

Application Form of EASTS IRG

Date of Submission: 2019/09/10

<p>1. Name of IRG: PPP Railway Projects and TOD in Asian Countries</p>
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3. Name of contact person other than representative:

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4. Keywords (Maximum: 5 words)

PPP, Railways, TOD, Land-use, Institution, Asia

5. Purpose and Mission of IRG:

Background

Railway as transport technology has reemerged as an important transport mode for both urban and intercity transports. However, developing countries are facing problems in mobilizing funding and financing resources since railway is capital-intensive infrastructure requiring a large amount of investment. Also, due to stiff competition from the private modes, it is challenging to shift demand from private modes to railway. This situation has further created problems in sustainable operation of railway services. Public Private Partnership (PPP) is often considered as an important instrument to utilize private sector's capital, management and innovative practices to address these issues. However, international experience of railway PPP projects is not very encouraging, and there are valuable lessons to be learnt. EASTS IRG-26 focusing on these issues examined the case of 11 urban railway projects from different Asian Megacities. The results were presented in three EASTS Conferences (2015, 2017 and 2019). Seven of these projects were of PPP model, and all of them were problematic, and PPP model for them was considered a failure. The reasons behind such failure had been thoroughly analyzed in IRG-26 studies.

Purpose of IRG

5.1. Despite the importance of PPP, there are some misunderstandings among policy makers about the PPP Railway Projects, such as risk sharing and contract design. IRG study will attempt to clarify such possible misunderstandings as listed below

1) Apart from the benefits of providing transport services, railway projects also generate benefits in terms of raising property value along the railway corridor. Coordinating railway development and high-density urban development, also known as Transit Oriented Development (TOD), the property value gain can be further maximized. Even if part of such property value gain can be captured (Value Capture), it cannot cover the deficit of railway projects. Sometimes, the decision makers expect too much revenue from TOD.

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2) But the question is how to operationalize the concept of Value Capture? In the ideal cases where both land in the corridor and railway project belongs to public sector, implementing value capture is relatively easy. However, in most countries land ownership is private. Yet, development right belongs to the state. So one of the way outs is give development rights (such as higher FAR) to private developers charging a reasonable fee. Sometimes, decision makers miss the chance to make big profit in future by increasing land price by other schemes. IRG will explore possible options and their impact on Value Capture benefits.

3) Value Capture from urban development (real-estate development) could appear very tempting, and policy makers can easily be driven by overly optimistic expectation. However, urban development and real-estate market may not response quickly and may take considerable time. IRG will examine such tendency of policy makers to underestimate the risk from real-estate market.

4) In the face of increasing motorization, it is always challenging for railways to attract enough demand. Policy makers often rely on an easy option of low fare to attract demand. However, this will deteriorate financial condition of railway operator, and also service level. The Bangkok Green Line is an interesting example of high fare and high-income passengers. Proposed IRG will examined this issue and will come up with recommendation for rational railway fare policy.

5) Usually, PPP project is conceptualized to lessen the funding burden to the public. However, in case the PPP project is failed (often with the bankruptcy of PPP company), huge cost burden is shifted to the public. The proposed IRG will examine such an underestimation of the eventual cost burden shifted to the public in case of failure of PPP project.

5.2. The proposed IRG will analyze following issues for each of above listed agenda.

- 1) * Reasons why the impact of TOD (which is basically about impact of railway on urban development) is very limited while there is significant impact of highway development on urban development.
 - * The delay of TOD benefits as it comes only after the operation of railway services (observed in Japan and other Asian countries).
- 2) * The history of New Town Development and the reason why the 'Land Readjustment Scheme' became the main institution for urban development and the lessons for Asian projects.
 - * The comparative study between the charge for urban development right, and the public participation for the urban development project as a shareholder providing part of land as an equity (or capital).
- 3) * The analysis of terms and conditions for the change of land-use.
 - * The analysis of the financial report of PPP Projects
- 4) * The time series data of the number of passengers for each railway station.
 - * The analysis of the relation between time series railway demand and land-use.
- 5) * Analysis of the cost burden of public for each projects under the different schemes

5.3. Proposed IRG is expected to make contribution to the following policy innovations.

- 1) Institution of railway PPP
- 2) Institution for urban development
- 3) Institution for TOD

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6. Target year for completion (Research period is suitable within four years.):
September 2021

7. Research plan:

Sep 2019: Preparation

- Group meeting for the contents of this project
- Share the research plan through email and internet

○4th Quarter of 2019 (Oct-Dec 2019):

- Selection of Research Topics
- Gathering demand and fare data for each country's project by the respective IRG members

○1st Quarter of 2020 (Jan-Mar 2020)

- International Conference in Manila
- Group meeting for the analysis of each country's project
- Gathering the financial statement of each project
- International Conference in Thailand or Vietnam

○2nd Quarter of 2020 (Apr-Jun 2020)

- Gathering land-use and financial statement data related to research topics
- Analysis on the relation between land-use and railway demand
- Start of analysis of the financial statement

○3rd & 4th Quarter of 2020 (July to Dec 2020)

- International Conference
- Cost and Revenue data for financial simulation model
- Comparison study of TOD and railway related law in Asian countries

○1st & 2nd Quarter of 2021 (Jan-June 2021)

- International Conference
- Simulation for different schemes for PPP
- Proposal for institutional innovation

○3rd Quarter of 2021 (July-Sep 2021)

- Wrapping up of research
- Publication of papers

8. Research funds:

1) Approximate Research costs (in \$US): 50,000

2) Expected sources of research funds: JTTRI, Tokyo

All applications are to be delivered to:
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