced in 2005
Introduction of PFS

- New paradigm of PIM

- Introduction of Preliminary Feasibility Study (PFS)
  - Short and brief evaluation of a project to produce information for budgetary decision
  - Owned by the Ministry of Strategy and Finance (MOSF) and evaluated by independent evaluation unit, PIMAC
  - Clear and explicated binary judgment (feasible/non-feasible) on the overall feasibility
Implementation Procedure of PFS

**Line Ministry**
- Select and Submit PFS candidate projects (pre - PFS Committee)

**Ministry of Strategy & Finance**
- Select PFS Projects in consultation with PFS committee

**KDI (PIMAC)**
- Consultation based on:
  - Eligibility for central government grants
  - Urgency of the Projects
  - Concreteness of the project plan

**1st Stage**
- Determination of the Priorities by considering:
  - The long-term National Comprehensive Plan,
  - National Policy Direction

**2nd Stage**
- Request PFS

**3rd Stage**
- Make Investment Decision

- Announce & Report to the National Assembly
- Open to the Public

- Conduct Feasibility Study or Stop the Project
- Submit PFS Report
- Organize Teams/Conduct PFS
- Conduct Feasibility Study or Stop the Project
1st Stage: Selection of Target Projects Subject to PFS

- **Line Ministry: Selection of PFS Candidate Projects and Submission of Project Proposals to MOSF**
  - All new large-scale projects with total costs amounting to 50 billion KRW (about 50 Million USD) or more are subject to PFS.
  - In principle, line ministries submit a project proposal to MOSF two years before the project.

- **PIMAC: Setting Forth its Views based on Project Proposals**
  - Consultation based on eligibility for central government grants, urgency of the projects and concreteness of the project plan

- **MOSF: Selection of target projects subject to PFS in consultation with PFS committee**
  - Eligible projects are selected from the PFS request submissions through a PFS committee.
Initially focused on economic infrastructure, PFS has expanded to social infrastructure, non-infrastructure (e.g. R&D, welfare) programs, SOE projects and tax expenditure program.
2nd Stage: Setting Out PFS

- Receiving project proposals of line ministries from MOSF, PIMAC sets out PFS and objectively evaluates project feasibility for 6 months.
  - In the early stages: organizing PFS team (External + Internal Experts), inquiring related data, addressing issues, studying PFS guidelines, etc

- Well developed evaluation guidelines
  - Detailed description of methodology and procedures of PFS implementation to avoid ambiguity
  - PFS guidelines by sector:
    - Roads, rail, seaports, airports, dams, and cultural facilities
    - Using the same dataset for different projects in the same sector
  - Continuous revision of guidelines through academic research
2\textsuperscript{nd} Stage: Evaluation

- Various values are incorporated and evaluated.
  - Various values (economic efficiency, policy consistency, relevant plans and policy directions, environmental impact, regional equity, project-specific factors) are incorporated in the frame of PFS.
  - Multi-criteria decision making technique (AHP) is finally adopted to combine quantitative and qualitative elements of evaluation.
    - Giving a weight on each element through pair-wise comparison
    - A project is evaluated as feasible if AHP score is 0.5 point or more out of 1.0 point.
    - PFS results are rarely overruled by budget ministry and the National Assembly.
  - Range of weight: Economic analysis—40~50\%, Policy analysis—25~35\%, Balanced regional development analysis -20~30\%
2nd Stage: Flowchart of PFS Analysis

- Project proposal
- Background study
  - Review of statement of purpose
  - Collect socio-economic, geographic, and technical data
  - Brainstorming (Other Alternatives)
  - PFS issues raised
- Economic analysis
  - Demand analysis
  - Cost estimation
  - Benefit estimation
  - Cost-benefit analysis
  - Sensitivity analysis
  - Financial analysis
- Policy analysis
  - Consistency with higher-level plan and policy directions
  - Project risk (financing and environmental impacts)
  - Project-specific evaluation item
- Balanced regional development analysis
  - Regional backwardness index analysis
  - Regional economic impacts
- Analytic Hierarchy Process
  - Overall feasibility
  - Prioritization
  - Financing and policy suggestion
3rd Stage: Investment Decision

- Receiving the PFS result from PIMAC, MOSF makes an investment decision based on it.
  - Submission of the PIMAC’s PFS full report to MOSF when PIMAC completes PFS

- MOSF announces the result to the National Assembly.
  - Go or Stop decision
  - In case of a project found feasible (go decision), line ministries conduct feasibility study in more detail.

- PIMAC announces the report to the public through the web.
  - The public can be readily accessible to the web and download PFS reports from it.
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Author</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>A Study on General Guidelines for Pre-feasibility Study (5th Edition)</td>
<td>PIMAC</td>
<td>2008/12/31</td>
</tr>
<tr>
<td>33</td>
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<td>2004/12/28</td>
</tr>
<tr>
<td>32</td>
<td>A Study on Standard Guidelines for Pre-feasibility Study on IT Sector Projects</td>
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<td>2004/12/15</td>
</tr>
<tr>
<td>31</td>
<td>A Study on Standard Guidelines for Re-assessment Study of Feasibility</td>
<td>Hyunso Park</td>
<td>2004/10/31</td>
</tr>
<tr>
<td>30</td>
<td>A Study on Value Estimation of Culture and Science Museum</td>
<td>Hyunso Park</td>
<td>2004/09/30</td>
</tr>
<tr>
<td>25</td>
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<td>JayHyung Kim</td>
<td>2002/12/31</td>
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Number of PFS Executed and Total Project Cost (1999~2014)

Note: 1) PFS completed as of 31 Dec 2014.
2) About 60 PFS conducted by other organizations are not included.
Proportion of Feasible Projects and Total Project Cost Saving (1999~2014)

Note: 1) PFS completed as of 31 Dec 2014.
2) About 60 PFS conducted by other organizations are not included.
Challenges and the Way forward

- International comparison of general gov’t debt levels shows Korea has a sound fiscal condition compared to other countries.
Public sector debt is a sustainable level, but the size and portion of the debt held by public corporations are relatively greater than other countries.
The new paradigm of public investment management system in early 2000 was a successful device to shift the trend of infrastructure development, strengthening fiscal efficiency.

The PIM process in Korea need to be developed following good tradition of infrastructure development.

- Strong linkage of infrastructure development to national policy direction such as economic growth
- Guide of infrastructure development by a strategic vision of national development
- Capability to adjust investment priority by national economic development stage
THANK YOU!