MANAGING RISKS IN THE INDONESIAN INFRASTRUCTURE PROJECTS: LESSONS FROM THE CASE STUDIES OF THE INDONESIA INFRASTRUCTURE ROUNDTABLE

Danang Parikesit Professor Faculty of Engineering Universitas Gadjah Mada, INDONESIA Email: dparikesit@ugm.ac.id

Sinthya Roesly CEO

The Indonesia Eximbank

Email: s.roesly@indonesiaeximbank.go.id

Pratomo Ismujatmika Senior Vice President **Business Development Division** The Indonesia Infrastructure Guarantee Fund Email: i.pratomo@iigf.co.id

Ratna Widianingrum Program Manager The IIGF Institute

Email: w.ratna@iigf.co.id

ABSTRACT

Indonesia has planned and constructed various infrastructure projects with different implementation modalities. Some of them are successfully operated and managed, while others are less successful or even are failed to finish or operate. After the decentralization and delegation of implementation as well as financing authorities to local governments after Decentralization Act in the year 1999 has taken place, sub national governments have begun to experiment various modes of financing and procurement. The paper will summarize the findings of 15 case projects examined by the Indonesia Infrastructure Guarantee Funds Institute in collaboration with Universitas Indonesia, Institut Teknologi Bandung and Universitas Gadjah Mada between 2012-2017. The research found out that the success of infrastructure project implementation would depend on government's consistency, clarity of policies and regulations, and certainty, and capacity of the contracting agency (2012-2014 project findings), as well as commitment, consultative and collaboration capability (2015-2017 project findings). For the PPP projects, the government should be aware the importance and capacity of advisors, as well as a pool of project developers, and

Keynote: Infrastructure, IIGF, role of government, risk allocation, capacity building

INTRODUCTION

Prior to the year 2002, decision making in Indonesia was largely centralized. Until today, the country experienced a significant degree of decentralization following the passing of the State Finance Law of 2002. This decentralization largely entailed the decentralization of democratic authority and decision-making powers, however government finance still remains largely centralized. Provinces and local authorities receive an equitable share of national revenue based on a formula for the division of revenue, but local authorities do not really possess a tax base of their own. Since 2010 local authorities can raise property taxes.

On local government level, there has so far not been much investment expenditure happening, but there are proposals currently that at least 20% of their expenditure should be on investment spending. It is important to note that sub-national governments are not obliged to follow central government rules for PPPs. This is only the case if guarantees or fiscal support from national government is sought (OECD, 2012).

As a part of the decentralization that occurred since 2002, and in particular in terms of the State Finance Law of 2002, some decision-making power shifted from BAPPENAS (The National Planning Agency) to the Ministry of Finance (MoF). In addition, decision-making power also shifted to local authorities, which means that the various BAPPEDAs (Regional Planning Agencies) operating on lower tiers of government do not any longer primarily report to BAPPENAS but to their respective local authorities. On local authority level BAPPENAS" role is largely limited to undertaking the promotion of PPP.

Before the reform process started in the early 2000s, most infrastructure projects that were not undertaken by the central, provincial or local governments were awarded through direct appointment to either SOEs (state owned enterprises) or private firms. As part of the reform process, the Indonesian government wanted to improve the process and principles through which projects are awarded. This includes the introduction and use of competitive bidding. As a result, BAPPENAS developed and government introduced Presidential Regulation 67/2005. This regulation was improved and augmented further by the introduction of Presidential Regulations 13/2010 and 56/2011. These regulations regulate what types of projects are considered as infrastructure, what the eligible contracting agencies are and the role of potential private participants. In addition, regulations set out the responsibilities of the Ministry of Finance with respect to the granting of fiscal support and guarantees to specific projects in the procurement process (Parikesit and Laksmi, 2016, Parikesit, 2017).

Since the introduction of the reform and abovementioned Presidential Regulations three Infrastructure Summits were held, the product of which has been a list of possible PPP projects. Many countries seek to kick start a PPP program by nominating a few (a handful) PPP projects based on both national priorities and their chances of success. On the experience of the first handful of projects a more generic approach to PPPs can be developed and rolled out in at national and sub-national level. The first Infrastructure Summit was held in 2005 and resulted in a list of 91 projects. The list increased to 101 potential projects and 10 model projects as part of the second Infrastructure Summit in 2006. By the time of the third Infrastructure Summit in 2010 there were 72 potential PPP projects, 27 priority projects and one ready for offer. However, this rather long list was subsequently shortened substantially so that by the fourth Infrastructure Summit held in April 2011 there were 5 showcase projects and 11 other projects. Nevertheless, by June 2011 the BAPPENAS PPP Book 2011 stood at 79 projects of which 45 were potential projects, 21 priority projects, and 13 were ready to offer. In addition, contract award went to one project, the Central Java Power Plant (originally part of the10 model projects identified in the 2006 Infrastructure Summit and signed on 6 October 2011), meaning that this projects is the only project to date to have passed through the project creation cycle specified in terms of the Presidential Regulation 67 of 2005, 13 of 2010, and 56 of 2011 (OECD, 2012).

As a country, Indonesia has currently the largest infrastructure investment spending recorded since its independence. The World Bank (2017) stated, "With public capital stocks per person at only a third of the average of major emerging economies, Indonesia faces an estimated gap in infrastructure assets of USD 1.5 trillion. The Government of Indonesia recognizes the importance of infrastructure for growth and, as a starting point, has targeted additional investments in transport, water, energy and other key sectors amounting to over USD400 billion from 2015-2019". The Indonesian government has been continually developing a best strategy to approach this issue. This paper will highlight Indonesia's national and sub-national government experiences in implementing infrastructure policies and projects. Selected infrastructure policies and projects were reviewed, representing the diversity of the issues and regional context within which those projects were implemented. The study is expected to assist the Indonesian government and project developers to improve their project design, regulatory framework, and governance structure of the infrastructure projects.

GOVERNANCE MODEL IN INFRASTRUCTURE DEVELOPMENT

Infrastructure investment in any country follows basic rules and procedures. From investment decision and priority, procurement decision and modalities (government budget, assignment of state own companies, and PPP scheme), and governance structure and process, government needs to undertake two main stages. As illustrated by Flyvbjerg (2017), each project has front-end planning stage involving project sponsor and client, as well as execution stage that will comprise of various contractors and suppliers until the project is handed over to the client. The needs to have a "strong owner" are coined by Morris and Hough (1987) in their analysis on why megaprojects often failed. They emphasized the importance of a strong owner or sponsor, in both legal and contractual terms, in shaping the front-end project definition stage. Winch and Leiringer (2015) reiterated the needs for having a well-defined project determined by the owner to be the key of a project success, which later they defined as project owner capabilities. They argued that in the project owner's capabilities, the operational and dynamic capabilities of the owner should be both addressed. Their core works focus on "dynamic capabilities required by the owner organization for the acquisition of infrastructure assets in order to extend or improve its operational capabilities in distinction to the operational capabilities deployed by the project-based firms which supply those assets".

Owners of infrastructure are categorized into (1) investors in infrastructure and (2) the operators of that infrastructure to provide infrastructure services to their customers. Those two types of role require different dynamic capabilities, of which the analysts (Winch and Leiringer, 2015) have identified, and should be further researched because they need to connect short term, project-level analysis and longer term organizational capability. This argument is later strengthened by the works of Davies and Brady (2016), which stated that project and dynamic capability are not mutually exclusive, but rather reinforcing.

While the project implementation experiences in the developed countries may agree with the notion of owner's capability, one could argue that their framework may not be applicable in developing Asian countries. The work by Abiad and Teipelke (2017) elaborated the implementation of infrastructure projects in three Asia's developing countries, i.e. China, India and Indonesia. A specific case regarding China's PPP governance was also examined by Zhang et.al. (2014). Front-end planning, undertaken by China's National Development and Reform Commission (NDRC), India's the National Institution for Transforming India Commission (NITI), and Indonesia's the National Development Planning Agency (NDPA/BAPPENAS), have all given an indication of priority and strategic projects, with different implementation strength. A weak planning agency in the case of Indonesia for example is amplified with the decentralization policy which is still under fragile condition, with less clear delegation of authority as compared with decentralized India. Besides the strength of planning agencies, the paper highlighted the role of State Owned Companies and the difficulties in land acquisition as the determining governance factors to ensure project implementation.

A specific example indicating the complexity of the having a strong owner and a suitable governance structure was shown by Salim and Negara (2016) who studied the case of the High Speed Railway project for Jakarta – Bandung. Originally build to connect Jakarta and Surabaya; the project was altered to serve other corridor, which is Jakarta-Bandung. The project was assigned to the Indonesia-China consortium although the initial works, i.e. pre-FS and project structure, were undertaken using Japanese government grant. Another Indonesian example illustrated by Knight and Meade (2015) on energy sector also highlights the importance of managing changes, i.e. landscape, regime, and niche, in both supply and demand sides, to ensure timely project completion and smooth operation. Using MLP (Multi Level Perspective) framework, they propose the following approach to unpack the complexity of project implementation.

Table 1: MLP Framework in the energy sector

	Landscape →	Regime →	Niche
	Project Selection	Project Planning	Project Completion
Supply Side	 Resource inventory International Assistance Flagship law 	Detailed regulationAssistance for feasibility studies	Risk guaranteesProject Bundling
Demand Side	Competition against price subsidies of coal	Clearer, flexible price structures	 Low volatility of operating costs Option of carbon revenues

Source: Knight and Meade (2015)

The above table reaffirms the earlier findings that "the project owner" or government agencies responsible for project completion and delivery should be strong but at the same time is able to dynamically managing the policy changes of the sector or development agenda. In countries where government has dominant SOEs (Zhang et.al. 2014; Abiad and Teipelke, 2017), the term "strong governance" is often used interchangeably between government agencies and SOEs. China is perhaps a country having very strong SOEs that outbid other private companies in infrastructure BOT projects. However, the question of strong government agencies or strong SOEs has been a subject of various discussions and debates within the private sector circles (see Cuevro-Cazzura et.al. 2014; Bruton et.al, 2015), with no conclusive results. In the Indonesian policy dialogues, especially those promoted by the Indonesian Chamber of Commerce, the role of SOEs is highly criticized. They are alleged not only dominating government contracts and winning concession bid for infrastructure investment, but also are having tendency to create a vertical integration between parent companies and their subsidiaries. It means that there is no room for private sector to participate as main players in the infrastructure supply chain.

CASE PROJECTS OF THE INDONESIA INFRASTRUCTURE ROUNDTABLE

The paper examines case projects presented at the Indonesia Infrastructure Roundtable (IIR) organized by the Indonesia Infrastructure Guarantee Fund (IIGF). IIGF is a State Owned company established by the Ministry of Finance Republic of Indonesia to provide predominantly political guarantee for PPP Projects in infrastructure. IIGF helps de-risk infrastructure projects procured using PPP framework with the expectation that those project can be safeguarded in their governance process, improve the capacity of contracting agencies, and provide better understanding on the project feature and risks, and finally attract private sector to participate in the tender process. IIGF through IIGF Institute invest in the knowledge management of Indonesia infrastructure project delivery, including establishing a methodology for infrastructure projects' case studies. Those case studies are initially developed to document past projects or past project initiatives for learning purpose. The IIR combines the development of case materials, workshop sessions, and the establishment of policy brief to be used by IIGF Institute to advocate various policy agendas to relevant stakeholders. The methodology was drawn from the Harvard Kennedy School of Government case study (HKS, 2017). The method was used with a wider analysis by integrating the participants' view on the subject and accumulating them into a policy brief, using IDRC (2017) framework.

Between 2012 and 2017, 15 (fifteen) case projects were presented and analyzed. The projects have different nature, types of infrastructure, government agencies responsible for implementing the projects and source of funds. Table 2 below demonstrates the nature of projects and their features at the time of policy review.

Table 2: IIR Case Projects 2012-2017

No.	Title, aspects of the review and case project	Source of fund(s)	Contracting agencies	Procurement modalities	Project status during review
1	Risk allocation in PPP Project; Case: Yogyakarta city Terminal	Private capital and bank loans	The City of Yogyakarta	PPP Project	Constructed In operation Termination of PPP contract
2	Optimal government capacity dealing with risk mitigation; Case: Tangerang Water	100% Equity from the investor	Tangerang Municipal Government	PPP Project	Implemented In operation

	Company				
3	Land acquisition of PPP projects: Case: Kanci-Pejagan Toll road project	Private capital and bank loans	Ministry of Public Works	PPP Project	Implemented In Operation Change of ownership to other private companies
4	Assignment of State Owned Company in the infrastructure project; Case: Kalibaru Port, Jakarta	Upfront payment from the sub concessionaires	Indonesia Port Corporation (Concession holder of port operation awarded by MoT))	B2B Investment Bidding by the Indonesia Port Corporation	On going construction
5	Private capital investment for infrastructure projects; Case: Jakarta Monorail	Private capital and bank loans	DKI Jakarta Provincial Government	Alliance Model PT Jakarta Monorel and State Owned Company PT Adhi Karya	Project stalled
6	Managing risks for bilateral debt; Case: MRT Jakarta	Bilateral loan (JICA STEP Loan) to MoF. On-lending facility to Jakarta Provincial Government	Jakarta Provincial Government	Construction bidding managed by Local Government Company PT MRT Jakarta	On going construction Opening year 2019
7	Investment opportunity in the electricity sector; Case: Batang IPP project	Private capital and bank loans	Ministry of Energy and Mineral Resources Indonesia Electricity Company PT PLN	PPP project	On going construction
8	Transformation of Local Government Company; Case: Jakarta Sanitation Infrastructure Service	Local government budget	Provincial Government of Jakarta	Direct Assignment to Provincial Government Company	Water and Sanitation Company merger completed
9	Best Practice of Infrastructure Service Charge; Case: Indonesia Railway Track Access Charge	National Budget	Ministry of Transportation	Direct Assignment to the Indonesia Railway Company PT KAI	Reform underway Proposal for TAC calculation and payment mechanism
10	Investment Risks for less-than-commercial Infrastructure; Case: Low traffic toll road project	National Budget	Ministry of Public Works and Housing Toll road Regulatory Agency	PPP tender with Availability Payment	NA
11	Fiscal Policy on National Infrastructure; Case: Levies for Telecommunication Services	National Budget	Ministry of Communication and Information Indonesia Telecommunicati on Regulatory Agency	NA	NA
12	Financing Aspects of Airport Development; Case: Kertajati West Java International Airport	National Budget for Airside Provincial Budget for Landside and Aerocity	Ministry of Transportation Provincial Government of West Java	SOE PT Angkasa Pura II Join Assignment with PT BIJB (Provincial	On-going Land Acquisition and Construction

				Government Company)	
13	Development of Aero	SOE	Ministry of	Direct	On-going planning
	city;	PT. Angkasa Pura I	Transportation	Assignment of	
	Case: Hasanuddin			SOE PT	
	International Airport	Provincial	Provincial	Angkasa Pura I	
	_	Government of	Government of		
		South Sulawesi	South Sulawesi		
14	Managing Access	Private capital and	Ministry of Public	PPP project	On-going
	Risk in Toll road	bank loans	Works and		construction
	Project;		Housing		
	Case: Malang		Toll road		
	Pandaan Toll Road		Regulatory		
	Project		Agency		
15	Mitigating Traffic	Private capital and	Ministry of Public	Direct	On-going
	Risks in Competing	bank loans	Works and	Assignment to	construction
	Project;		Housing	SOE	
	Case: Manado-Bitung		Toll road	Consortium	
	Toll Road		Regulatory		
			Agency		

Source: www.iigf.co.id/institute/id/kegiatan/peningkatan-kapasitas/indonesia-infrastructure-roundtable-iir, accessed 01 October 2017

Projects included in the IIR case projects were solicited from internally within IIGF and from the consultation with IIGF partners, both practitioners and academics. From the above table, we can see that the majority of the projects studied in the IIR are toll road projects (26.7%), indicating the current appetite of private sector to invest in the Indonesia's infrastructure projects, and we can learn a lot from those projects. Toll road is the frontrunner in the Indonesian PPP projects with complex land acquisition issues but with more established risk analysis framework. National investors and banks have already participated in the toll road projects, making them the preferred infrastructure projects, allowing private sector, SOEs, and national/sub national government to all participate financing those projects. Other sectors, although there are attracting private sector investment, are currently funded by either national government budget or by State Owned Companies. Hence, the complexity of the risk allocation is less than PPP or privately financed projects, but the interest of private parties are pushed to B2B approach, rather than PPP.

The case materials were developed from actual field data and project information. The projects were simulated to generate responses from the expert panels and resource persons during workshop sessions. The procedure is established using qualitative approach and cross-verification method to allow the panel reaching into conclusions. This procedure of structured expert judgment on managing stakeholder's expectations and conflicts can be proven useful in assessing large and complicated undertakings such as infrastructure projects (Cooke and Goosens, 1999, Littau, 2015), especially in the PPP project (El Gohary et.al, 2016) as well as in drafting the briefing papers addressed to the policy makers (IDRC, 2017).

FACTORS ENSURING SUCCESSFUL INFRASTRUCTURE PROJECT IMPLEMENTATION

In their illustration to highlight the needs for a successful regulatory and institutional framework for promoting infrastructure development, the World Bank in their recent report highlight that "The GoI envisions that the private sector will finance nearly two-thirds of the USD 415 billion in additional infrastructure investments over 2015-2019. However, the share of 'core' infrastructure investment financed by the private sector has steadily declined from an average of 19 percent in 2006-2010 (0.8 percent of GDP) to 9 percent in 2011-2015, or 0.2 percent of GDP. Data for 2016 appear to indicate a pick-up in private sector investment, but in reality reflects lagged progress on previously tendered projects".

Learning from the case studies, by developing simulated responses from the experts, and policy panels, as well as carrying out stakeholder mapping analysis, the IIGF Institute come out with the following framework.

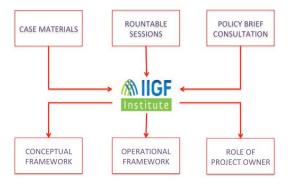


Figure 1: IIR Framework

Three board categories emerged from the exercise, namely (1) the needs to have an appropriate and robust conceptual policy framework, (2) strong and detailed operational framework to safeguard the projects' proceed from planning to operation stage, and (3) the role of government as projects' owner and the capacity for them to successfully execute infrastructure projects. The following section will discuss each element of project implementation success factors.

Appropriate and robust conceptual framework

The Government of Indonesia has established Medium Term Development Plan (MTDP or RPJM in the Indonesian Government term) for the year 2014-2019, following the formation of a new administration in 2014. This 5-years plan serves as a guideline for the newly elected President to give directives to the Ministers to outline their strategic plan and propose an annual work-plan and budget-plan. In accelerating the priority projects, in July 2015 the Indonesian government established KPPIP or The Committee for Acceleration of Priority Infrastructure Delivery. The establishment of KPPIP as an inter government agency to deliver priority projects is clearly an indication of problematic and complex issues around infrastructure delivery.

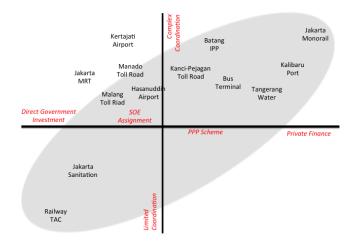


Figure 2: Financing Modalities and Project Complexity

The case projects listed above has also learned the hard way on implementing, even straightforward projects using direct government finance. Clear government responsibility for the development of any infrastructure project regardless of implementation modalities seems to be the key for ensuring a timely delivery and operation of the infrastructure assets. As the number of related agencies increase, the difficulties of project implementation arise; and so does the source of funding for the project. This condition met with the situation explained by Knight and Meade's MLP framework (2015) as well as the approach proposed by the earlier Moris and Hough (1987) or later Winch and Leiringer (2015). Their argument of a well-designed sequence of infrastructure policy decision is also an important aspect to consider.

At the top right is the Jakarta Monorail Project, which was initiated in 2004 and abandoned in 2008. The new investor came in 2013 with a renewed approach using a combination of ridership and property development, but stopped again in 2015 due to inability to have a financial close and the legal disputes on the land provision of monorail depot. What remains today in the monorail pillars along HR Rasuna Said or Kuningan and Senayan, two of the prominent commercial area of Jakarta.

Often, successful project is simply following examples elsewhere and ensuring basic infrastructure is in compliance with national/international standards (example of a merger between water company and liquid waste management company in Jakarta). This compliance with a simple logic can saves government's time and money government to execute projects.

With the limited number of PPP projects that were successfully implemented or having financial close, the Government of Indonesia issued several Presidential Regulations giving an assignment to SOEs to invest in infrastructure projects. Those SOEs, often received equity injection from their shareholder, i.e. Ministry of SOE, and then using their balance-sheet capacity to raise debt to finance projects. Since the Indonesian Central Bank does not allow national banks to do pure project finance, quasi-project finance, thus a corporate finance practice was the usual practice. The establishment of SMI and IIGF as SOEs in project financing and guarantee has started to overcome the problems.

Fundamental to this problem is the lack of a proper project sequence. In the ideal-world situation, the procedure to implement project will depend on the following order:

- a) Investment decision and priority
- b) Procurement modalities (government budget, SOEs assignment, PPP scheme)
- c) Governance structure and process

Projects without a proper front-end planning are bound to be less successful than the more prepared projects. In the case of port of Kalibaru, which was treated as SOE assignment, a better plan, especially a time commitment to complete the project, was a winning formula against the competing scheme using PPP framework prepared by the MoT.

The project should, as far as possible avoid un-necessary complexity in infrastructure delivery. Simplicity in project structure helps policy makers to make decision. More complex projects scare project owners to actually act against the problems along the way. Many large projects (for example Batang IPP, Kertajati Airport, MRT Jakarta) are complex in nature. However, creating a feel that complex project are always tend to fail has created a barrier for the government to act in a structured way. A proper conceptual framework for project planning will help policy makers, planners and engineers to respond to their roles in the project delivery process. As simple as addressing who is doing what in infrastructure will empower project owner to gain confidence in the project execution. In short, the government as "project owner" will lead the process and is able to develop a mechanism for incorporating various stakeholders and relevant agencies both horizontal and vertical, to work in a concerted effort.

Clear and detailed operational framework for implementing agencies

Government officials use to follow rules and procedures. Very tight regulation and governance structure, created by internal auditors and anti-corruption agencies frequently hamper innovation and flexibility in project implementation. The case of Yogyakarta terminal PPP project that was implemented before national PPP framework established, has provided a very good example of failure in risk reconnaissance. The project is currently under legal dispute after the government unilaterally terminated the contract. Other failed project such as the Jakarta Monorail was also an example on why detailed operational framework is absolutely necessary for government's contracting agencies.

Another specific issue related with the project concept, is the methodology for undertaking life cycle costing and a full cycle asset management, reflecting short and long term commercial as well as development objectives of the project. This means the outline business case should carefully look at risks (political and reputational risks, production risks, demand/revenue risks, and residual risks), not only at the beginning of project process, but also along the lifetime or concession period of the project. The case of Kalibaru Port project is a good example of residual risks that cannot be managed by the concessionaire and then pass along to the government.

Role of government agencies and their capacity to execute infrastructure projects

During the project lifetime or concession period, government-contracting agencies have different roles to play. The IIR has identified several key features in both successful and failed projects. In the 2013-2014 IIR project exercise, the IIGF came up with 4C principles of the government. Like a diamond, the government is valued using 4C: Clarity, Certainty, Consistency, and Capacity. During 2015-2016 IIRs, IIGF add 3 more Cs namely, Commitment, Consultative, Collaboration capacity. Those 7Cs came over and over again in various project cases, although the study did not take a qualitative nor quantitative measurement on each C. The validity of the 7C models were tested against the later successful PPP project's financial close of Palapa Ring of Telecommunication infrastructure for Indonesia, guaranteed by IIGF. The procedure for improving the capacity of the contracting agencies has now mainstreamed by the IIGF in undertaking their projects, including IIR methodology and general or specific capacity building practices.

It is also important to note, and to be always reminded to the stakeholder, that when discussing PPP project, PPP is not only Public Private Partnership, but also Putting People as a Priority. It means, that successful on-going project like MRT Jakarta and successfully privatized water project in Tangerang always consider public service as their main agenda, allowing public support during project preparation, construction, and operation. Support to government should also come from different professional entities, namely project developers, financiers, advisors. The pool of talents and continuous support to professional that came out very strongly during IIR has been responded by IIGF by promoting the establishment of the University Network in the Indonesia Infrastructure Development (UNIID) and Indonesia Infrastructure Society (IIS/MII)

CONCLUSIONS AND WAYS FORWARD

The series of exercise conducted during the Indonesia Infrastructure Roundtable has enabled policy makers to learn in the simulated environment, the views of various stakeholders involved in the infrastructure projects. In the absence of regulations, breakthrough in the infrastructure provision is often hampered by the fear of allegation from both the public or from legal officers. Imperfect contract is often found in public procurement, both for the delivery of goods and services, and the investment project. It means that the contracting parties will have to allow certain flexibility in the contract to allow unforeseen risks and uncertainty to be adjusted. Safeguarding the process is also as important as the quality of infrastructure and punctuality of project milestones. The framework of joint monitoring committee developed by IIGF can serve as a model for safeguarding the procurement and delivery process.

It is also apparent from the projects reviewed, that the dynamics in the owners will play a role in ensuring the project's success. The concept of "strong owner" and "dynamic project capabilities", tested during the IIRs, and both are very relevant to the Indonesian case.

As a strong and dynamic owner, the government is expected to operate with the principles of (1) government's Consistency, (2) Clarity of policies and regulations, (3) Certainty in the decision making and timelines, and (4) having adequate Capacity to

execute projects and implement policies. Later, this 4C should be added with another 3Cs, which are (5) political and operational Commitment, (6) providing framework for Consultative process, and (7) continuously improving Collaboration capability to manage project stakeholders.

Identifying relevant actors and players, including creating a mass of players should also be homework for national and sub national governments. For the PPP projects, the government should be aware the importance of adequate number and qualification of advisors, enough project developers to enable innovation and competitive proposal development, and attractive incentive through fiscal and non-fiscal instruments to attract financiers participating in the project process.

At the moment, IIGF Institute is establishing a network of knowledge and undertaking impact assessment on the learning process during IIR. Future works to standardize the methodology and improve the quality of IIR should be the main focus of the IIGF Institute. IIGF has realized that the limitation of IIR was the variation of the project case and the body of knowledge that needs to be created. The strategy for wider implementation of the approach should also be channeled through the professional body that IIGF help promote, as well IIGF support to a consolidated PPP office established in 2017. The roundtable has attracted interest from various national and international players, and has mainstreamed in the PPP project process of IIGF to improve the capacity of government contracting agencies. The importance of IIR methodology in the development process has began to be appreciated by policy makers and projects developers.

ACKNOWLEDGEMENTS

This paper is made possible with the support from the Indonesia Infrastructure Guarantee Fund (IIGF) and the IIGF Institute. The former CEO of IIGF, Ms. Sinthya Roesly, has been instrumental in establishing The Indonesia Infrastructure Roundtable (IIR), which was the data source in this research. The research is indebted to Dr. Tri Tjahjono from Universitas Indonesia and Dr. Ibnu Syabri from Institut Teknologi Bandung, who promoted Indonesia's university network in infrastructure development.

REFERENCES

- Abiad, Abdul, Renard Teipelke (2017) Infrastructure Provision in Developing Asia's Giants: A comparative perspective on China, India, and Indonesia, *Journal of Infrastructure, Policy and Development*, Volume 1 Issue 1, pp.24-43.
- Battacharya, Amar, Jeremy Oppenheim, and Nicholas Stern (2015) Driving Sustainable Development through Better Infrastructure: Key Elements of a Transformation Program, *Global Economy and Development Working Paper 91*, July 2015, Brookings
- Bruton, Garry D., Mike W. Peng, David Ahlstrom, Ciprian Stan, and Kehan Xu (2015) State-Owned Enterprises around the World as Hybrid Organizations, *The Academy of Management Perspectives 2015*, Vol. 29, No. 1, pp. 92–114.
- Cooke, R.M., L. J. H. Goosens (1999) Procedures Guide for Structured Expert Judgment: EUR 18820, Delft University of Technology, Delft
- Cuervo-Cazurra, Alvaro, Andrew Inkpen, Aldo Musacchio, and Kannan Ramaswamy, (2014) Governments as owners: State-owned multinational companies, *Journal of International Business Studies* 45 (2014), pp. 919–942
- Davies, Andrew, Tim Brady (2016) Explicating the Dynamics of Project Capabilities, *International Journal of Project Management* 34 (2016), pp. 314–327
- El-Gohary, Nora M., Hesham Osman, and Tamer E. El-Diraby (2016) Stakeholder Management for Public Private Partnerships, International Journal of Project Management 24 (2006), pp. 595–604
- Flyvbjerg, Bent (Ed) (2017) The Ofxord Handbook of Megaproject Management, Ofxord University Press, London
- Knight, Eric R.W., James D Meade (2015) Managing Productivity in the Infrastructure Sector: A Case Study from Indonesia, *Journal of Economics and Finance in Indonesia*, Vol. 61 No. 3, December 2015, pp. 214-222
- Littau, Paul (Ed) (2015) Managing Stakeholders in Megaprojects, COST project, The University of Leeds, Leeds
- Morris, P.W.G., Hough, G.H (1987) The Anatomy of Major Projects: A study of the reality of project management, Wiley, Chichester.
- OECD (2012) Public-Private Partnership Governance: Policy, process and structure, OECD Reviews of Regulatory Reform in Indonesia, OECD
- Parikesit, Danang, Irene N. Laksmi (2016) Managing PPP for Infrastructure Development in a Changing Regulatory Environment: Challenges for Indonesia's New Administration, IIGF Institute, Jakarta.
- Parikesit, Danang (2017) Recent Advances in Indonesia's Infrastructure Development through Private Sector Financing, *Nomura Journal of Asian Capital Markets*, Spring 2017 Vol.1/No.2, pp. 16-20
- World Bank (2017) Closing the Gap: Indonesia Economic Quarterly, October 2017, The World Bank Jakarta, pp. 35-54
- Winch, Graham, Roine Leiringer (2015) Owner Project Capabilities for Infrastructure Development: A review and development of the "strong owner" concept, *International Journal of Project Management 34 (2015)*, pp. 271–281
- Zhang, Shuibo, Ying Gao, Zhuo Feng, and Weizhuo Sun (2014) PPP Application in Infrastructure Development in China: Institutional analysis and implications, *International Journal of Project Management 33 (2015)*, pp. 497–509

Online resources on the methodology

Harvard Kennedy School for Government, https://case.hks.harvard.edu/teaching-with-cases/, accessed 22 December 2017

International Development Research Centre, https://www.idrc.ca/sites/default/files/ idrcpolicybrieftoolkit.pdf, accessed 22 December 2017

Indonesia Infrastructure Guarantee Fund, http://www.iigf.co.id/institute/id/kegiatan/ peningkatan-kapasitas/indonesiainfrastructure-roundtable-iir, accessed 01 October 2017