Governance Models for Public Investment Systems

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Conference 1 : Governance Models for Public Investment Systems

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About the speaker

Jae Choi is former director for infrastructure and transportation budget affairs in the Ministry of Economy and Finance of Korea and now a consultant of Inter-American Development Bank.
About the session

Today’s public investment → How to improve governance → Summary
Public Investment can be defined as funding and allocating resources for projects and services that the private sector cannot successfully deliver on its own.

* Examples are dams, roads, highways, research projects, sewage systems, medical care, education, etc. Today’s presentation mainly refers to PIs of infrastructure and transportation.
Public Investment Features?
Be careful! If it fails, it costs you an arm and a leg!

Illustration source: http://kevanna.net/idioms/cost-an-arm-and-a-leg
Cost over-run
quite often it gets out of control

* Some studies (by Joaquim Miranda Sarmento, Luc Renneboog) estimate that the average cost deviation relative to the budgeted cost amounts to 24%.

Illustration source: https://300000questions.wordpress.com/2012/02/06/snowballing-ideas/
You should know whom are dealing with....

- Politicians
- Congressmen
- President
- Local residents

Once on the track, very hard to stop!
No passengers in Korean airport

And only 3 out of 14 Korean airport makes money, others are all bleeding cash
Formuler 1 Game with not so many rooms......

Illustration source: https://www.pinterest.co.kr/pin/303993043596191697/?lp=true
Missile or Hotel?

“The highest empty house in the world”
by Guinness World Records

Illustration source: https://en.wikipedia.org/wiki/Ryugyong_Hotel
“Rush hour in capital city”
IMF estimates inefficiency in public investment reaches at 30%.

* “Making public investment more efficient”, June 2015, the International Monetary Fund
IMF also estimated the most efficient PI gets twice growth benefit than the least efficient one.
What went wrong?

- Inadequate investment planning
- Lack of objective & independent evaluation
- Excessive political interference
Political intervention is a necessary evil – crucial element in public investment

- Demonstrating local resident’s opinions
- Local government’s readiness and willingness of cooperation
- Important channel to materialize president’s campaign pledges
However, political intervention often runs against efficient public investment

- Deviating resource allocation
- Leading to pork barrel projects
- Undermining capacity of public resources

Research outcomes conducted by Besley and Coate 1998, Johnston 1997, Margolis 1968
Political intervention kicks in at various stages
Behold! Political force *sometimes* change game rules and players

- In case of political upheavals like regime change, presidential elections
- A sweeping reshuffling may displace government officers
Therefore, public administrations should have “strong public investment systems”
Economies with **strong PIM Institutions** get a **bigger “bang” for their investment “buck”**

As the economies with **stronger PI institutions** have **more predictable, credible, efficient, and productive investments**

**Strengthening these institutions** could close up to **two-thirds of the public investment efficiency gap**

**Strong PIM institutions** are associated with **lower perceived levels of rent-seeking and corruption**
Then what is strong public investment system?

- More binding fiscal framework
- Stricter criteria for project appraisal and selection
- Tighter controls over capital budget execution

* “Making public investment more efficient”, June 2015, the International Monetary Fund
An example of **binding fiscal framework** is to make line ministry’s investment plan as a must for budget support.

< Example of Korea’s overall investment plans >

<table>
<thead>
<tr>
<th>Name of OIP</th>
<th>Legal background</th>
<th>review interval</th>
<th>target period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive national land plan</td>
<td>Framework act on the national land act</td>
<td>5</td>
<td>20</td>
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<tr>
<td>Plan for national core transport network</td>
<td>National transport system efficiency act</td>
<td>5</td>
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<td>Comprehensive national road network plan</td>
<td>Road act</td>
<td>5</td>
<td>10</td>
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<tr>
<td>Construction plan for national railroad networks</td>
<td>Railroad construction act</td>
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<td>Long term water resource plan</td>
<td>River act</td>
<td>5</td>
<td>20</td>
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<tr>
<td>Mid-long term plan for airport development</td>
<td>Aviation act</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Harbor master plan</td>
<td>Harbor act</td>
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</table>
Some hints to make this practice stronger

- If project is not in the line ministry’s overall investment plan, then simply do not give budget support
- Budget allocation can be denied in face of parliament, invoking this practice
- Even when a budget is forcefully squeezed in, then budget authority still may put the budget disbursement on hold
This practice tightens alignment between public investment policy, planning, and individual project, and enhances predictability, transparency and efficiency in public investment.
Preliminary feasibility study (PFS) - another case of strengthening PI system

- PFS is an ex-ante evaluation, key process for identifying feasibility before budget support in Korea
- When initially carried out by line ministries, it was just a passage ritual due to “conflict of interest”
- Only one out of 33 projects failed in line-ministry driven PFS
Strengthening Preliminary feasibility study (PFS) by independent & competent agency

- Line ministries → Budget Authorities (i.e. Ministry of Economy & Finance)
- Budget authorities are more responsible and much motivated to filter out infeasible investment projects

* In the new model, for those projects whose total project cost exceeds USD 50 mil with budget support over USD 30 mil. are subject to PFS in Korea
Strengthening Preliminary feasibility study (PFS) by independent & competent agency

✓ Operation by generalist (gov’t officers) → research institution (i.e. PIMAC of Korea)

✓ PIMAC enacted by MOEF with 100% public funding comprises 100 staff of economists, engineers, transportation experts, lawyers, but not government officers

✓ PIMAC enjoys concrete independence in operation, even MOEF stays clear of it

Former governance – line ministry driven PFS
New Governance Model

- **Line Ministry**: project planning and submitting project list to MOEF for PFS
- **MOEF**: finalizes projects for PFS and sets policy settings and regulatory framework
- **PIMAC**: conducts independent and objective PFS operation
## Governance models - before & after

<table>
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<tr>
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<th>Former governance</th>
<th>New governance</th>
<th>Under New governance</th>
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</thead>
<tbody>
<tr>
<td><strong>Project planning</strong></td>
<td>Line Ministry</td>
<td>Line Ministry</td>
<td>LM overseas planning and submitting projects to MOEF for PFS</td>
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<tr>
<td><strong>PFS responsibility</strong></td>
<td>Line Ministry</td>
<td>Budget Authority (MOEF)</td>
<td>MOEF selects projects for PFS and overseas PFS regulatory framework and policy settings</td>
</tr>
<tr>
<td><strong>PFS operation</strong></td>
<td>Line Ministry-driven</td>
<td>Research Institution (PIMAC)</td>
<td>PIMAC solely conducts PFS operation with strong independence</td>
</tr>
</tbody>
</table>
Strengthening Preliminary feasibility study (PFS) by giving critical power to PFS outcomes

✓ PFS determines life (pass) or death (failure) of big projects in Korea. With pass, budget allocation comes immediately, otherwise no money
Strengthening Preliminary feasibility study (PFS) by giving critical power to PFS outcomes

- In case of failure, project to be scrapped or suffers drastic changes
- In contrast, many advanced economies use pre feasibility studies as a reference, not as decision making tool
PFS can kill a project!

- Parliament may allocate budget, but line ministries cannot use until positive PFS outcomes
- Even presidential campaign projects in principle should pass PFS

→ PFS is powerful instrument and protects gov’t coffer by removing bad projects and curbing excessive investment demands

Illustration source: http://www.gnnews.co.kr/news/articleView.html?idxno=182528#09xr
Of course, PFS has exemptions

- Public buildings, correctional facilities, schools, simple maintenance
- Military purpose, security, defense, disaster prevention & relief, etc.
- Pure policy reason: equitable regional development, urgently needed projects, key public policies with concrete implementation plans (cabinet meeting approval required in Korea)

⇒ Policy oriented exemptions are critical. Without them, PIMAC may have to massage PFS research outcomes

* Korea’s new government adopted 24 exempted PI projects amounting to USD 2.4 bil, based on this policy oriented exemptions
But exemption is double-edged sword...

- PFS exemptions are useful in times of political transformation like regime change, presidential elections
- But it should be exercised with great care and discipline

→ A delicate balance between principle and exemption should be ardently sought after
1 in 3 projects is kicked out by PFS in Korea
→ Savings amount to total 131 bil. USD

Pass : 64%
Fail : 36%

Source : 2016 PIMAC Annual report (Korea Development Institute, 2017)
Then, what to evaluate in the PFS?
(1) Economic Analysis

\[ NPV = \sum_{t=0}^{n} \frac{(Benefits - Costs)_t}{(1 + r)^t} \]

where:
- \( r \) = discount rate
- \( t \) = year
- \( n \) = analytic horizon (in years)
• $\Sigma$Cost for design, land acquisition, construction - seems easy to calculate

  Line ministries tend to register smaller costs than actual
  They may intentionally split projects to avoid PFS

• $\Sigma$Benefit\textsuperscript{s} are hard to assess demanding a lot of guesswork,

  depending on coverage of benefit, research method, assumptions etc.
  Line ministries, politicians tend to bloat benefits to obtain better outcome
✓ B/C analysis demonstrates economic efficiency.

✓ But it does not tell the entire story. Some projects without positive BC ratio often successfully pass PFS in Korea.
(2) Policy Analysis: six elements

- Policy alignment
- Funding risk
- Job creation effect
- Stakeholder opinion
- Environmental risk
- Job quality improvement effect
Policy Analysis

- Line Ministry’s upper level investment plans (i.e. railways, highways)
- How much the project is aligned with government policies
- Whether they are against it or behind it
- Often survey or interview method are conducted
Policy Analysis (risk factors)

- Funding risk
  - Government readiness to provide budget
  - Size of funding (if it is too big, then it is hard to secure)
  - Prospect of private investment in PPP

- Environmental risk
  - Identify a hint of environmental problems
  - Different from full-fledged environmental impact evaluation
Policy Analysis

- Economy-wide job creation effect
- Using IRIO - Inter-Regional Input-Output Table
- Consultations with experts
- Checking into: job stability, training, salary & welfare, health & security, gender equality, dispute settlement

* For this analysis, MOEF devised a guideline on how to analyze PIP’s impact on job (2013)
(3) Regional Balance Analysis

Regional backwardness
- Every local government is assigned with index
- The less developed, the higher score is given

Local economy impact
- Using Regional Input Output Model
- Formula = Regional Value Added Amount / Regional GDP
### All in one shot!

<table>
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<th>Economic</th>
<th>Policy</th>
<th>Regional Balance</th>
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<tr>
<td>BC analysis</td>
<td>Policy alignment</td>
<td>Local backwardness</td>
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Summary
Point 1: PI projects, big spending chunk

Failure of public investment spells a great trouble
Main culprits - crude planning, perfunctory preliminary evaluation, and formidable political interference.
Point 3: Political intervention, a crucial element

→ A vehicle shifting political agenda to concrete project by showcasing stakeholder intention – local residents, local gov’t and president.
Point 4  Political force can be a poison

→ Frequently, political intervention hampers efficient public investment with its tremendous power.
Point 5: “Be prepare” with strong PI systems

→ with binding fiscal framework
  stricter criteria for project appraisal and selection
  tougher controls over capital budget execution
Strong practice can tame unruly political interference and refine alignment of policy, planning and project.
Third party entity or budget authority should take the helm for independent and objective study, not line ministry.
Point 8  Let experts do number-crunching job

→ G-officers do not fit with operational work in preliminary feasibility study, instead they polish policies and regulatory frameworks.
Point 9: Consider giving say to pre-feasibility study

Possibly reliable counter-measure against political pressure touting bad projects.
Point 10  Evaluation embracing varying values

➢ To be more relevant, efficient and stronger, incorporate economic merits, policy elements and regional equity
Thank you!

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