

# Estimating Asia's Social Infrastructure Needs in the time of COVID-19 (for Session 1)

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# Introduction

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- COVID-19 posed a major challenge to achieving inclusive and sustainable growth.
- Human resources are the key to sustainable growth over the long term, and empirical studies indicates that social infrastructure facilitates to develop human capital.
- Forecasting demand for economic and social infrastructure is essential for sound fiscal management planning. However, studies on estimating social infrastructure needs are very limited, while demand forecasts for economic infrastructure have been made since early 2000s.
- With this backdrop, JICA has conducted case studies of several countries first, then extended the scope of research to 45 Asian countries.



# Study Outline

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- Researchers: JICA Ogata Research Institute and Institute for Economic and Social Research, FEB, University of Indonesia
- Study Objectives: To estimate financial needs of social infrastructure such as education, health, public housing, government buildings and propose policy recommendations for 45 Asian countries and regions during 2021 to 2030
- Contents:
  1. Estimates of actual spending of social infrastructure
  2. Estimation of the needs in 2021 to 2030
  3. Estimation of revised needs to respond to COVID-19
  4. Policy recommendations to close the funding gap
- Result: The annual investment needs are estimated at USD 1.7 trillion in BAU and USD 1.8 trillion under COVID-19 scenario.

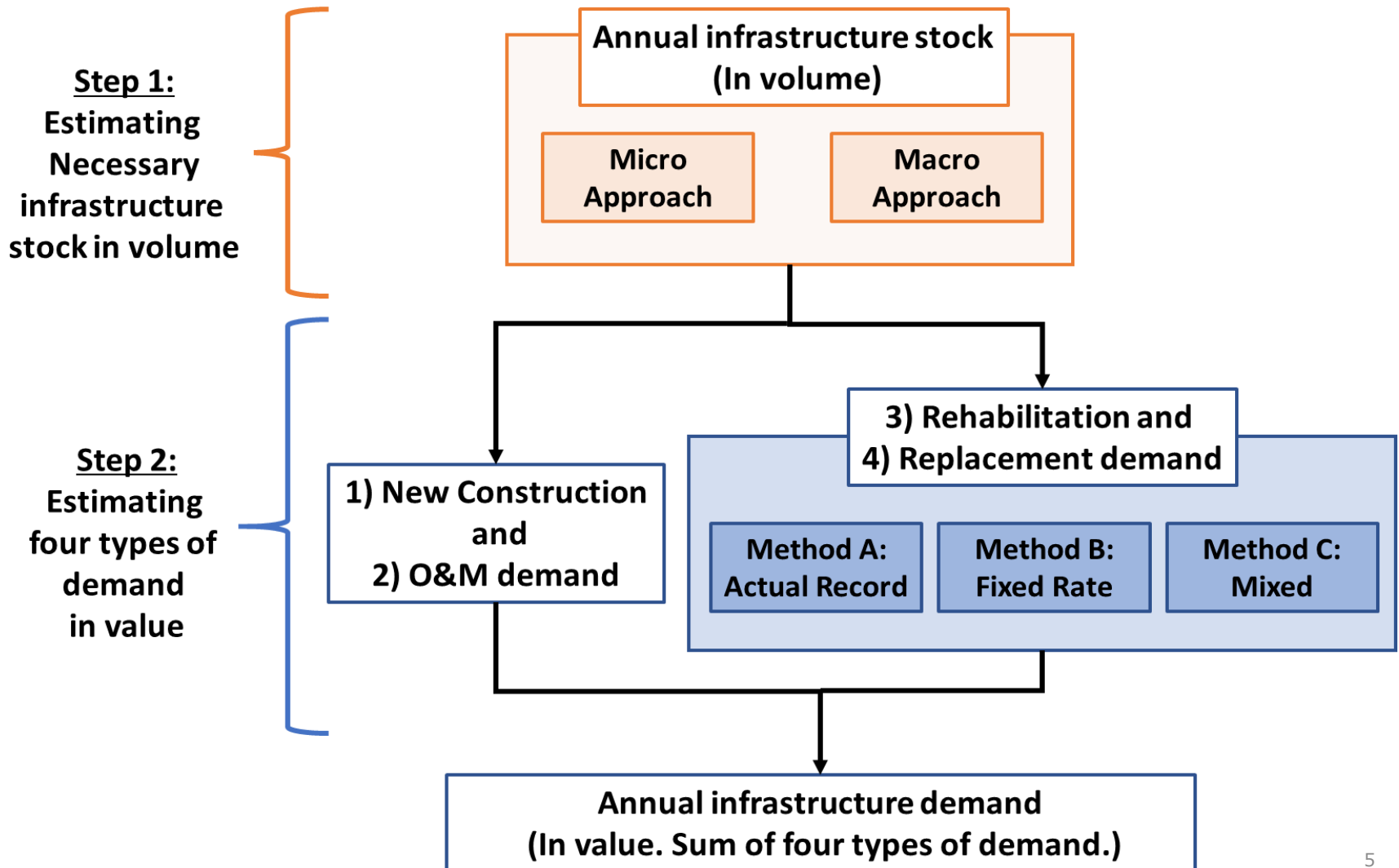


# Difference with economic infrastructure

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- Institutions and people are essential rather than infrastructure, as facilities are just building.
- The breakdown of infrastructure expenditures is much varied by sub-sector.
- Different countries have different systems and policy tools. The share of the public and private sectors also varies greatly by country.
- Facility planning does not give much consideration for redundancies (spare capacity).

# Model for social infrastructure demand estimate



# Assumed impact from COVID-19

Sector	General modification	Service standard	Cost proxy
Education	Stricter health protocol	Additional amenities, Improved cleaning	USD 1.64 per student 1,15 times O&M
	Online education	Expanded Internet	USD110 per student with O&M
Health	More medical equipment & beds Stricter health protocol	No changes of beds standards Improved cleaning	Increased share of equipment in medical investment (43%→50%) 1.15 times O&M
Public Housing	Stricter health protocol Support social distancing	Improved cleaning Reliable internet network	1,15 times O&M USD110 per person with O&M
Government Building	Stricter health protocol	Additional amenities Improved cleaning	USD 1.64 per employee 1,15 times O&M

# Annual investment gap during 2021-2030 (in billion USD) (1)

		BAU			COVID-19		Difference of Gap
		Needs	Gap	per GDP%	Needs	Gap	
Asia total		1,715	-1,412	-2.37	1,842	-1,538	-126
By sector	Education	286	-194	-0.22	293	-201	-7
	Health	517	-412	-0.65	627	-522	-111
	Public housing	847	-811	-1.65	855	-819	-9
	Gov't building	65	+4	+0.16	66	+4	0

Source: estimated by Institute for Economic and Social Research, FEB, University of Indonesia

# Annual investment gap during 2021-2030 (in billion USD) (2)

		BAU			COVID-19		Difference of Gap
		Needs	Gap	Per GDP%	Needs	Gap	
By Income group	Low	9	-8	5.08	11	-9	-1
	Lower middle	433	-365	2.16	528	-460	-95
	Upper middle	1,187	-1,003	2.71	1,212	-1,028	-26
	High	87	-36	0.56	91	-40	-5
By sub-region	Central	17	-9	0.20	22	-14	-5
	East	1,238	-1,026	2.60	1,262	-1,049	-23
	South	282	-243	2.74	358	-320	-77
	Southeast	177	-132	1.23	198	-153	-21
	Pacific	2	-2	1.30	2	-2	0

Source: estimated by Institute for Economic and Social Research, FEB, University of Indonesia <sup>8</sup>



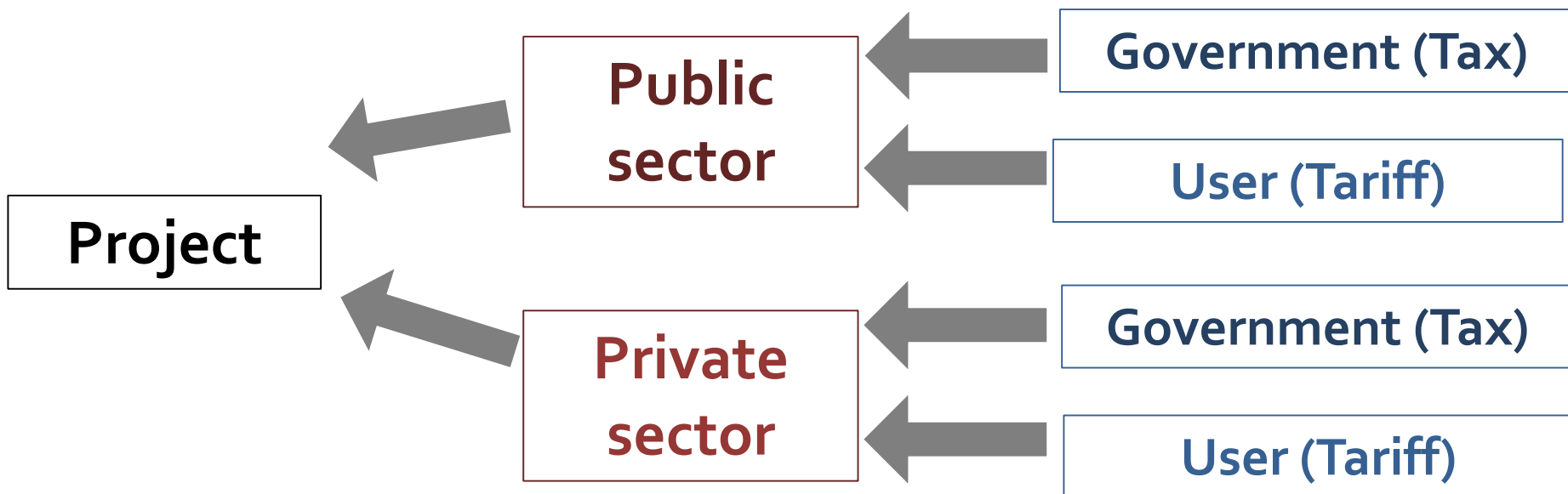
# Caveats on policy measures by sector

Sector	Outline
Education	Large investment gap in low-income countries Large demand of school building in urban Critical role of municipalities
Health	Investment gap for all income categories Substantial increase of gap under COVID-19 scenario Great diversity of public-private share Significant role of government subsidy, e.g. UHC
Public Housing	Great demand to achieve SDGs target related to slum Variety of housing policy tools
Government Building	Relatively less problematic

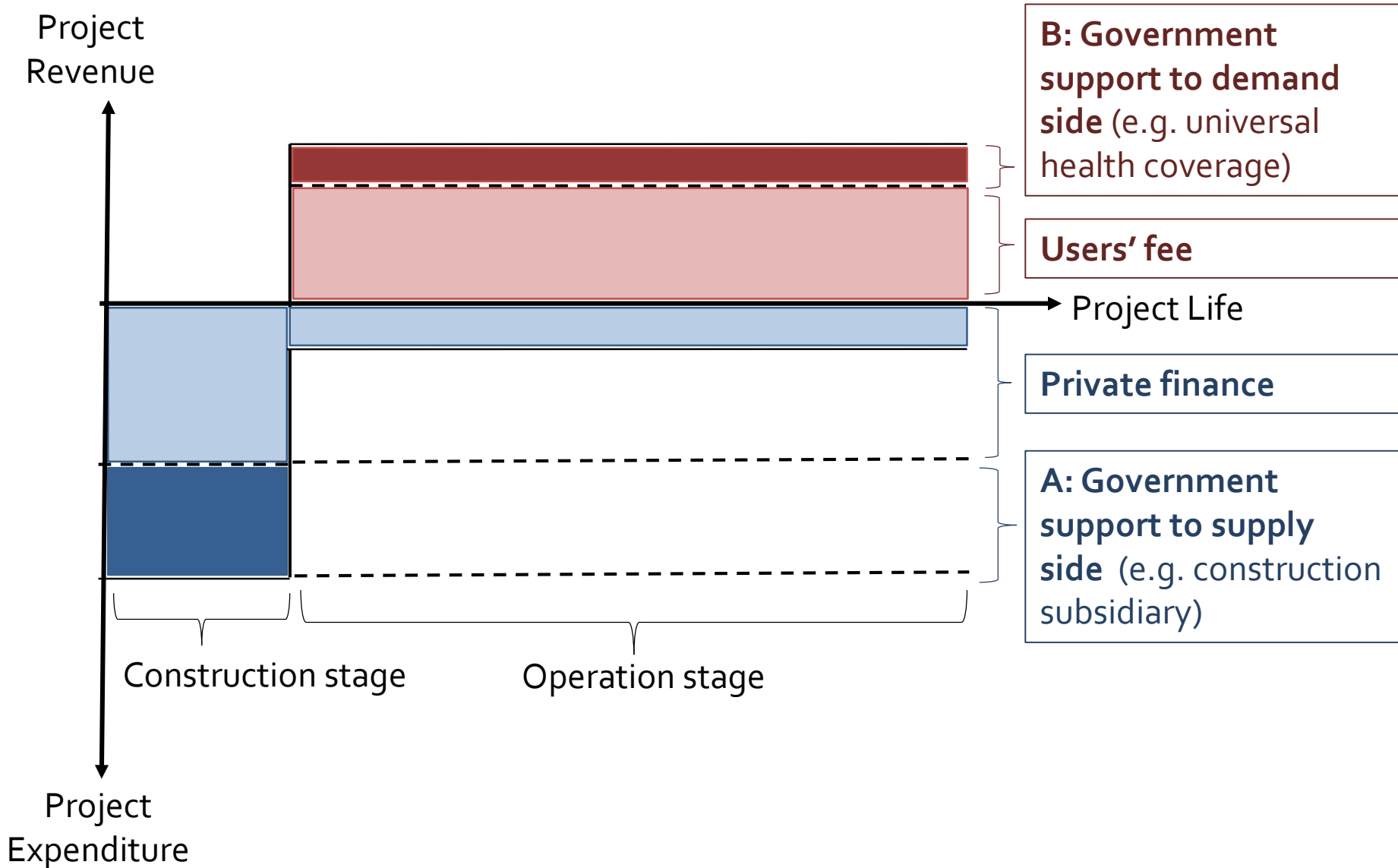
# Financing and Funding

**A. Financing**  
(who puts the money upfront to build and start operating projects)

**B. Funding**  
(who eventually pays for the full cost of projects)



# Government life-time support to private



# Possible policy responses

Subject	Policy measures
Public funds	Revenue reform, re-prioritizing spending, and proper borrowing as discussed in ADB(2017) Strengthening fiscal capacity of municipalities, e.g. local tax, local bond, special purpose transfer from central
Private mobilization	Supply side: Enabling environment to attract private investment through subsidy, taxation, government credit, Reform of regulatory framework Demand side: Institutional support such as medical insurance
More integrated funding	User charge Land value capture
Investment efficiency	Improvement of project-related capacity Selection of appropriate technology Efficient use of facilities, such as multi-purpose building



Thank you very much  
for your attention!

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