

The Philippine Review of Economics

Editor-in-Chief

EMMANUEL S. DE DIOS

Editorial Advisory Board

RAUL V. FABELLA

HAL C. HILL

CHARLES Y. HORIOKA

KIAN GUAN LIM

ROBERTO S. MARIANO

JOHN VINCENT C. NYE

GERARDO P. SICAT

JEFFREY G. WILLIAMSON

Associate Editors

DANTE B. CANLAS

RAMON L. CLARETE

LAWRENCE B. DACUYCUY

FRANCISCO G. DAKILA JR.

CRISTINA C. DAVID

JONNA P. ESTUDILLO

MARIA S. FLORO

GILBERTO M. LLANTO

ANICETO C. ORBETA

ERNESTO M. PERNIA

STELLA LUZ A. QUIMBO

Managing Editor

HONLANI RUTH J. RABE

ARTICLES IN THIS ISSUE

Social mobility in the
Philippine labor market

Lawrence B. Dacuycuy

The Social Weather Reports of
economic well-being in the
Philippines

Mahar Mangahas

PPP vs ODA revisited: key
issues for PPP infrastructure
development in the
Philippines

Susumu Ito

Maternal mortality in Lao
People's Democratic
Republic

Jonna P. Estudillo

A game of subsidization or
taxation for new technology
adoption in international
duopoly

**Masahiko Hattori and
Yasuhiro Tanaka**

Is household income
diversification welfare
improving? The evidence
from Philippine panel data

Adrian R. Mendoza

Potential output and output
gap estimation models for
the Philippines

**Roberto S. Mariano
Suleyman Ozmucur
Veronica B. Bayangos
Faith Christian Q. Cacnio
Marites B. Oliva**

Two memoranda
from G. Ranis

Gustav Ranis

BOOK REVIEW

Fabella's Capitalism and
inclusion under weak
institutions"
Lessons on inequality
for a new generation of
economists

Ronald U. Mendoza, PhD



A joint publication of the
University of the Philippines
School of Economics
and the **Philippine Economic Society**





The Philippine Review of Economics

A joint publication of the UP School of Economics (UPSE)
and the Philippine Economic Society (PES)

EDITOR-IN-CHIEF

Emmanuel S. de Dios
UP SCHOOL OF ECONOMICS

EDITORIAL ADVISORY BOARD

Raul V. Fabella
UP SCHOOL OF ECONOMICS

Hal C. Hill
AUSTRALIAN NATIONAL UNIVERSITY

Charles Y. Horioka
ASIAN GROWTH RESEARCH INSTITUTE
(KITAKYUSHU)

Kian Guan Lim
SINGAPORE MANAGEMENT UNIVERSITY

Roberto S. Mariano
UNIVERSITY OF PENNSYLVANIA

John Vincent C. Nye
GEORGE MASON UNIVERSITY

Gerardo P. Sicat
UP SCHOOL OF ECONOMICS

Jeffrey G. Williamson
HARVARD UNIVERSITY

ASSOCIATE EDITORS

Dante B. Canlas
UP SCHOOL OF ECONOMICS

Ramon L. Clarete
UP SCHOOL OF ECONOMICS

Lawrence B. Dacuycuy
DE LA SALLE UNIVERSITY

Francisco G. Dakila Jr.
BANGKO SENTRAL NG PILIPINAS

Cristina C. David
PHILIPPINE INSTITUTE
FOR DEVELOPMENT STUDIES

Jonna P. Estudillo
NATIONAL GRADUATE INSTITUTE
FOR POLICY STUDIES (TOKYO)

María S. Floro
AMERICAN UNIVERSITY (WASHINGTON D.C.)

Gilberto M. Llanto
PHILIPPINE INSTITUTE
FOR DEVELOPMENT STUDIES

Aniceto C. Orbeta
PHILIPPINE INSTITUTE
FOR DEVELOPMENT STUDIES

Ernesto M. Pernia
UP SCHOOL OF ECONOMICS

Stella Luz A. Quimbo
UP SCHOOL OF ECONOMICS

MANAGING EDITOR

Honlani Ruth J. Rabe
UP SCHOOL OF ECONOMICS

COPY EDITOR

Dinna Dayao

Aims and Scope: The *Philippine Review of Economics* (PRE) invites theoretical and empirical articles on economics and economic development. Papers on the Philippines, Asian and other developing economies are especially welcome. Book reviews will also be considered.

The PRE is published jointly by the UP School of Economics and the Philippine Economic Society. Its contents are indexed in the *Journal of Economic Literature*, EconLit, and RePec. PRE's readership includes economists and other social scientists in academe, business, government, and development research institutions.

Publication Information: The PRE (ISSN 1655-1516) is a peer-reviewed journal published every June and December of each year. A searchable database of published articles and their abstracts is available at the PRE website (<http://pre.econ.upd.edu.ph>).

Subscription Information:

Subscription correspondence may be sent to the following addresses:

- css@pssc.org.ph
- PSSC Central Subscription Service,
PSSCenter, Commonwealth Avenue, 1101, Diliman, Quezon City, Philippines.
P.O. Box 205, UP Post Office, Diliman, Quezon City, Philippines
1101
PHONE: 922-9627, FAX: 924-4178/926-5179

Submissions: Authors may submit their manuscripts to addresses below:

- pre@econ.upd.edu.ph or pre.upse@upd.edu.ph
- The Editor, The Philippine Review of Economics, Rm 237,
School of Economics, University of the Philippines, Diliman,
Quezon City, 1101.

Manuscripts must be written in English and in MS Word format. All graphs and tables must be in Excel format. Submission of a manuscript shall be understood by the PRE as indicating that the manuscript is not under consideration for publication in other journals. All submissions must include the title of the paper, author information, an abstract of no more than 150 words, and a list of 3–4 keywords. Complete guidelines can be viewed in PRE's website.

Copyright: The *Philippine Review of Economics* is protected by Philippine copyright laws. Articles appearing herein may be reproduced for personal use but not for mass circulation. To reprint an article from PRE, permission from the editor must be sought.

Acknowledgements: The PRE gratefully acknowledges the financial support towards its publication provided by the Philippine Center for Economic Development (PCED). The Review nonetheless follows an independent editorial policy. The articles published reflect solely the editorial judgement of the editors and the views of their respective authors.



The Philippine Economic Society

Founded 1961

BOARD OF TRUSTEES 2018

PRESIDENT

Majah-Leah V. Ravago
ATENEO DE MANILA UNIVERSITY

VICE PRESIDENT

Lawrence B. Dacuycuy
DE LA SALLE UNIVERSITY

SECRETARY

Cristina M. Bautista
ATENEO DE MANILA UNIVERSITY

TREASURER

Emilio S. Neri, Jr.
BANK OF THE PHILIPPINE ISLANDS

BOARD MEMBERS

Victor A. Abola
UNIVERSITY OF ASIA AND THE PACIFIC

Kevin C. Chua
WORLD BANK

Rosemarie G. Edillon
NATIONAL ECONOMIC AND DEVELOPMENT
AUTHORITY

Lawrence S. Fernandez
MERALCO

Stella Luz A. Quimbo
PHILIPPINE COMPETITION COMMISSION

Rosalina P. Tan
ATENEO DE MANILA UNIVERSITY

V. Bruce J. Tolentino
BANGKO SENTRAL NG PILIPINAS

EX-OFFICIO BOARD MEMBERS

Jose V. Camacho, Jr.
UNIVERSITY OF THE PHILIPPINES-LOS BAÑOS
IMMEDIATE PAST PES PRESIDENT

Emmanuel S. de Dios
UNIVERSITY OF THE PHILIPPINES-DILIMAN
EDITOR, PHILIPPINE REVIEW OF ECONOMICS

The Philippine Economic Society (PES) was established in August 1962 as a nonstock, nonprofit professional organization of economists.

Over the years, the PES has served as one of the strongest networks of economists in the academe, government, and business sector.

Recognized in the international community of professional economic associations and a founding member of the Federation of ASEAN Economic Associations (FAEA), the PES continuously provides a venue for open and free discussions of a wide range of policy issues through its conferences and symposia.

Through its journal, the *Philippine Review of Economics* (PRE), which is jointly published with the UP School of Economics, the Society performs a major role in improving the standard of economic research in the country and in disseminating new research findings.

At present the society enjoys the membership of some 800 economists and professionals from the academe, government, and private sector.

- Lifetime Membership - Any regular member who pays the lifetime membership dues shall be granted lifetime membership and shall have the rights, privileges, and responsibilities of a regular member, except for the payment of the annual dues.
- Regular Membership - Limited to individuals 21 years of age or older who have obtained at least a bachelor's degree in economics, or who, in the opinion of the Board of Directors, have shown sufficient familiarity and understanding of the science of economics to warrant admission to the Society. Candidates who have been accepted shall become members of the Society only upon payment of annual dues for the current year.
- Junior Membership - This is reserved for full-time college or graduate students majoring in economics. Affiliation for junior membership is coursed through the Junior Philippine Economic Society (JPES).

For more information, visit: www.phileconsociety.org.

The Philippine Review of Economics

Vol. IV Nos. 1 and 2

June and December 2018

ISSN 1655-1516

- 1 Social mobility in the Philippine labor market
Lawrence B. Dacuycuy
- 41 The Social Weather Reports of economic well-being
in the Philippines
Mahar Mangahas
- 56 PPP vs ODA revisited: key issues for PPP infrastructure
development in the Philippines
Susumu Ito
- 87 Maternal mortality in Lao People's Democratic Republic
Jonna P. Estudillo
- 110 A game of subsidization or taxation for new technology
adoption in international duopoly
Masahiko Hattori and Yasuhito Tanaka
- 128 Is household income diversification welfare improving? The
evidence from Philippine panel data
Adrian R. Mendoza
- 161 Potential output and output gap estimation models
Roberto S. Mariano
Suleyman Ozmucur
Veronica B. Bayangos
Faith Christian Q. Cacnio
Marites B. Oliva
- 198 Two memoranda from G. Ranis
Gustav Ranis
- 218 Book Review
Ronald U. Mendoza, PhD

PPP vs ODA revisited: key issues for PPP infrastructure development in the Philippines

Susumu Ito*

Chuo University, Japan

This paper studies key issues for infrastructure development in the Philippines by focusing on a major policy shift on public-private partnership (PPP) from the Aquino administration to the Duterte administration. While the former focused on PPP-based infrastructure development as a priority policy, the Duterte administration in 2017 launched “Dutertenomics”, a large-scale infrastructure development plan of about ₱8 trillion, about \$160 billion, over 6 years which mainly depends on the national budget and Official Development Assistance (ODA) as a financial source rather than PPP. This triggered a debate on “PPP vs ODA” in the Philippines.

The paper discusses that it is not about the “PPP vs ODA”, but how to promote complementary relations between the public and PPP; in other words, “PPP *and* ODA”. In this context, the PPP environment will be evaluated based on four criteria: regulatory framework; institutional framework; institutional capacity; and financial facilities. Key issues for further improvement of the PPP environment in the Philippines will be also discussed for policy recommendations including enactment of PPP law, government guarantee for contingent liability, foreign capital deregulation, risk-sharing mechanism, development of “bankable” project, and development of capital market.

JEL classification: E22, H54, O18

Keywords: public-private partnership, infrastructure, Philippines

1. Introduction

Infrastructure, such as roads, railways, and electric power, is a major premise for economic development, as well as improving people’s lives and contributing to poverty reduction. In many emerging countries, the necessity of infrastructure development is high. Further considering future population increase and

* Please address all correspondence to ito-susumu@tamacc.chuo-u.ac.jp.

economic growth, it is one of the most important policy issues. There are many estimates of infrastructure gap, i.e., the difference between the infrastructure investment necessary amount and the investment forecast amount in emerging countries. According to McKinsey [2016], one of the most quoted estimates, there is an infrastructure gap of \$3.3 trillion a year worldwide between 2016 and 2030, of which about \$1 trillion is for emerging and developing countries. Since the support from international financial institutions and bilateral donors and the government's financial resources of the emerging and developing countries are limited, the expectation is high for the private sector to fill this gap. Furthermore, limitations are also seen on the planning and implementation capabilities of the government of emerging countries for the development of infrastructure. Therefore, the utilization of the private sector's finance, know-how, and technology for the development of infrastructure in emerging countries through public-private partnership (PPP) is receiving attention in both academic research and actual projects including innovative attempts. On the other hand, although there are merits in reducing the external debt, fiscal burden of emerging countries' governments by PPP infrastructure development, it is also pointed out that there are issues in PPP.

In the Philippines, due to the power crisis that occurred in the 1980s, the development of PPP-related laws was relatively early among emerging economies. The country's Build-Operate-Transfer (BOT) law was enacted in 1990, which was the first of its kind in Asia. After that, PPP projects are being promoted in sectors including electric power, water supply, and transportation. The Aquino administration made important policy change to develop infrastructure through PPP, not through public procurement, mainly to reduce the fiscal burden by establishing a new government agency to promote PPP and various PPP support systems.

Against this backdrop, the Duterte administration, launched in 2016, announced "Dutertenomics", a large-scale infrastructure development plan of about ₱8 trillion, or about \$160 billion, in April 2017. The plan aims to make a major policy change in infrastructure development from PPP of Aquino former administration to construction of infrastructure by public sector by using government budget and Official Development Assistance (ODA) together. In response to this, the debate on "PPP vs ODA" is active in the Philippines.

This paper aims to evaluate the environment for PPP infrastructure development in the Philippines following drastic policy shift in PPP by the Philippine government from the Aquino administration to the Duterte administration based on a review of the relevant primary and secondary literature, anecdotal evidence, and the author's own knowledge on the subject coming from his involvement with the issue.

In this paper, section 2 outlines an overview of PPP infrastructure development in emerging countries and literature review on PPP. Section 3 discusses the current status of infrastructure development and achievements in PPP in the Philippines.

Section 4 depicts policy changes in the Philippines' PPP policy. Section 5 discusses the PPP environment and key issues of PPP infrastructure development in the Philippines including policy recommendations.

2. Overview

This section discusses definition of PPP, overview of PPP infrastructure development in emerging countries, and literature reviews on PPP infrastructure development.

2.1. Definition of PPP

PPP is a mechanism for collaboration between the public sector and the private sector in the provision of public services such as infrastructure construction, operation, and maintenance. It is said that the water supply business in France in the mid-nineteenth century was the origin of PPP, but the term PPP came about in the United Kingdom in the late 1990s. Though PPP was born in Europe and the United States and many schemes have been developed there, it has been introduced and developed particularly in emerging countries due to the large supply-demand gap of infrastructure and restrictions on government resources.

The definition of PPP is not academically established. This is because there are many schemes in PPP, from combination of traditional government procurement to complete privatization, in infrastructure asset design, construction, possession and operation. These schemes include Design-Build-Maintain, Build-Own-Operate-Transfer, Build-Own-Operate, BOT, Build-Lease-Transfer, and Rehabilitate-Operate-Transfer, among others. According to Delmon [2010], there are over 25 PPP schemes.

In this paper, PPP is defined as “a long-term contract between a private party and a government agency, for providing public services and/or developing public infrastructure, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance”.¹

2.2. PPP in emerging economies

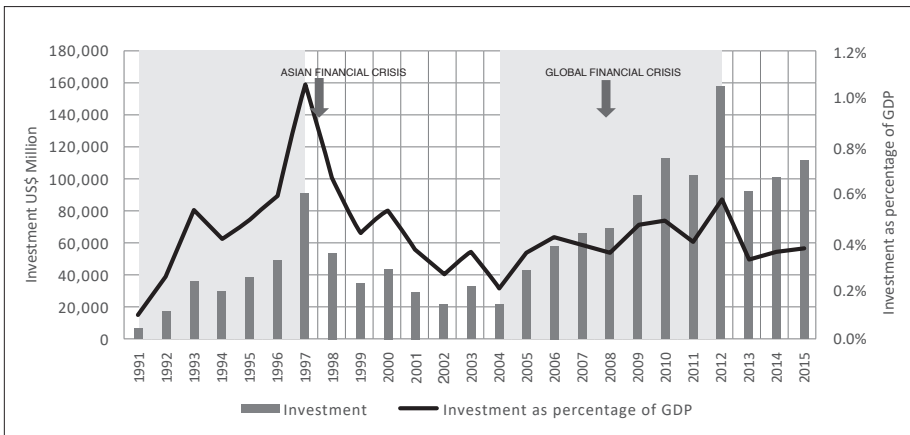
According to the World Bank's Private Participation in Infrastructure Project Database, which maintains PPP data in emerging and developing countries since 1990, the total number of PPP projects so far implemented is 7,023, amounting to \$1,739 billion in total as of the end of 2017. In the 1990s, Latin America and the Caribbean countries had a relatively large number of PPP. In recent years, PPP projects are also increasing in Southeast Asia and South Asia due to

¹ World Bank Institute [2014]

the increase in infrastructure projects and macroeconomic stability. Among the emerging countries, Brazil, India, China, Turkey, and Mexico are the top 5 countries by investment, accounting for 58.7 percent of the total PPP in emerging and developing countries. In terms of sector, electricity, transportation, ICT, water supply, and sewerage are the popular sectors; electricity accounts for 50.2 percent of all sectors.

World Bank [2016] states that investments in PPP have grown in absolute terms since 1991 with two notable periods of expansion and one period of contraction as shown in Figure 1. The bank also notes that investments in PPP as percentage of GDP have remained flat in the last decade, without recovering the levels achieved prior to the Asian financial crisis.

FIGURE 1. Investments in PPP infrastructure projects 1991-2015 (2015 US\$ million and as percentage of GDP)



Source: World Bank (2016)

2.3. Literature review on PPP

Many studies have been made on PPP reflecting its history of nearly 30 years, although Kivleniece and Quelin [2012] argue that systematic review of PPP evidence is still limited and PPP-related literature remains fragmented. These studies can be classified mainly into the following groups: advantages of PPP; success factors of PPP; and determinants of PPP.²

² Other possible groups of PPP-related literature include risk management/allocation, incentive/governance mechanism, contract structure, financing scheme and modalities, legal, regulatory and institutional framework in sponsor country, public financial management, and contract management/monitoring.

2.3.1. Advantages of PPP

This group of literatures generally argues that PPP modality has advantages over traditional government procurement through government budget and ODA.

UNESCAP [2015] points out the following advantages of PPP.

1. Access to private sector capital: With the increased access to private sector financing, the government budget is significantly relieved by an amount that is large enough to finance other equally important development projects.
2. Better allocation of risks: Another unique feature that highlights the importance of PPP in meeting the growing demand for infrastructure is the ability of the involved parties to better, if not efficiently, allocate risks depending on the comparative advantage of the players and project characteristics.
3. Efficiency gains: If constructed carefully, PPP contracts allow for efficiency gains since they put more focus on the outputs and less on the inputs.

The World Bank Institute [2014] further disaggregates the factors discussed by UNESCAP [2015] and identifies the following seven points as advantages of PPP.

1. Whole-of-life costing: Full integration incentivizes the single party to complete each project function (design, build, operate, maintain) in a way that minimizes total costs.
2. Risk transfer: Allocating some of the risk to a private party which can better manage it can reduce the project's overall cost to government.
3. Focus on service delivery: Management in the PPP firm is focused on the service to be delivered without having to consider other objectives or constraints typical in the public sector.
4. Innovation: Specifying outputs in a contract, rather than prescribing inputs, provides wider opportunity for innovation.
5. Asset utilization: Private parties are motivated to use a single facility to support multiple revenue streams, reducing the cost of any particular service from the facility.
6. Mobilization of additional funding: Charging users for services can bring in more revenue and can sometimes be done better or more easily with private operation than in the public sector.
7. Accountability: Government payments are conditional on the private party providing the specified outputs at the agreed quality, quantity, and timeframe.

The "whole-of-life costing" aspect discussed by the World Bank Institute [2014] is also supported by Delmon [2015] that PPP incentivizes the builder-operator to incorporate long-term operating cost considerations in the design and construction phases of a project and reduces the coordination costs.

Trebilcock and Rosenstock [2015] argue that the following are three motivations for governments in emerging markets.

1. Replacing poorly performing public operators with private operators has incentives to induce optimal investments in infrastructure and quality at a relatively lower cost or risk to government or users.
2. Addressing construction-phase concerns, such as mitigating cost overruns and building new infrastructure more quickly.
3. PPP as a means of meeting infrastructure needs without compromising budget constraints.

Kivleniece and Quelin [2012] also emphasize “innovation” argued by the World Bank Institute [2014] as PPP allows the public sector to access resources and capabilities to realize innovation and improved service quality.

The aforementioned studies share views on the advantages of PPP in terms of funding, quality of services, innovation, and efficiency, among others. The following empirical studies, including case studies, also show the advantages of PPP.

When 181 PPP projects in Latin America for energy, communications, and water sectors were examined, the quality of service improved in all three sectors. With the introduction of PPP, user charges rose in the energy and water sectors, but in the communication sector, it was observed for both increase and decrease.³ Moreover, compared with the case without introducing PPP, reduction of labor by one-fourth is achieved. However, with regard to expanding the range of service offerings through PPP, there was no significant change in the number of connections and sales volume in energy and water, and there was a certain increase in the number of subscribers and the duration of communication in communication sector⁴ [Andres et al. 2008]

On the aspect of efficiency, Gassner et al. [2009] show that efficiency gains, such as reduced water/power losses, increased staff efficiency, increased coverage, increased bill collection rates and daily hours of service are found when PPP mode is introduced in a comprehensive empirical study of about 1,200 water and electricity utilities in 71 developing countries. They argue that the private sector delivers on expectations of higher labor productivity and operational efficiency, convincingly out-performing a set of comparable companies that remained state owned and operated.

A study which examined 65 PPP projects in the urban water sector also shows the efficiency of PPP, since the transition to PPP addressed water leakage problem and improved the reliability in water supply and billing operations [Marin 2009].

³ It should be noted that the fee charged by the public sector before the introduction of PPP may have been kept to an excessively low level with some subsidies.

⁴ Regarding the expansion of services, it is necessary to verify how it is prescribed in the PPP contract.

On the other hand, for water charges, charges increased in all cases except the cases of four countries.⁵ In addition, with the introduction of PPP, there was a reduction effect of one-fourth to two-thirds of the labor force. According to all the PPP contracts investigated, 24 million people were newly accessible to water.⁶

On the cost overrun issue which is often seen in infrastructure development projects in developing countries, OECD [2008] argues that in the United Kingdom, the cost increase of construction costs in the PPP project is 23 percent, which is much lower than 73 percent of traditional government procurement method.⁷

However, there are a number of studies that show concerns over PPP. Based on a study of hospital construction in the United Kingdom, Barlow and Koberle-Gaiser [2009] argue the following negative aspects of PPP: very high transaction costs over the project life; limited integration between service models and infrastructure design and delivery; and lack of innovation realized by PPP projects. Grout [1997] discusses, based on a study of the United Kingdom experience, that the incentive structure of private proponents in PPP projects focuses on cost minimization and not on service-enhancing activities. Another study in the United Kingdom health sector shows that under PPP, soft facilities management services, including cleaning services, have been shown to provide less value for money compared to non-PPP hospitals [Liebe and Pollock 2009]. They argue that PPP creates serious affordability problems, diverting money to banks and shareholders at the expense of staff and patient care, taxpayers, and citizens. Trebilcock and Rosenstock [2015] also discuss that there are many cases where, due to excessively optimistic revenue forecasts, the government side took revenue risk, according to PPP contracts.

Although majority of the literature argues that PPP is advantageous, empirical studies show mixed results of PPP projects. The above empirical studies, however, need more analysis on reasoning of their findings.

2.3.2. Success factors of PPP

A second group of literature discusses the factors contributing to the success of PPP projects. They include both macro level factors such as macro-economic and investment environment, legal system, and institutional framework, as well as micro level factors such as project feasibility and risk allocation.

On the institutional framework of government, OECD [2008] argues that the effectiveness of the establishment of government unit exclusively for PPP is a success factor. This PPP agency is especially important for promoting smooth and

⁵ The same as footnotes 3 above.

⁶ Since the study was not able to establish counterfactual for not having PPP, this 24 million people could be examined further.

⁷ Regarding the cost of the PPP project, it is necessary to consider not only the construction cost but also the long-term cost of operation and maintenance.

advantageous negotiations on complicated PPP contracts with private enterprises with extensive experience in PPP and implementing various coordination activities within the government. For the private sector, it also means the signal of the government's PPP implementation ability and its experience. ADB [2008] and World Bank [2007] also argue the importance of creating a PPP dedicated unit to make the public sector an equal partner with the private proponent in PPP, specifically, negotiations of the PPP contract. The latter study's conclusion, drawn from a qualitative assessment of 8 PPP units around the world⁸, includes the following: relatively successful PPP units directly target specific government failures; PPP units with executive power tend to be more effective than those that are purely advisory; and without high-level political support for the PPP program, a PPP unit will most likely fail. Trebilcock and Rosenstock [2015] discuss that the capabilities and institutions of emerging countries' governments in value-for-money audits capacity, PPP dedicated department establishment, and PPP-related law enactment status are important success factors.

The following studies identified success factors in both macro and micro level. Zhang [2005] argues that favorable investment environment, economic viability of a project, reliable consortium with technical strength, sound financial package, and reliable contractual arrangement are critical success factors. Jamali [2004] points out that careful preparatory work, which includes a comprehensive feasibility study and thorough economic evaluations of PPP projects and better regulatory systems that include protection from expropriation, arbitration procedures, respect for contract as success factor. Akintoye et al. [2003] investigated 61 PPP projects in the United Kingdom and identified success factors for PPP projects as follows: efficient procurement; feasibility; desirable economic environment; and well-established financial market. Interestingly, all these studies assert that feasibility or economic viability of a project—in other words, the “bankability” of the project—is a success factor.

Based on a detailed analysis of PPP projects in the United Kingdom and British Columbia, Canada, Aziz [2007] identifies the following principles to ensure the success of PPP: availability of a PPP legal framework and implementation units; perception of the private finance objectives, risk allocation consequences, and value-for-money objectives; maintenance of PPP projects' process transparency; standardization of procedures; and use of performance specifications.

On the other hand, failure factors are argued as inappropriate risk allocation, demand for higher subsidies and guarantees by the concessionaire during

⁸ The Philippine's BOT Center, the former institution of PPP Center, is included as one of the 8 PPP units and as one of the 3 least effective units among the 8, together with Bangladesh and Jamaica. The study argues that the effectiveness of the BOT Center (of the Philippines) appears to be limited by a lack of formal control over PPP procurement, or in the absence of formal control, informal influence. This is an interesting contrast to the discussion in section 3.2 of this paper which argues positive achievements in PPP in the Philippines since 2010.

procurement and tendering stage, delayed acquisition of land, slow and hindered project construction progress, and cost overrun during construction stage, lower traffic demand, enforcement of unfair toll pricing, and legal proceedings due to the conflict between partners during project operation stage based on study on 35 transport PPP projects [Soomro and Zhang 2013]. It is noted that failure factors are not necessarily the opposite of the aforementioned success factors discussed. The absence of some failure factors, such as delay in construction progress, is not mentioned as a success factor in the above studies.

Studies on both success and failure factors need to further clarify the root causes of these factors and to analyze how these factors led to project success or failure. Also, the definition of “success” and “failure” in PPP is not necessarily clear nor shared in the above studies. Part of the reasons is that the definition of PPP is not established, and there are many schemes in PPP as discussed in section 2.1.

2.3.3. Determinants of PPP

A third group of study is on factors affecting the private sector’s decision to participate in PPP and how to attract private investments in public infrastructure especially in developing countries. Studies in this group give practical implications for policymakers of developing countries in framing policies.

On macroeconomic and market conditions, Sharma [2012] shows that large size and relatively higher income markets, macroeconomic stability, and quality of regulation and governance as determinants, while political factors and budget constraint are not significant based on data for the period of 1990-2008. An analysis of the determinants of PPP by country and sector implemented in 1990-2003 reveals that factors such as larger markets, political stability, macroeconomic stability, stronger rule of law, administrative capacity, and greater consumer demand are determinants for PPP [Hammami et al. 2006]. Trebilcock and Rosenstock [2015] also argue that a ranking of countries by their PPP environments explains the attraction towards wealthier developing countries as a function of their established legal, regulatory, and institutional frameworks, project experience⁹, and investment and financing climate. On particular sector of economy, Mengistu [2013] finds that countries with larger service sectors, larger contribution of industry to GDP, more openness to trade and democracies, more stability in macroeconomic environment, higher levels of fiscal freedom, and availability of domestic credit are more likely to have PPP.

On legal and governance issue, Moszoro et al. [2014] argue that PPP is highly sensitive to the quality of government variables and underscore the following factors as highly sensitive to PPP investment in infrastructure: freedom from corruption; rule of law; quality of regulations; and the number of disputes in a sector.

⁹ A wealthier economy and project experience are not necessarily deemed to be closely related.

On finance sector, a well-developed finance sector especially capital market with depth and liquidity is found to be a key determinant based on a study on power sector in 37 developing countries between 1990 and 2007 by Ba et al. [2010]. Kinda [2008] also shows economic growth, physical infrastructure, and level of development of the finance sector as determinants based on infrastructure projects in 61 developing countries between 1970 and 2003.

A study in 48 Muslim developing countries from 2002 to 2011 shows market conditions which include population, purchasing power and income, institutional qualities, and country risks are the most crucial factors in determining PPP in infrastructure [Kasri and Wibowo 2015].

Determinants of PPP include macroeconomic status, legal framework, finance sector development, and political stability as discussed. However, it is not clear why some of the determinants such as physical infrastructure and larger service sector discussed above lead to the mobilization of private money into public infrastructure.

2.3.4. Areas of further study

The number of PPP projects is growing. However, PPP still remains a small proportion in total infrastructure. Moreover, PPP projects tend to be found in higher income countries as studies on determinants show. Regarding areas, there are many studies concerning Europe, Latin America, and Africa, but there are fewer studies concerning Southeast Asia including the Philippines.

The abovementioned studies and discussions tell us that PPP has advantages over the traditional procurement system financed by government budget/ODA and actually delivers efficiency. However, as noted before, some empirical studies show the disadvantages of PPP. Although PPP was launched nearly 30 years ago, there are still many ongoing PPP projects involving long-term operation and maintenance and not yet completed/expired or transferred to the public. Bovaird [2004] argues that we are still at an early stage of learning which types of PPP are appropriate for which tasks and, therefore, cannot judge how important PPP will become. Therefore, it needs to further validate as to the advantages of PPP.

Based on the above findings, there are three areas for further study. First, studies on performance, including service quality and user fees, of PPP projects by comparing these projects with matched pairs of public and PPP infrastructure in the same sector of similar specification and magnitude to validate whether PPP is better than traditional procurement are further expected to be conducted.

Second, further studies are expected not only whether PPP is advantageous but also how successful achievements are delivered in PPP arrangements; in other words, a detailed study of the process and mechanism of success of PPP.

Finally, few studies have been made which combine the above three aspects of PPP studies: advantages; success factors; and determinants. What environment attracts the private sector to participate in a public infrastructure development project? What factors contribute to the success of a project, making it advantageous over traditional procurement?

The above studies on success factors and determinants of PPP tell only a partial picture. However, the question is, in what situation/condition in both macro and micro level, and in what type of projects, is PPP advantageous over traditional procurement that is financed by government budget and ODA? And in which situations and projects is PPP not advantageous over traditional procurement? In other words, what are the appropriate roles of PPP and government budget/ODA, or appropriate roles of private sector and public sector, in developing public infrastructure for a particular economy or a particular project? Extant literature does not fully answer these questions. The answers can lead to settle the debate on “PPP vs ODA”.

3. Current status of infrastructure development and achievements in PPP in the Philippines¹⁰

In this section, the current status of infrastructure development and achievements in PPP in the Philippines are described.

3.1. Infrastructure development in the Philippines

Regarding the current status of infrastructure, ranking in the Global Competitiveness Index by the World Economic Forum is often cited for international comparison in recognized studies. According to the index, the rankings concerning infrastructure development status are shown in Table 1. The Philippine’s ranking and score are among the lowest in comparison with other ASEAN peer countries. In comparison with 2010-2011, there is no change in the ranking in 2017-2018, though the score itself declined. Meanwhile, both Indonesia and Vietnam have greatly increased their rankings and scores.

TABLE 1. Quality of overall infrastructure ranking (score in parentheses)

	2010-2011	2017-2018
Philippines	113 (3.2)	113 (3.0)
Indonesia	90 (3.7)	68 (4.1)
Thailand	46 (4.9)	67 (4.1)
Vietnam	123 (3.0)	89 (3.6)

Source: The Global Competitiveness Report 2010-2011 and 2017-2018

¹⁰ This section is derived mainly from Ito [2019].

UNESCAP’s Access to Physical Infrastructure Index is based on data from 2013 to 2015 on the status of infrastructure development in transportation, energy, ICT, water supply, and sanitation in 41 Asian and Pacific Region Sector Sector [UNESCAP 2017b]. Among them, the Philippines is 25th in all 41 countries. The country’s score is 0.336, far below the average 0.431 in emerging countries in the region. It is lower than other ASEAN countries as shown in Table 2.

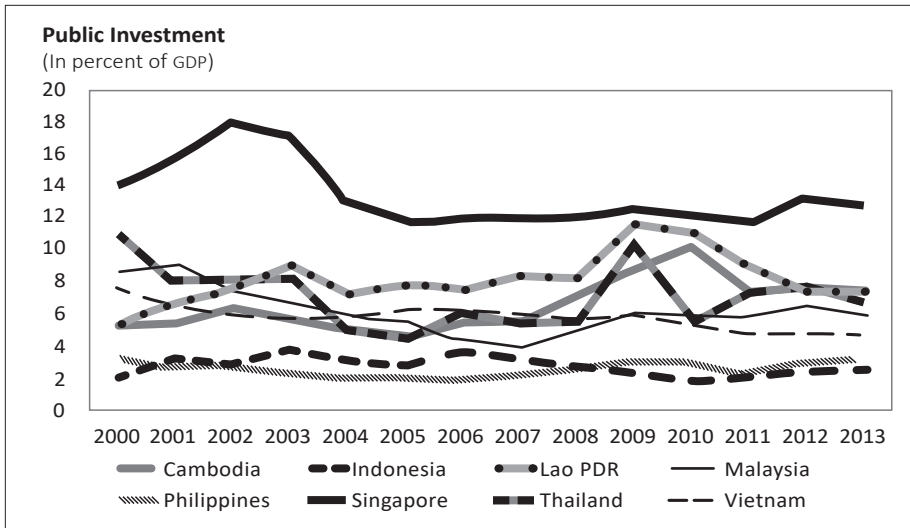
TABLE 2. Access to Physical Infrastructure Index rank and score

	Rank	Score
Philippines	24	0.336
Thailand	15	0.418
Indonesia	27	0.278
Vietnam	14	0.419

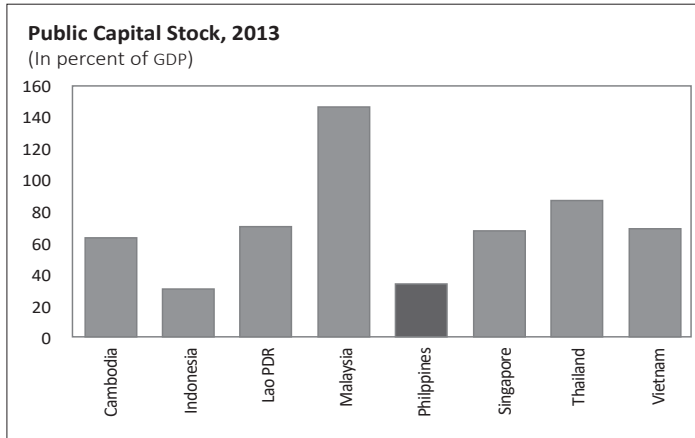
Source: UNESCAP [2017b]

One of the reasons behind this underdevelopment of infrastructure in the Philippines is a low level of public investment. According to a study by the IMF [2015], the Philippines’ public investment had consistently been the lowest among ASEAN countries in the recent past, averaging 2.5 percent of GDP in 2000-2013 as shown in Figure 1. As a result, the study argues that the public capital stock is also one of the lowest among ASEAN countries, at around 35 percent of GDP in 2013 compared to the ASEAN average of 72 percent of GDP as shown in Figure 2.

FIGURE 2. Public investment as a percentage of GDP



Source: IMF [2015]

FIGURE 3. Public capital stock as a percentage of GDP in 2013

Source: IMF [2015]

3.2. Achievements in PPP infrastructure development in the Philippines

Contrary to the infrastructure development situation, the Philippines' achievements in PPP infrastructure development is relatively positive in ASEAN.

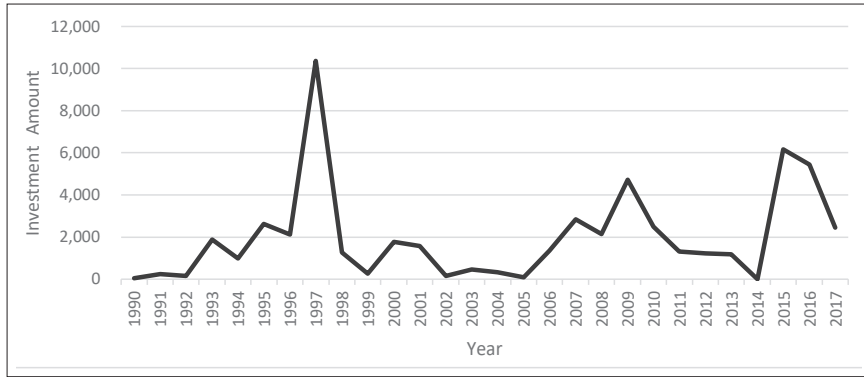
In 1990, the first BOT law (Republic Act 6957) was enacted in the Philippines. This law was the first of its kind in Asia, making the Philippines the oldest PPP country in the region. The law was amended by Republic Act No. 7718 in 1994 to include other schemes such as the Build-Own-Operate scheme.

According to the World Bank Private Participation in Infrastructure Database, PPP projects in the Philippines accumulated \$56,073 million, totaling 149 projects from 1990 to 2017. In terms of investment value, the Philippine is the eighth largest country among emerging countries.¹¹ Historical investments in PPP for the Philippines are shown in Figure 3. Peak in 1997 and contraction in 2002 is similar with trends in whole emerging and developing countries as shown in Figure 2.¹²

¹¹ The Philippines is ranked after Brazil, India, China, Turkey, Mexico, Russia, and Indonesia.

¹² In 1997, investment was made in the 2 PPP projects in the water sector which is the largest and third largest in the Philippines so far in the metropolitan area of Manila.

FIGURE 4. Investments in millions of US dollars in PPP infrastructure projects in the Philippines, 1990-2017



Source: World Bank Private Participation in Infrastructure Database

Comparison with ASEAN neighboring countries is as shown in Table 3. This also shows that the country has a relatively good record of PPP.

TABLE 3. PPP projects for 1990-2017

	Number of projects	Investment (million \$)
Philippines	149	56,073
Thailand	167	39,456
Indonesia	123	58,856
Vietnam	96	14,705

Source: World Bank Private Participation in Infrastructure Database

The World Bank Private Participation in Infrastructure Database also shows that in PPP projects in the Philippines, the electricity sector accounts for an overwhelming share of 72.4 percent on the basis of the total number of projects and 66.8 percent on the basis of the investment. Also, the top 6 sponsors by investment in the Philippines during 1990-2017 are all local conglomerates which account for 62.7 percent of the total investment which is \$35,143 million.

The Economist Intelligence Unit [2015] depicts the PPP environment in the Asia-Pacific countries in 19 indices including the legal framework, government organization, PPP project implementation, investment environment, and finance. The Philippines' score is marked as 64.6 (full mark of 100.0), which is the seventh in all Asia-Pacific countries and the highest in ASEAN as shown in Table 4. It is noted that the Philippines' last score in 2011 was 47.1, and it shows the significant improvements in the PPP environment of the Philippines. This reflects various

PPP promotion measures implemented during the Aquino administration (2010-2016), which will be discussed in section 4.1. Among 6 categories¹³, the ranking was relatively high for regulatory framework and institutional framework for the Philippines while operational maturity was relatively low.

TABLE 4. The Economist Intelligence Unit ranking and score for PPP in 2011 and 2014

Rank 2014	Score 2014	Rank 2011	Score 2011
1 Australia	91.8	1	92.3
4 Japan	75.8	6	63.7
7 Philippines	64.6	8	47.1
9 Indonesia	53.5	9	46.1
10 Thailand	50.4	10	45.3

Source: The Economist Intelligence Unit [2015]

In the report, the score was divided into three categories: “mature” for scores of more than 80; “developed” for more than 60; and “emerging” for more than 30. The Philippines was in the group of “emerging” at the time of the 2011 survey. In 2014, the country was raised to the category of “developed”, which is the only country in ASEAN in that category.

Although international recognition of PPP environment of the Philippines is relatively positive, the results of some of PPP projects are mixed. OECD [2016] argues that the Philippine government tended to take on excessive risk in past contracts, particularly foreign exchange and demand risks, to extend overly generous guarantees, and to shoulder heavy contingent liability. PPP succeeded in introducing power generation projects in the 1990s and resulted in the mobilization of \$8 billion and additional 8,000 MW capacity. On the other hand, in the series of those PPP power projects, the government took the demand risk into a “take-or-pay” format. This is part of the reason that the current Philippine electricity tariff is one of the highest in Asia.

Also, in the Metro Rail Transit line 3 project, which started operation in 2003 by Build- Lease-Transfer, the revenue from train fares accounted for only around 30 percent of operating cost and lease fee. In this Build- Lease-Transfer contract, the government took demand risk by guaranteeing Internal Rate of Return (IRR) of 15 percent on a dollar basis, which may have affected incentives for efficient operation and improvement of services by private operator.

¹³ Regulatory framework, institutional framework, operational maturity, investment climate, financial facilities, and subnational adjustment.

4. Transition of PPP policy in the Philippines¹⁴

This section describes the drastic PPP policy change in the Aquino administration (2010-2016) and in the Duterte administration (2016-2022).

4.1. *The Aquino administration*

The Aquino administration reviewed the existing infrastructure development policies which depended mainly on government budget and ODA. As a result of the review, the administration prioritized infrastructure development and launched an aggressive PPP program in November 2010. Ten priority projects were identified, targeting about \$4 billion in private capital. Based on this policy changes, the debate on “PPP vs ODA” was active then in the Philippines.

The main achievements in PPP by the Aquino administration are as follows.

4.1.1. *Government organization*

The administration reorganized the then BOT center, established under the Department of Trade and Industry in 1993, and created the PPP Center (PPPC) by Executive Order No. 8 in 2010 and transferred it under the National Economic Development Authority. The main duties of PPPC are promotion of PPP policy and assistance in formulation, implementation, and monitoring of PPP projects. This is exactly what OECD [2008], ADB [2008], and World Bank [2007] argue as a success factor of PPP as discussed in section 2.3 of this paper.

As a result, the main roles of major government agencies in PPP are as follows. The PPP Governing Board is chaired by the director general of the National Economic Development Authority. The board is composed of relevant departments including Department of Finance and Department of Budget and Management (DBM). It is responsible for overall policy issues in PPP. The National Economic Development Authority reviews the appropriateness of specific PPP project, including validation of economic viability. The Investment Coordination Committee approves PPP projects. The Department of Finance reviews the risk-sharing mechanism of specific PPP projects and the impact on government guarantees. The PPPC extends support to make business plans for specific PPP projects. Regarding the pipeline of the PPP project under preparation, relevant information is disclosed in the PPPC’s website which could attract potential private sector including outside of the Philippines.

¹⁴ This section is mainly derived from Ito [2019].

4.1.2. Project development fund

The Project Development and Monitoring Facility (PDMF) was established in PPPC in 2010 to support PPP project formation with the assistance of the Asian Development Bank and the Australian government. The committed amount to PDMF is \$42.9 million. This is a revolving fund, meaning that when the project is awarded successfully, the private sponsor will bear the cost of funds being used from PDMF. When the project was not awarded where Philippine government agency should be responsible for, then that agency will repay them in full to PDMF. If the project is terminated outside of the responsibility of the agency, the agency is obliged to repay half of fund utilized. According to PPPC, PDMF supported 35 PPP projects by the end of 2017.

4.1.3. PPP fund

In 2012, the Asian Development Bank (\$25 million), the Government Service Insurance System of the Philippines (\$400 million), the Netherlands pension fund Algemene Pensioen Groep (\$150 million), and Australian Macquarie Infrastructure and Real Assets (\$50 million) established the Philippine Investment Alliance for Infrastructure fund, the Philippine's first private fund specializing in PPP (total fund size of \$625 million). The fund already started investing in PPP projects including the electric power sector. Given the investment performance of the Philippine Investment Alliance for Infrastructure fund, Government Service Insurance System is considering the establishment of Philippine Investment Alliance for Infrastructure fund 2.

4.1.4. Relaxation of single borrower's limit

In the Philippines, the role of domestic banks is important in promoting PPP infrastructure development. While local conglomerates are being active in PPP projects, those conglomerates also have banking arms which will be described in section 5.5 later and had some issues in single borrower's limit.

Central Bank of the Philippines sets single borrower's limit as 25 percent of net worth. However, the Central Bank added another 25 percent for single borrower's limit for PPP projects for the purpose of PPP promotion in 2010 until the end of 2013, later extended until the end of 2016.

In 2010, when the Aquino administration started, the ratio of infrastructure development to GDP was 1.8 percent, but in 2015 it was increased to 4 percent. The average of six years of the administration was 2.9 percent, exceeding 1.9 percent of the Arroyo administration (2001-2010). Also, during the Aquino administration from June 2010 to June 2016, 28 PPP projects were approved by the government; however, PPP contracts were signed for 12 projects, and 3 projects were completed¹⁵ by the end of the administration.

¹⁵ Daang Hari-SLEX Link Road (Muntinlupa-Cavite Expressway) Project, PPP for School Infrastructure Project (PSIP) – Phase I, and Automatic Fare Collection System

4.2. The Duterte administration

In June 2016, when the Duterte administration began, it announced a 10-point Socio-Economic Agenda as the most important socio-economic priority. One of the points of the agenda was about infrastructure and PPP: “Accelerating annual infrastructure spending to account for 5 percent of the gross domestic product (GDP), with public-private partnership playing a key role”.

However, in April 2017, “Dutertenomics” was announced. The policy includes acceleration of infrastructure investment, achievement of sustainable development, and investment promotion. The most important pillar is massive infrastructure improvement; therefore, Dutertenomics is also called the “Build, Build, Build program”.

4.2.1. Acceleration of infrastructure development

Until 2022, Dutertenomics plans infrastructure investments of ₱8.4 trillion (about \$168 billion), with 75 large-scale infrastructure projects. Moreover, the government plans to increase infrastructure investment rate with respect to GDP to 7.3 percent by 2022, making the average rate during Duterte administration in 2017-2022 6.8 percent¹⁶, which is significantly higher than the average of 2.9 percent of the Aquino government and 1.9 percent of the Arroyo administration. Among 75 large-scale infrastructure projects, railway sector is regarded as one of the most important sectors, which includes the Philippines’ first ever subway project (the Metro Manila Subway Project), the Manila North-South Commuter Line (North) Project, and the Manila North-South Commuter Line (South) Project.

4.2.2. Shift from PPP to ODA

As a financial resource of this large-scale infrastructure development plan, Dutertenomics made a drastic shift from PPP to government budget and ODA. Contrary to 2010’s debate of “ODA vs PPP”, again this debate was active in Philippines in 2017 after the announcement of Dutertenomics which made a major policy change from PPP to ODA.

The main reason for this policy shift was the fact that during the Aquino administration, although 28 PPP projects were approved, contract for only 12 projects were concluded, and 3 PPP projects were completed by the end of the administration. This was mainly caused by delay in PPP bidding process which involved various inquiries from private parties sometimes involving the judicial branch. In some cases, contract negotiation was lengthened after bidding. The

¹⁶ In 2017, the ratio was 5.4 percent.

Economist Intelligence Unit [2015] argues that controversies related to the bidding and award procedures for major transport infrastructure projects indicate certain weaknesses in public sector decision making, and the whole process can be inefficient due to the length of time it takes to reach a final decision.

At the time of the start of the Duterte administration, six projects were in the bidding stage as PPP, of which four projects were changed as ODA projects and the other two projects were canceled by government decision. The Aquino administration focused on solicited PPP scheme, making unsolicited PPP scheme an exception. However, the Duterte administration made a position that it welcomes both solicited and unsolicited PPP.

4.2.3. Hybrid PPP

Dutertenomics is not a complete shift from PPP to the public sector/ODA. The government's priority is to complete the construction phase by the public sector, while operation and maintenance are left to the private sector. They call it the "hybrid PPP" scheme. This is to utilize the highly capable private expertise in operation and maintenance while spending budget and ODA for construction at lower cost. Although this is not popular scheme in other parts of the world, there are several PPP projects under this scheme in the Philippines including the Subic-Clark-Tarlac Expressway Project.

In the bidding and negotiation process before PPP contract, it is necessary to take the time to carefully study and negotiate terms, including how to share risk among public and private sectors. In the case of ordinary PPP projects, it is necessary to conduct this study and negotiation before construction, in which case there may be a delay in the start of the construction phase. For this reason, "hybrid PPP" is government priority. The construction stage could be started with government finance or ODA first while during the construction period, while bidding and contract negotiation for operation and maintenance of PPP project after completion could be done so that loss of time could be minimized. By this "hybrid PPP" scheme, the public sector will bear risks in the construction phase like traditional public procurement. It can be said that this scheme is an attempt to simplify procedures and process and speed up the project implementation.

On the other hand, depending on the design, specifications, standards, and systems of the physical infrastructure decided at the construction stage, there is a possibility that the private sector that can participate in the operation and maintenance stage is limited. Furthermore, by pursuing "hybrid PPP", utilization of some benefits of PPP as pointed out by the World Bank Institute [2014] as "Whole-of-life costing: Full integration incentivizes the single party to complete each project function (design, build, operate, maintain) in a way that minimizes total costs" in section 2.3 of this paper may not be achieved. On this issue, the arguments by Delmon [2015] in section 2.3 of this paper, as PPP incentivizes the builder-operator to incorporate long-term operating cost considerations in the

design and construction phases of a project and reduces the coordination costs, may not be materialized in hybrid PPP.

For this purpose, it is necessary to involve the interested private sector or even share some information of the project including design, specification, and standards to the potential private parties in early stage of the construction.¹⁷ Also, it should be noted that in some ODA, the procurement condition is tied to specific countries that may affect PPP bidding for operation and maintenance after the construction phase.

4.2.4. Financial source of Duterteonomics

The Duterte administration emphasizes the ODA and tax reform as a financial source of large-scale infrastructure development plan by the government. Regarding the former, the Philippine government has expectations for multilateral institutions including Asian Development Bank, which used to focus mainly on program loans and is now active in infrastructure, and bilateral donors including Japan, China, and South Korea, especially Japan for the Quality Infrastructure Initiative and China for the Belt and Road Initiative. The government also expects the Asian Infrastructure Investment Bank in this sector as well.

For the tax reform, the government expects to increase revenues with the reform, including reduction of VAT exemption items, and tax increase on automobiles, gasoline, and sweetened beverages. The first tax reform was passed in 2017 by Congress. The government is preparing a second package of tax reform including review of incentives for foreign direct investment, which is generating controversy among foreign investors.

The Philippines' public debt to GDP has decreased to 32.6 percent in 2017 from its peak of 68.0 percent recorded in 2003. In addition, the ratio of public interest payment in government expenditure was 13.9 percent in 2017. Due to a relatively stable fiscal situation, the government is in the position that large-scale infrastructure projects could be promoted without too much depending on PPP. Philippine government has formulated a fund procurement plan as "80 percent domestic borrowing and 20 percent overseas borrowing in principle" in order to ease the influence from external shocks.

5. Issues in promoting PPP in the Philippines

In this section, key issues for further improvement of PPP environment in the Philippines will be discussed for policy recommendations based on the evaluation of current PPP environment.

¹⁷ By doing these, it may take longer and, in the end, hybrid PPP may not save time as originally planned.

5.1. Overview of the PPP environment

Section 4 stated that there were two major policy shifts in infrastructure development recently: first one from public to PPP in 2010, and second one from PPP to public in 2017. Both triggered debate on “PPP vs ODA”. Regardless of this debate, it is not realistic for the public sector alone to develop all necessary infrastructure which lags behind with ASEAN peer countries. Therefore, it is not about the “PPP vs ODA”, but how to promote complementary relations between the public and PPP/private in consideration of the characteristics of the specific project and the PPP related environment in both domestic and international—in other words “PPP *and* ODA”. In this context, the PPP environment should be further improved based on the evaluation of current PPP environment.

As mentioned above, during the Aquino administration, the Philippines’ PPP environment greatly improved, and according to the Economist Intelligence Unit [2015], the country’s PPP environment is regarded as “developed” as the only country in ASEAN. In the Duterte administration, the policy has been largely converted to the infrastructure development through public investment, but the country’s PPP institutions and support systems are sustained.

There are many ways and criteria to evaluate PPP environment with reference to findings in the literature review in section 2.3. However, necessary conditions and important criteria for PPP environment are the following: regulatory framework; institutional framework; institutional capacity; and financial facilities.

5.2. Regulatory framework

The regulatory framework of PPP in the Philippines is relatively well established. However, enactment of PPP law, government guarantee for contingent liability, and foreign capital deregulation are necessary elements for further improvement in regulatory framework in PPP.

5.2.1. Enactment of PPP law

PPP transactions in the Philippines are based on the BOT law (RA 7718) and its Implementing Rules and Regulation (IRR). The latest version of IRR was revised in 2012. Llanto [2010] argues that the current BOT law contains both the enabling policy framework and too many details that should be in the IRR, leaving the government with less flexibility to change these details in order to conform to the dynamic nature of such factors as technology and financial markets.

In addition to the BOT law and its IRR, there are several measures and mechanisms already introduced such as PDMF and ADR¹⁸ including through

¹⁸ Alternative Dispute Resolution: Since there were several cases that PPP projects which were delayed due to the dispute involving the judiciary, Executive Order No. 78 (2012) made it obligatory to stipulate ADR in

executive orders. Also, strengthening government support mechanism including review of risk sharing, prohibition of implementation of PPP project by regulatory agencies, and establishment of the contingent liability fund, which will be discussed later, should be stipulated in the law.

In this sense, the enactment of a comprehensive PPP law is necessary. There was an attempt to create a comprehensive PPP law based on the BOT law at the time of the former administration for the purpose of promoting PPP. During the Aquino administration, although the bill was supported in the House of Representatives, the Senate was not able to approve it.

In the Duterte administration, though PPP has ceased to be a high priority, there is still some support in both the House of Representatives and the Senate for the PPP bill. In consideration of long-term continuity of improved PPP environment, the legalization of measures and mechanism in one comprehensive law as PPP law is essential.

5.2.2. Government guarantee for contingent liability

If the specific event stipulated in the PPP contract occurs, the government agency is obliged to pay the debt to the private sponsors according to the contract. If that government agency cannot pay the debt, the Philippine government's risk management program guarantees to prepare the funds for payment against the contingent liability. This is stated in the BOT law and its IRR.

With regard to this government guarantee, there is a function to reduce the perception of risk in the private sector and to give incentive to private sector to participate in PPP. Regarding which risk is to be guaranteed, it is stipulated in each of the PPP contract, but commercial risks are to be borne by the private party which will be discussed in section 5.4 later.

The stipulation of contingent liability on the legal system is being incorporated as mentioned above, but there is demand from the private sector to establish the contingent liability fund in order to ensure more secure payment from the government. This is because it is difficult to grasp the timing and amount of contingent liability in advance and because the budgeting requires appropriation procedures both by the executive branch and legislative branch. In this sense, there is a risk that payment will not be made at appropriate timing or a risk that deliberation at the legislative branch may be suspended and payment will not be made. Therefore, the establishment of the contingent liability fund is preferred from the perspective of the private party.

At the moment, the abovementioned risk management program (about ₱30 billion, about \$600 million), which covers not only contingent liability but also the risks related to the PPP project, was established, but it is within the scope

all PPP contracts. However, there have so far been no cases where ADR was actually implemented.

of unprogrammed fund of the budget. Therefore, this is not strictly speaking the contingent liability fund. With regard to the establishment of this fund, as discussed in 5.2, discussions have been made to include relevant provisions in the PPP Law.

Regarding the identification and calculation of the contingent liability of the PPP project, it is under the jurisdiction of the Department of Finance of the Philippines. It is important to further strengthen the capacity of the department on this area.

5.2.3. Foreign capital deregulation

The operation of the infrastructure project is only allowed for Philippine nationals or corporations registered with the Philippines' Securities and Exchange Commission and more than 60 percent of the shares are owned by Philippine nationals. Article 12 of the 1987 Constitution stipulates restriction of foreign capital. In the Foreign Investment Act of 1991, for industries listed in the "Foreign Investment Negative List", foreign ownership is stipulated up to 40 percent. In the current negative list of 2015, the PPP project is included and therefore subject to the restriction of the foreign ownership. It is based on this fact that the top 6 sponsors by investment in the Philippine during 1990-2017 are all local conglomerates as mentioned in section 3.2 of this paper.

As mentioned above, many Philippines' conglomerates operate in many sectors including finance, real estate, construction, communication, and retail. Since some PPP projects have positive linkages with real estate, retail, and construction, conglomerates actively participate in the PPP project. Therefore, as long as the foreign capital regulation continues, partnerships with local conglomerates are necessary and a realistic option for foreign investors.

However, it may not always optimal from the viewpoint of users of infrastructure and taxpayers if local conglomerates are only participating in PPP projects. It is necessary to look into this foreign capital restriction to have a further competitive environment for PPP projects. In fact, the Philippine Competition Commission, which was established in 2015, is strengthening the monitoring of the PPP project. The Philippine Competition Commission and PPPC signed a Memorandum of Agreement for "developing the culture of competition in PPP projects" in July 2018. From the viewpoint of reducing the burden on the users of infrastructure and improving the quality of infrastructure services, it is important to secure further competition including foreign companies.

5.3. Institutional framework

In this area, the establishment and facilitation/monitoring/advisory function of PPPC is regarded as an important improvement in the PPP environment in the Philippines. However, the risk-sharing mechanism should be further improved.

One of the important elements of private investment decisions in the PPP project is that various risks are properly shared between the public and private sectors. PPC issued a comprehensive optimum risk-sharing table called Generic Preferred Risk Allocation Matrix. This matrix lists type of risk, definition, proposed risk allocation and rationale, possible risk mitigation strategies, and suggested contract provisions. In this table, risks that the government should bear in principle are regulatory risk, compensation for loss due to competing infrastructure, and payment due to business suspension. Commercial risks including demand risk are specified as risks to which the private sector is responsible. However, there is no binding force in this matrix and it is determined by individual PPP contract.

Among various risks, demand risk, regulatory risk, and changes in law or policy are especially to be noted.

5.3.1 Demand risk

There is demand from foreign investors that the government should bear the demand risk. Their argument is that since the life of PPP project is relatively long and the project may be affected by change in urban development plan or other related infrastructure development resulting in fluctuation of demand, it is difficult to accurately predict long-term demand, and the government is in a better position of controlling these factors to a certain extent.

On the other hand, by seeing the case of the government guarantee and subsidy on MRT 3 and the aforementioned report by OECD [2016] about power purchase agreements in the 1990s both mentioned in section 3.2 of this paper, and eventually making burdens for users by increasing user fees, this issue needs to be examined further.

5.3.2. Regulatory risk

Tariff increase will be executed based on indices such as inflation and mathematical formula, according to stipulations of PPP contract. On the other hand, in the Philippines, there are cases in which the government did not approve price increases. There are also cases where the government approved the increases, but these were disapproved by the judicial branch.

From this point of view, Republic Act 8975 prohibits the issuance of temporary restraining orders by lower courts against national projects implemented by the BOT law. This facilitates the smooth progress of the project. Although this will reduce the number of temporary restraining orders by the lower courts, the Supreme Court is not affected.

(c) Changes in law or policy

For PPP projects, it takes a long time to complete processes such as planning, decision making in the government, preparation for construction, actual construction and operation, and maintenance. Therefore, it is necessary to pay

attention to the risk of policy consistency. In the Philippines, the president's single term of office is for six years, and every six years there is a change in government. In addition, many of the executives of the central government bureaucracy are political appointees. Because of this background, there is a policy change risk every six years.

In the event of a change in administration, there is a possibility that not only the method of implementation of the project and the fund procurement plan but also the life of the project itself may be reviewed. Many of the large-scale infrastructure projects currently in progress, such as railroad projects, may not be completed within the current administration. This may cause some concern on private investors.

5.4. Institutional capacity

In order to promote PPP, it is indispensable to formulate and implement an attractive "bankable" project from the viewpoint of private investors. In the Philippines, there has been some challenges in developing and implementing attractive PPP projects due to the issue of securing budget for preparing feasibility studies, the lack of government capacity for making feasibility studies for PPP projects, the lack of government capacity making business plan for PPP project and, more importantly, the lack of government capacity for executing smooth bidding and contract negotiation for PPP project.

However, by the establishment of PDMF in 2010 mentioned in section 4.1, now financial support for feasibility studies creation, PPP bidding related expenses, and advisory services related to PPP business plan and bidding process are partly being taken care of, thus making improvement in PPP environment.

In addition, with the support of ADB, the Infrastructure Preparation Innovative Facility (approximately \$100 million) to the government of the Philippines was approved in 2017. As a result, this facility adds another support for financing important projects, mainly the priority projects of Duterteomics, for the preparation of business plan and preparation for procurement procedures.

On the other hand, the audit report of the Commission of Audit of the government of the Philippines which audited PDMF, discusses that 2015 to 2017 showed ₱845 million, about \$17 million, of public funds were disbursed to various national government agencies and government-owned and controlled corporations for PPP projects which were eventually canceled and not yet refunded to PDMF.¹⁹ This matter could be cause concern about the fund's future sustainability, if PDMF will not be functional as a revolving fund, as mentioned in section 4.1.²⁰

¹⁹ 2017 Annual Audit Report for PPP Center

²⁰ These projects may include those that did not result in PPP project due to policy shift by Duterteomics, and this needs to be further reviewed.

Moreover, many government departments and agencies are involved in planning, contracting, and executing large-scale infrastructure projects. Therefore, there exists a challenge for smooth coordination across multiple departments and agencies. In response to this, in 2017, the Project Facilitation, Monitoring and Innovation Task Force was established at the National Economic Development Authority with the purpose of monitoring and promoting the implementation of priority projects including PPP projects included in Duterteomics. It needs further follow-up as to whether this task force will deliver results.

5.5. Financial facilities

Since many of the major local private banks are affiliated with conglomerates, it is becoming more challenging for local conglomerates from the viewpoint of single borrower's limit as 25 percent of net worth, after the expiration of additional 25 percent for PPP project by the end of 2016, to finance large-scale PPP projects to be handled mainly by financial institutions under their umbrella. In addition, due to Basel III requirements for increased bank capital and liquidity, restrictions on financing by domestic and overseas financial institutions are assumed. Given this background, the development of local capital market is necessary.

In November 2016, the Philippine Stock Exchange announced a new regulation on listing companies involved in the PPP project. For private enterprises that became contracting parties to the PPP project, it is possible to be listed on the Philippine Stock Exchange if the total project cost of the PPP exceeds ₱5 billion (about \$100 million). In addition, the company is exempted from the sales record for listing that is normally required over the past three years. This is because PPP companies are usually special purpose vehicles that are established for the purpose of implementing specific PPP projects and do not have business records as a company. The listing period is the same as concession period of the PPP project or 15 years which is longer. The relaxation of the listing requirement for companies that participate in PPP makes it possible for the companies to raise funds from the Philippine capital market. However, currently no private companies availed of this scheme.²¹ In addition, this is also beneficial for investors for the increase of investment opportunities and the contribution to the development of the Philippine capital market.

The matter of issuing bonds specialized for specific PPP projects is also a subject for further promotion. In the case of large-scale infrastructure projects, it takes a long time to recover funds, but the long-term funds that can be financed from local banks in the Philippines is around 15 years. Therefore, infrastructure project bonds are expected to be issued from the perspective of diversification of fund procurement.

²¹ Information obtained during author's interview with PPPC conducted in August 2018. PPPC has yet to identify its reason.

Currently, the PPP Center is involved in the development of the project bond market in collaboration with the Philippine Securities and Exchange Commission and others. In the current plan, companies participating in existing PPP business issue PPP project bonds and list them on the Philippine Dealing and Exchange Corporation. If this plan becomes possible, PPP participating companies will not only be benefited by the diversification of means of procuring funds, but also because the revenue collection in the PPP infrastructure business can be made possible by long-term investment, issuing bonds will provide long-term financing for PPP participating companies. However, the risk assessment of PPP infrastructure project bonds is more complicated than ordinary corporate bonds. Therefore, it is necessary to develop infrastructure for bond market, including appropriate rating of PPP infrastructure project bonds. In addition to the project bond by private sector, government is studying possibility of issuance of PPP project bond.

From this point of view, the Credit Guarantee and Investment Facility, which was established with the aim of issuing local currency-denominated bonds within the region in 2011 by ASEAN+3. In 2016, project bonds for the Philippine geothermal power plant project were issued (₱7.7 billion, about \$150 million) with guarantee of the Credit Guarantee and Investment Facility as its first project.

6. Conclusion

The Philippines needs to accelerate infrastructure development which lags behind its neighboring ASEAN countries. Regarding infrastructure development by public sector, Duterteonomics, currently major concerns are not seen in securing financial resources through support by international development financial institutions and bilateral donors including ADB, Japan, China, Korea, the Asian Infrastructure Investment Bank, and government budget through tax reform.

However, the Philippines is no exception as the overall macro-economic downside risk of emerging countries is beginning to be seen. Recent inflation and peso depreciation added to Basel III regulatory requirements may also negatively affect the PPP environment. Currently, the Philippine government bonds is rated as investment grade, but there is a risk that the cost of raising funds will rise if the rating falls.

Therefore, in terms of infrastructure development in the Philippines, from the viewpoint of “PPP *and* ODA” rather than “PPP vs ODA”, it is necessary to further improve the PPP environment in order to strengthen mutual complementarity between public and PPP/private, especially in the area mentioned in section 5.

Discussions are underway in congress for a shift to federalism from the unitary system of government in the Philippines. This is one of the election promises of President Duterte. Although many PPP projects are implemented in the Metro Manila area, PPP projects outside of Metro Manila including Cebu, the second-biggest city, and Davao, the third-biggest city, are also being formulated, planned,

and implemented. If and when the shift to the federal system is implemented, it may create another uncertainty in PPP environment in the country.

About two years have passed since the launch of Dutertenomics. It needs more time to monitor the progress of large-scale infrastructure projects listed in Dutertenomics and the implications to speediness of project preparation, bidding, and implementation, and its cost and user fee.

Also, PPP projects developed and approved during Aquino administration will be completed and enter the operation and maintenance phase of PPP. The success and failure of the PPP project can be determined not only at the construction stage but also at the operation and maintenance stage: whether efficient and effective infrastructure services can be provided at an appropriate fee; if forecast including demand for the project is within the range assumed by the private participants; and if public interest is protected.

As discussed in section 2.3, further study and validation, based on the results and progress of projects commenced during Aquino administration and projects listed in Dutertenomics, on appropriate role and function of PPP and government budget/ODA is expected. Moreover, how to promote the complementarity of PPP and government budget/ODA in developing infrastructure in the Philippines should be further addressed.

References

- Abdel Aziz, A. M. [2007] “Successful delivery of public-private partnerships for infrastructure development”, *Journal of Construction Engineering and Management* 133(12).
- Andres, L. A., J. L. Guasch, T. Haven, and V. Foster [2008] *The impact of private sector participation in infrastructure: Lights, shadows and the road ahead*. Washington DC: World Bank.
- Asian Development Bank (ADB) [2008] *Public-private partnership handbook*. Manila.
- Asian Development Bank (ADB) [2017] *Public-private partnership monitor*. Manila.
- Akintoye, A., M. Beck, and C. Hardcastle [2003] *Public-private partnerships: managing risks and opportunities*. Oxford: Blackwell Science Ltd.
- Barlow, J. and M. Koberle-Gaiser [2009] “Delivering innovation in hospital construction: contracts and collaboration in the UK’s private finance initiative hospitals program”, *California Management Review* 51(2):126-143.
- Bocchi, D. M. [2008] *Rising growth, declining investment: the puzzle of the Philippines*. Washington DC: World Bank.
- Bovaird, T. [2004] “Public-private partnerships: from contested concepts to prevalent practice”, *International Review of Administrative Sciences* 70(2): 199-215.

- Delmon, J. [2010] Understanding options for public-private partnerships in infrastructure: *sorting out the forest from the trees--BOT, DBFO, DCMF, concession, lease . . .*. World Bank Policy Research Working Paper 5173. Washington DC: World Bank.
- Delmon, J. [2015] *Private sector investment in infrastructure: project finance, PPP projects and PPP frameworks*. The Netherlands: Kluwer Law International.
- Economist Intelligence Unit (EIU) [2015] *Evaluating the environment for public-private partnerships in Asia-Pacific*. The 2014 Infrascope.
- Gassner, K., A. Popov and N. Pushak [2009]. *Does private sector participation improve performance in electricity and water distribution?* Washington, D.C.: The World Bank.
- Genberg, H. [2015] “Capital market development and emergence of institutional investors in the Asia-Pacific region”, *Asia-Pacific Development Journal* 22(2): 1-26.
- Grout, P. [1997] “The economics of the private finance initiative”, *Oxford Review of Economic Policy* 13(4): 53-66.
- Hammami, M., J. Ruhashyankiko, and E. Yehouse [2006] “Determinants of public-private partnerships in infrastructure”, International Monetary Fund Working Paper 06/99. Washington DC: IMF Institute.
- Humphrey, C. [2018] *Channeling private investment to infrastructure*. London: Overseas Development Institute.
- International Monetary Fund (IMF) [2015] *Making public investment more efficient*. Washington DC. International Monetary Fund.
- Ito, S. [2019] *A study on Duterteonomics: drastic policy shift in PPP infrastructure development in the Philippines*. Collected papers of the Research Center for PPP No. 10, Toyo University, Japan
- Jamail, D. [2004] “Success and failure mechanisms of public-private partnerships in developing countries: insights from the Lebanese context”, *International Journal of Public Sector Management* 17(5): 414-430.
- Kasri, R. A. and F. A. Wibowo [2015] “Determinants of public-private partnerships in infrastructure provision: evidence from Muslim developing countries”, *Journal of Economic Cooperation and Development* 36(2): 1-34.
- Kateja, A. [2012] “Building infrastructure: Private participation in emerging economies”, *Social and Behavioral Sciences* 37(2012): 368-378.
- Kinda, T. [2008] *Infrastructure and private capital flows in developing countries*. Munich Personal RePEc Archive Paper, 19158.
- Kivleniece, I. and B. Quelin [2012] “Creating and capturing value in public-private ties: a private actor’s perspective”, *Academy of Management Review* 37(2): 272-99.
- Komatsuzaki, T. [2016] *Improving public infrastructure in the Philippines*. Washington DC: International Monetary Fund.

- Moszoro, M., G. Araya, F. Ruiz-Nunez, and J. Schwartz [2014] *Institutional and political determinants of private participation in infrastructure*. International transport forum discussion paper No. 2014/15. Paris: OECD.
- McKinsey [2016] *Bridging global infrastructure gaps*. Brussels: McKinsey Global Institute.
- Navarro, A.M. and G.M. Llanto [2014] *Financing infrastructure in the Philippines: fiscal landscape and resources mobilization*. Manila: Philippine Institute for Development Studies.
- Liebe, M. and A. Pollock [2009] *The experience of the private finance initiative in the UK's National Health Service*. University of Edinburgh, Centre of International Public Health Policy, Edinburgh.
- Llanto, G. M. [2010] *A review of build-operate-transfer for infrastructure development*. Makati: Philippine Institute for Development Studies.
- Marin, P. [2009] *Public-private partnerships for urban water utilities*. Washington DC: The World Bank.
- Organization for Economic Co-operation and Development (OECD) [2008] *Public-private partnerships: in pursuit of risk sharing and value for money*. Paris.
- Organization for Economic Co-operation and Development (OECD) [2016] *OECD investment policy reviews Philippines*. Paris.
- Schuster, S., J. Balbosa, C. Tang, T. Komatsuzaki, and S. J. Peiris [2017] *Scaling up infrastructure investment in the Philippines: role of public-private partnership and issues*. Manila: Asian Development Bank.
- Sharma, C. [2012] "Determinants of PPP in infrastructure in developing economies", *Transforming government: people, process and policy* 6(2): 149-66.
- Soomro, M. A. and X. Zhang [2013] "Failure links between public and private sector partners in transportation public private partnerships failures", *Journal of Traffic and Logistics Engineering* 1(2): 116-21.
- Trebilcock, M. and M. Rosenstock [2015] "Infrastructure public-private partnerships in the developing world: lessons from recent experience", *The Journal of Development Studies* 51(4): 335-54.
- Mengistu, T. [2013] *Determinants of private participation in infrastructure in low and middle income countries (LMICs)*. Pardee RAND Graduate School.
- United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) [2015] *Infrastructure financing, public-private partnerships, and development in the Asia-Pacific region*.
- United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) [2017a] *Infrastructure financing strategies for sustainable development in southeast Asia*.
- United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) [2017b] *Asia-Pacific countries with special needs development report 2017: investing in infrastructure for an inclusive and sustainable future*.

- United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) [2017c] *Financing infrastructure projects in the Philippines*.
- Warner, A. [2014] *Public investment as an engine of growth*. Washington DC: International Monetary Fund.
- World Bank (WB) [2007] *Public-private partnership units: lessons for their design and use in infrastructure*. Washington DC.
- World Bank (WB) [2016] *The state of PPPs: infrastructure public-private partnerships in emerging markets and developing economies 1991-2015*. Washington DC.
- World Bank “Private Participation in Infrastructure Database”, <https://ppi.worldbank.org/data>
- World Bank Institute [2014] *Public-private partnerships: reference guide version 2.0*. Washington DC.
- World Economic Forum [2010] *The global competitiveness report 2010-2011*. Geneva.
- World Economic Forum [2017] *The global competitiveness report 2017-2018*. Geneva.
- Zhang, X. [2005] “Critical success factors for public-private partnerships in infrastructure development”, *Journal of Construction Engineering and Management* 131(1): 3-14.