



**Asia-Pacific  
Economic Cooperation**

---

**2019/SOM3/EC/WKSP2/003**

## **Governance Models for Public Investment Systems**

Submitted by: IDB



**Best Practices Workshop on Public Investment  
Systems  
Puerto Varas, Chile  
28-29 August 2019**

Best Practice Workshop on  
Public Investment Systems



# Conference 1 : Governance Models for Public Investment Systems

- By Jae Young Choi
- 2019.8.28 Puerto Varas Chile

## ***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?***

## - Public Investment Features -

***Be careful ! If it fails, it costs you an arm and a leg!***





## ***Cost over-run quite often it gets out of control***

\* Some studies (by Joaquim Miranda Sarmiento, 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 !***

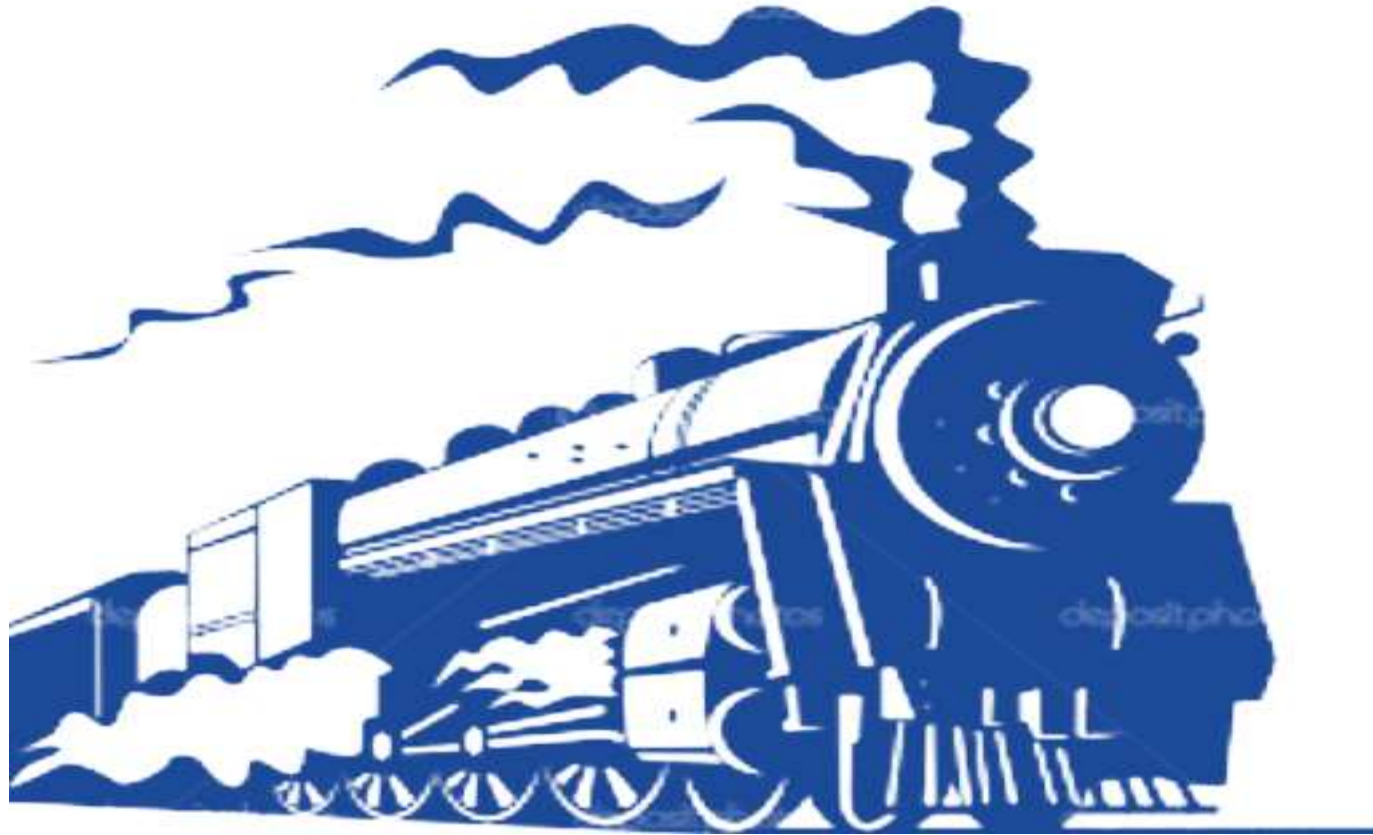
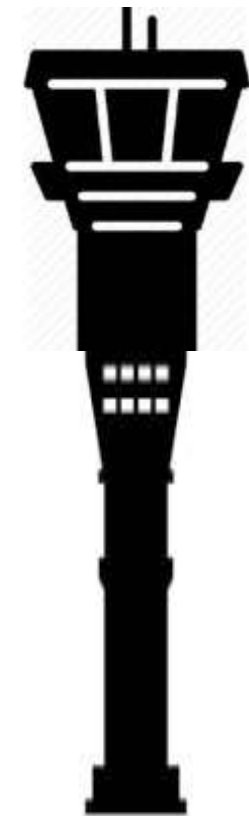


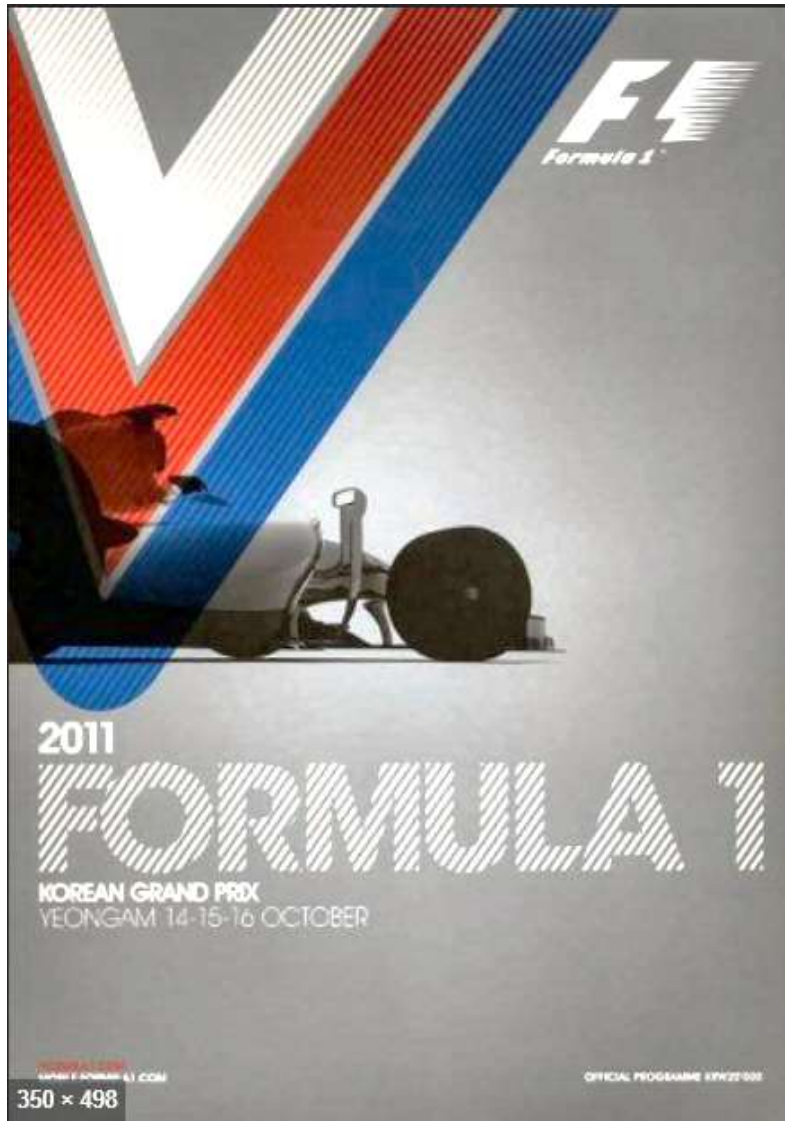
Illustration source : <http://clipartmag.com/steam-train-clipart>

## - Public Investment Failures -

***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.....***

# *Missile or Hotel?*



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

Illustration source : [https://en.wikipedia.org/wiki/Ryugyong\\_Hotel](https://en.wikipedia.org/wiki/Ryugyong_Hotel)



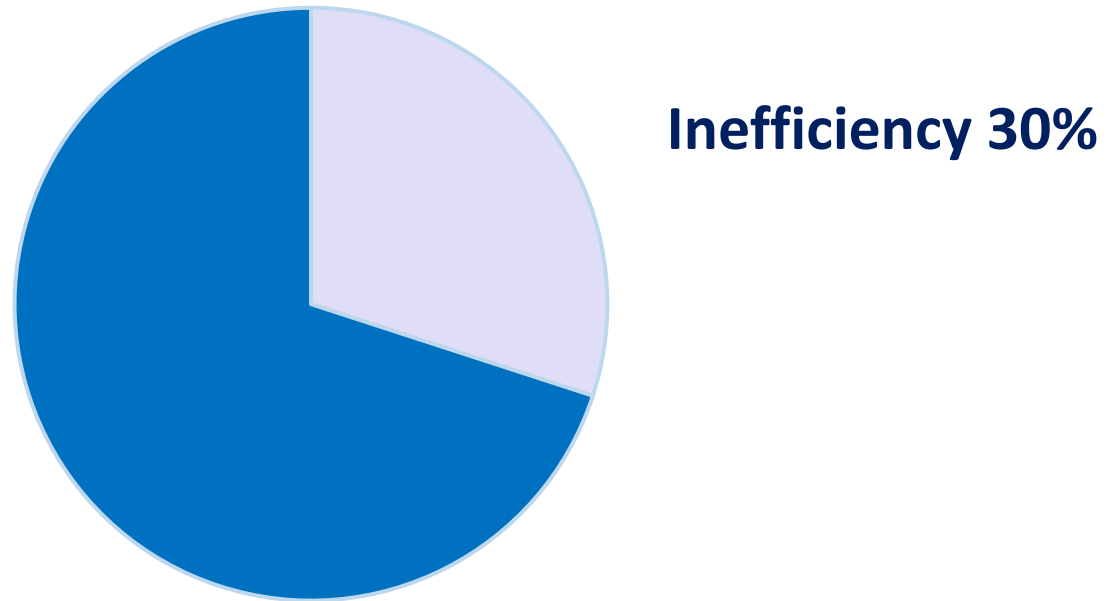


# ***“Rush hour in capital city”***



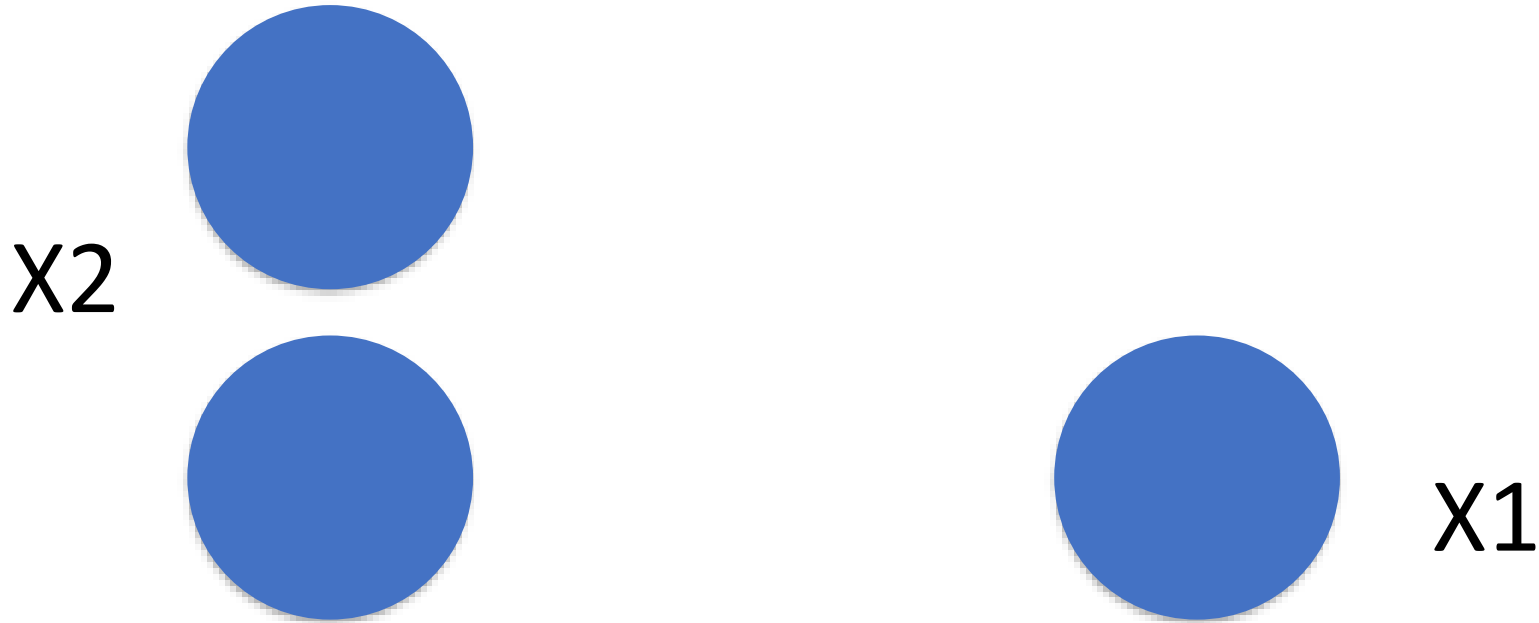
Illustration resource : <https://imgur.com/gallery/TgKmO>

# ***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

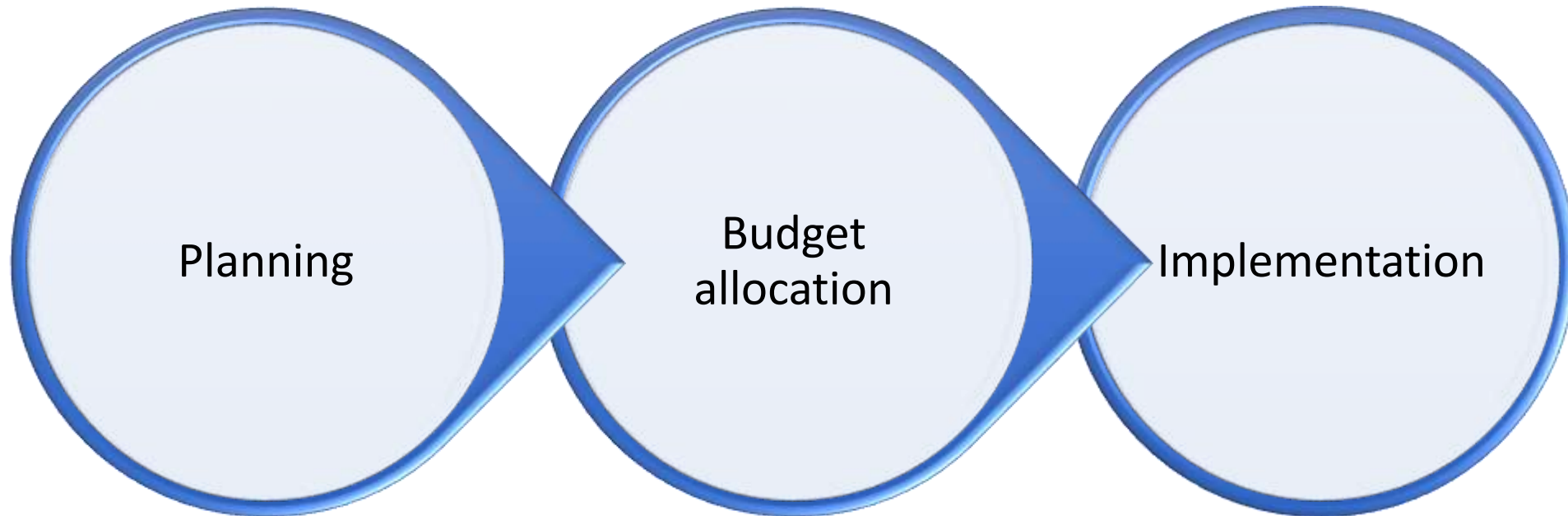
# ***Political intervention is a necessary evil – crucial element in public investment***

- ✓ 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

# ***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***

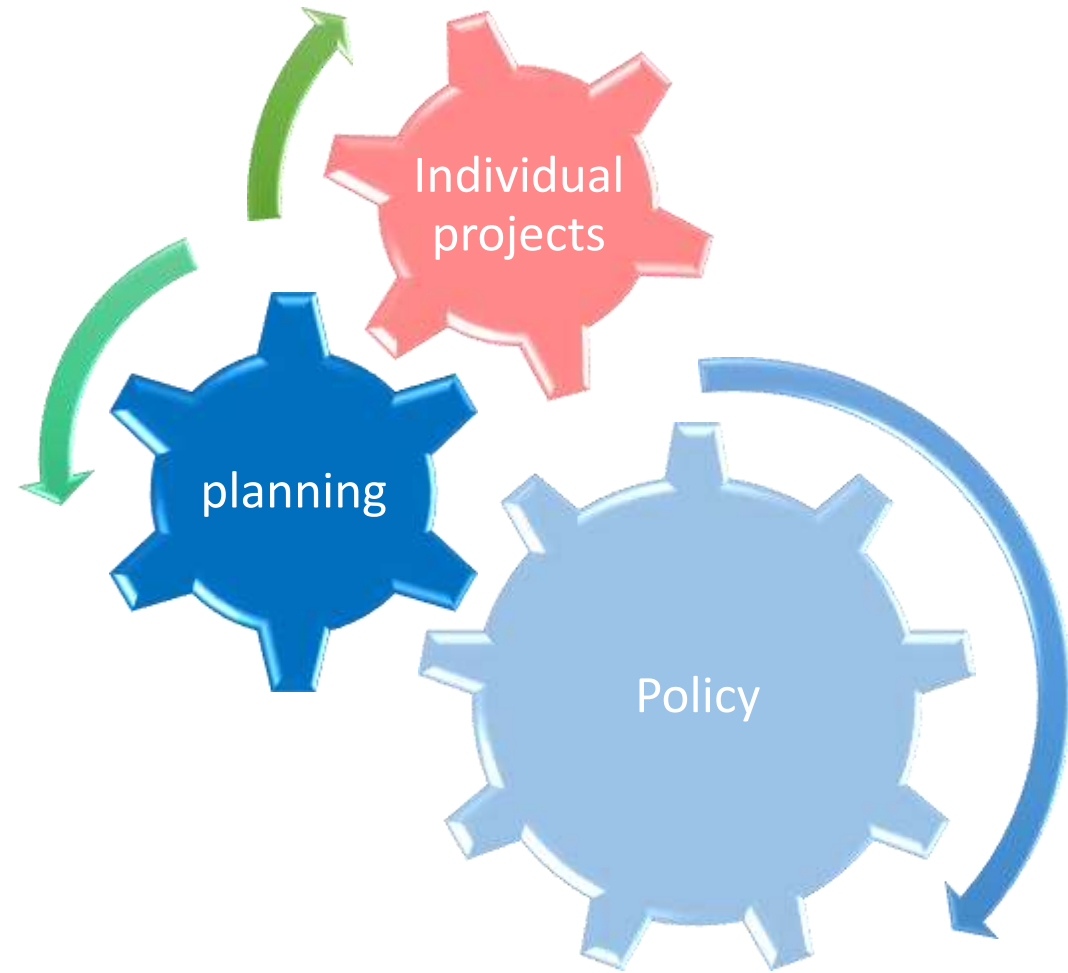
**< Example of Korea's overall investment plans >**

Name of OIP	Legal background	review interval	target period
Comprehensive national land plan	Framework act on the national land act	5	20
Plan for national core transport network	National transport system efficiency act	5	20
Comprehensive national road network plan	Road act	5	10
Construction plan for national railroad networks	Railroad construction act	5	10
Long term water resource plan	River act	5	20
Mid-long term plan for airport development	Aviation act	5	5
Harbor master plan	Harbor act	5	10

## ***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**

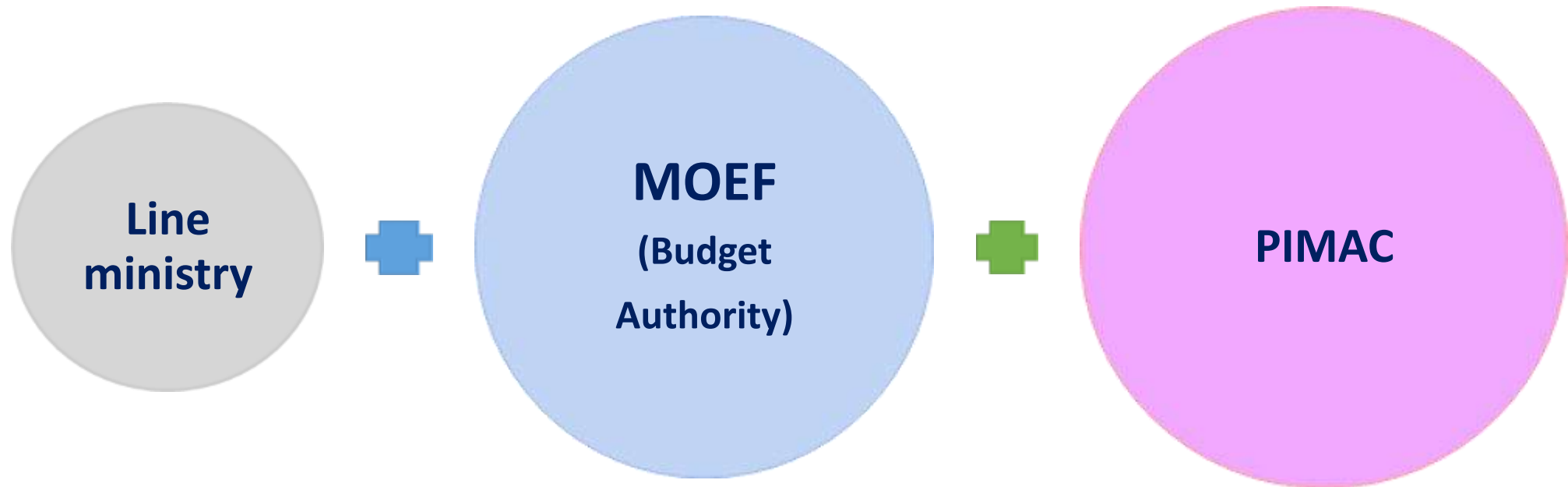
- ✓ Operation by generalist (gov't officers) → research institution (i.e. PIMAC of Korea)
- ✓ PIMAC enacted by MOEF with 100% public funding comprises 100 staff of economists, engineers, transportation experts, lawyers, but not government officers
- ✓ PIMAC enjoys concrete independence in operation, 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



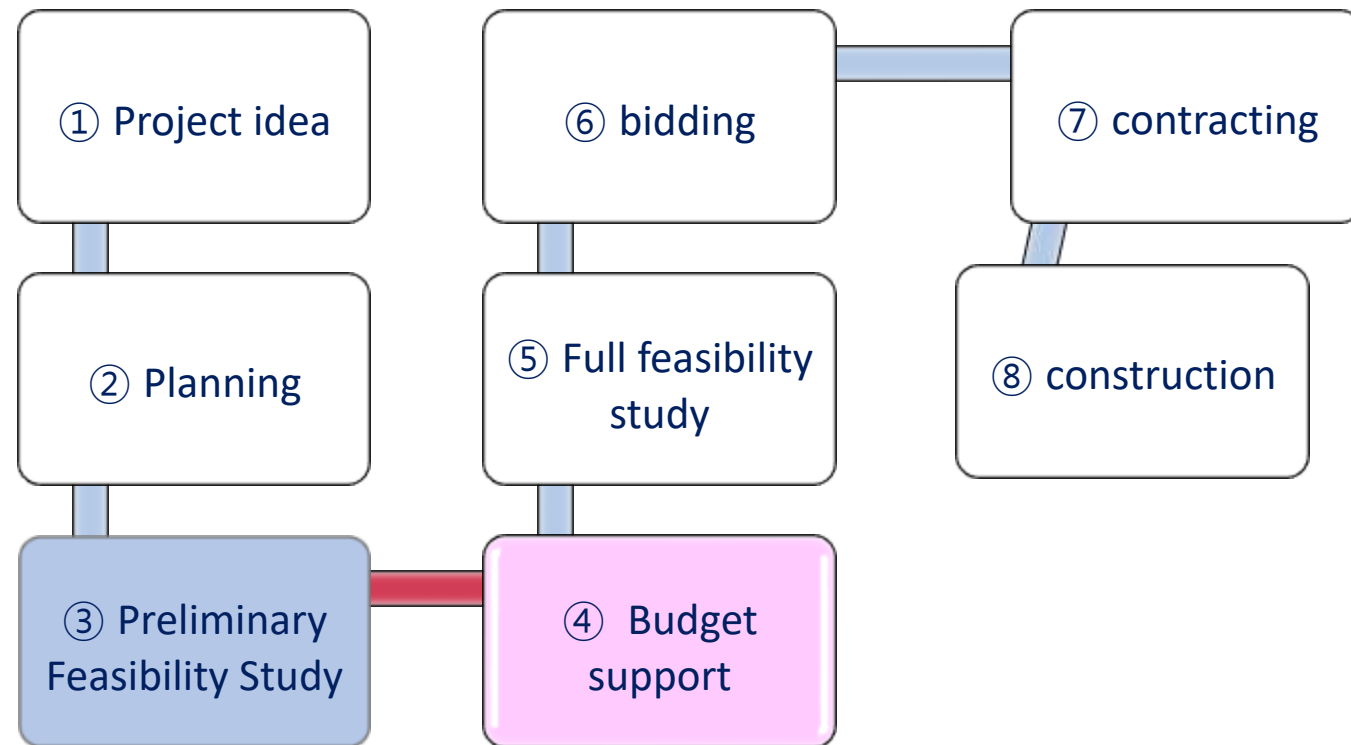


# ***Governance models - before & after***

	<b>Former governance</b>	<b><u>New governance</u></b>	<b><u>Under New governance</u></b>
<b>Project planning</b>	Line Ministry	Line Ministry	LM overseas planning and submitting projects to MOEF for PFS
<b>PFS responsibility</b>	Line Ministry	Budget Authority (MOEF)	MOEF selects projects for PFS and overseas PFS regulatory framework and policy settings
<b>PFS operation</b>	Line Ministry-driven	Research Institution (PIMAC)	PIMAC solely conducts PFS operation with strong independence

# 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***



# ***Of course, PFS has exemptions***

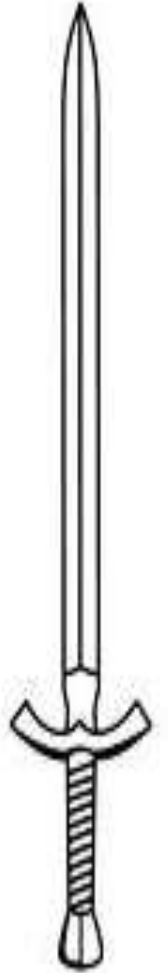
- ✓ Public buildings, correctional facilities, schools, simple maintenance
- ✓ Military purpose, security, defense, disaster prevention & relief, etc.
- ✓ Pure policy reason : equitable regional development, urgently needed projects, key public policies with concrete implementation plans (cabinet meeting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

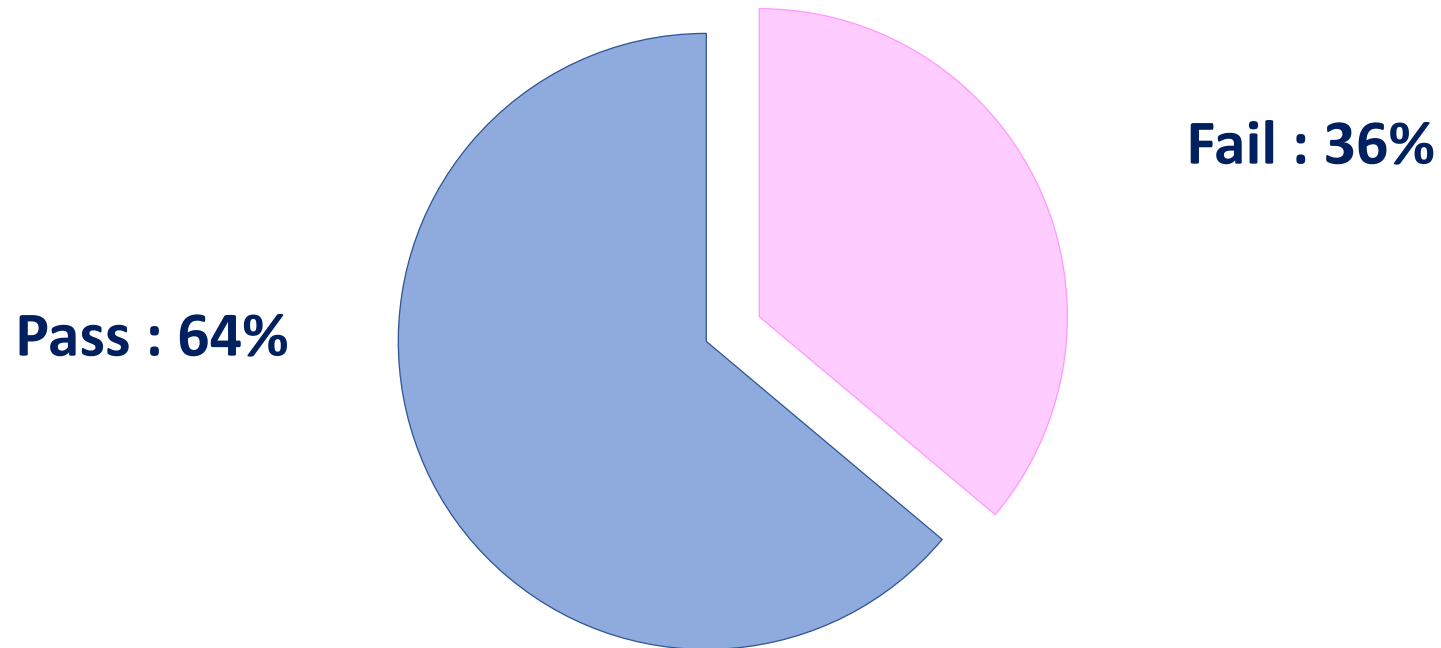
# ***But exemption is double-edged sword...***

- ✓ 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**



Source : 2016 PIMAC Annual report (Korea Development Institute, 2017)

## ***Then, what to evaluate in the PFS?***





# (1) Economic Analysis

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

where:

$r$  = discount rate

$t$  = year

$n$  = analytic horizon (in years)

- **ΣCost** 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

- **ΣBenefit**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 Analysis

Policy  
alignment

- Line Ministry's upper level investment plans (i.e. railways, highways)
- How much the project is aligned with government policies

Stakeholder  
opinion

- 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

## Job creation effect

- Economy-wide job creation effect
- Using IRIO- Inter-Regional Input-Output Table

## Job quality improvement effect

- 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

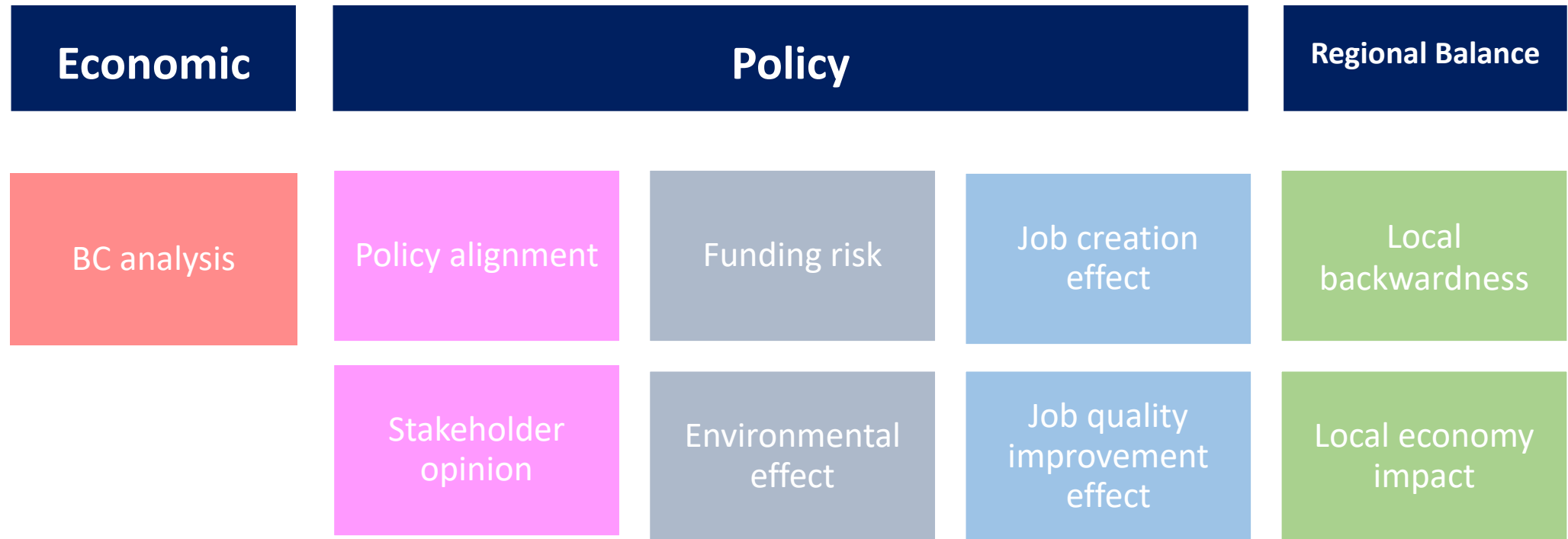
- Every local government is assigned with index
- The less developed, the higher score is given

Local  
economy  
impact

- Using Regional Input Output Model
- Formula =  $\text{Regional Value Added Amount} / \text{Regional GDP}$



# *All in one shot !*



# Summary

Point 1 : PI projects, big spending chunk

→ *Failure of public investment spells a great trouble*

## Point 2 : Many PI projects doom fiasco

→ *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*

## Point 6 : No plan, no money

→ ***Strong practice can tame unruly political interference and refine alignment of policy, planning and project.***



## Point 7 : Making credible preliminary evaluation

**→ *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 !**

[Jychoi.mof@gmail.com](mailto:Jychoi.mof@gmail.com)