

Examining Public Private Partnerships in ASEAN countries: the role of investment climate

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Abstract. *Evidently, the ASEAN countries are among those which have achieved remarkable economic growth rates in the world. But they are facing significant infrastructure bottlenecks which can threaten the sustainability of their development, if not solved effectively and efficiently well in time. Apparently, Public Private Partnership (PPP) arrangement promises to be an ideal solution for developing countries that have limited fiscal capacity such as ASEAN. However, PPP performance in this region is not very encouraging compared with other countries. This study attempts to look at the role of investment climate especially the economic and political factors that may affect the economic growth performance of PPP projects. For empirical investigation panel data approach is utilized, where mostly the estimated coefficients exhibit expected signs but are not statistically significant. Besides, each country has unobserved special characteristics that can affect the conduciveness of PPPs which should also be considered by policymakers.*

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JEL Classification: D73, F21, H54, I28.

REL Classification: 8D, 13B.

1. Introduction

After suffering from the Asian crisis in 1997/98, the ASEAN⁽¹⁾ countries are now back on the growth path collectively enjoying one of the highest growth rates in the world. Led by Indonesia, the biggest economy in the group, their economic growth reached the average rate of 5%, which is higher than that of the rest of the developing world, which only reached 4%. Indonesia, itself, has achieved remarkable growth rate of 6.3% during the last two years, the second fastest among the G-20 countries, behind only China which expanded by 8.6% in the same period. This high growth rate was made possible, among others, by the availability of infrastructure which facilitates the economic activities in each country resulting in expansion in commodities and products either for domestic consumption or export.

However, most of these ASEAN countries now are facing increasing pressure from the infrastructure bottleneck which can threaten their economic growth. Since the Asian crisis which huge cost is still borne by some of these countries until today, the development for infrastructure has not received major attention which resulted in serious lack of infrastructure such as roads, ports, bridges, power generation stations, and drinking water facility. As shown in Table 1, compared to other regions in the world, the basic infrastructure in ASEAN countries is still behind the OECD, Latin America, and even the rest of Asia.

Table 1. Comparison of Basic Infrastructure in ASEAN and other regions

	Roads (km)	Rail (km)	Phones (number)	Electrification	Clean Water
Per 1,000 people			Percentage		
ASEAN	10.51	0.27	3.53	71.69	86.39
Asia	12.83	0.53	3.47	77.71	87.72
OECD	211.68	5.21	13.87	99.80	99.63
Latin America	14.32	2.48	6.11	92.70	91.37
Africa	n.a.	0.95	1.42	28.50	58.36

Source: Proposed Equity Contribution and Administration of ASEAN Infrastructure Fund (ADB, 2011).

This trend is made worse by the external shocks which hit these countries such as the global crisis in 2008 and the present recession in Europe, USA and Japan which can lower their growth through in many of these ASEAN countries will harm their economic growth prospect and sustainable development. Meeting the increased demand for these infrastructure services certainly require substantial resources. According to Asian Development Bank (ADB) estimate, the fund needed by the ASEAN to overcome their infrastructure shortage would reach US \$ 600 billion for the period of 2010-2020 (ADB, 2011). This is a big amount

of money that is not possibly fulfilled by the governments themselves without cooperation from their development partners.

Due to scarce state resources to finance the development of infrastructure has forced the governments to turn to private sector to ask for their participation in this endeavor. One of the popular modes in this regard is what is called PPP where a government makes an arrangement with a private sector party to build infrastructure facilities based on win-win situation principle.

The private partners could be businesses or investors with technical or financial expertise needed to implement the project. The partnership can also include multilateral and bilateral organizations such as the World Bank or Japan's JICA. The private partner may contribute investment capital, depending on the arrangement thus bearing much of the project risk with the public part taking over at the end of contract. Besides its potential to supply the resources needed for infrastructure investment, Public Private Partnership is also perceived to bring in additional benefits such as improving efficiency in project construction and operation, and allowing access to more advanced technology. This Public-Private Partnership scheme has become popular since early 1990s led by UK and other advanced countries such as Japan and Australia. Since then this arrangement has been adopted in many parts of the world including in USA, Western Europe, Latin America, Australia, East and South Asia.

Looking at the ASEAN PPP achievement, however, the figures are not encouraging. These countries are still under the global average both in term of PPP investment value and number of projects. Compared with some countries in Latin America and India especially the state of Gujarat, ASEAN still lags behind. Therefore, it is important to find out the factors that affect PPP performance in the ASEAN countries.

A question arises which is why PPP performance in ASEAN is relatively weak? According to the theory and empirical studies, the main reason that affects the growth of PPP is investment climate, which in turn, consists of a number of factors such as political, economic and infrastructure variables. A policy and regulatory environment that is not conducive or accepting of PPPs will result in low PPP investment. Therefore, the problem to be investigated in this paper is "What are the factors that affect the PPP performance in ASEAN countries?"

PPP has been a valuable instrument to help the developing countries to cope with their infrastructure problems due to their limited fiscal capacity to finance development projects. The lack of PPPs can affect their future growth if delays in infrastructure development continue to persist. The past studies have shown that the variables affecting the growth of PPPs are varied; therefore it would be useful

if the common factors irrespective of the geographical location of the countries and the common factors specific to a group of countries can be found out (Cheung et al., 2012). This research attempts to find out the common variables that affect the growth of PPPs in the ASEAN region. However, the scope of this study is the 4-ASEAN countries namely Indonesia, Malaysia, Thailand and the Philippines. Apart from the advice to help the policy makers, the outcomes of this study will surely contribute to the growth of literature on the subject under the study.

This paper is structured as follows. Next section 2 reviews the relevant literature includes on investment climate for public private partnership. Section 3 deals with materials and methods. Section 4 presents finding and discussion. Finally, section 5 concludes the study and provides some requisite policy implications.

2. Literature review

The available literature on the PPP in the context of ASEAN countries is no doubt very limited. More studies are required to probe into depth and identify the more relevant factors regarding PPP based on the condition of ASEAN environment. Some prior studies have been conducted to examine the variables that affect PPP as presented by the theory. In the context of Malaysia, for example, Ismail and Ajija (2011) using a questionnaire survey and found that the critical success factors (CSF) for PPP implementation are good governance, commitment of the public and private sector, favourable legal framework, sound economic policy and availability of finance market. Kwak et al. (2209) trying to explain the factors contributing to successful PPP projects came up with four main elements: the competence of the government, the selection of an appropriate concessionaire, an appropriate risk allocation between the public and private sectors; and a sound financial package. Some other researchers emphasize the importance of a stable political and social environment for successful implementation of PPP. As an example, the frequent changes of the Prime Minister in Thailand have led to many cancellations of PPP projects in the country. Besides this political factor, several studies found the existence of an efficient domestic financial market is also crucial to enable private sponsors to access relatively cheaper financing packages (Cheung et al., 2012).

The ADB (2011) in its effort to evaluate the environment for PPP in Asia Pacific countries has commissioned the Economist Intelligence Unit to conduct a study. EIU used six categories: legal and regulatory framework, institutional framework, operational maturity, investment climate, financial facilities and sub-national adjustment factor. According to the study, United Kingdom and Australia have become the leading PPP countries in the world, while in Asia Japan, Korea have achieved significant success in that respect. Thailand, Indonesia, and the

Philippines, while still lagging behind, have made significant progress in creating the enabling condition and are poised to attract large interest from PPP private investors in the near future. The International Monetary Fund (IMF) made an empirical investigation regarding the determinants of PPP investment. They found that countries with high sovereign debt levels and large market size tend to have more PPPs. Their findings also show the importance of macroeconomic stability in attracting PPP as well as quality institutions and effective rule of law. Experience with PPP was also found to have a positive correlation with PPP (Hammami et al., 2006). Khan (1999) examined why there were low inflows of foreign direct investment in Pakistan. He offered ten main crucial factors: local business environment, labour force, infrastructure, economic strength, government economic policies, quality of life, welcoming attitude, law and order, government bureaucracy and political stability.

In another study, Sharma (2012) analyzed the factors determining PPP in infrastructure by using a unique data set on Private Participation in Infrastructure (PPI) for the period 1990-2008 for 22 developing countries, namely, Argentina, Bangladesh, Brazil, Chile, China, Colombia, Egypt, India, Indonesia, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Russian Federation, South Africa, Sri Lanka, Thailand, Turkey, Venezuela and Vietnam. The study observed that that large size and relatively high income markets enhance more PPP projects. Furthermore, the study results suggested that macroeconomic stability, quality of regulation and governance are the significant factors in determining PPP in the infrastructure. However, the study failed to find any robust support for the role of political factors and budget constraint as important factors.

2.1. Investment climate for Public Private Partnership

The existence of good climate has long been recognized as a pre-requisite for attracting investment and thus fostering economic growth. The investment climate is defined as the institutional, policy, and regulatory environment in which firms operate. Key determinants of the investment climate include economic and political stability, rule of law, infrastructure, approaches to regulations and taxes, functioning of labor and finance markets, and broader features of governance (World Bank, 2005).

Investment climate can also be defined as the institutional and policy environment that influence the actual and potential performance of business establishments. Three broad sets of factors make up the overall investment environment: macro fundamentals, institutions and governance, and market size. Investment climate is crucial because the private sector would not be interested to participate in a PPP arrangement if the situation in the country is not conducive. Therefore, an enabling environment should be established so that private sponsors can be

compensated with reasonable returns for putting a significant amount of resources which constitute a high degree of risk due to long-term nature of this kind of investment.

While there are many factors that affect investment climate for PPP, some of the more commonly mentioned in the literature, among others, in ESCAP's Public Private Partnerships: A Financier's Perspective (undated), are as follows:

2.1.1. Macroeconomic stability

Macroeconomic stability including fiscal stability is essential for PPP because investors will be more encouraged if the country has relatively low inflation rate, stable exchange rate and tolerable sovereign debt level. Fiscal stability will make long-term financing and its terms and conditions from financiers more attractive.

2.1.2. Political stability

Political stability is an important factor for a country that tries to attract investment including PPP. This involves relative stability of the government, orderly change of government and limited political violence. Political stability will minimize cost to investors arising from risks of appropriation, nationalization, and contract renegotiation.

2.1.3. Development of local capital markets

Infrastructure projects require long-term financing that means long pay-back times. If the country has a relatively developed local capital market, potential investors can access the financing in the domestic currency to be repaid by the project's revenue, and therefore, protect them from the exchange rate risk. This in turn, requires long-term institutional investors such as pension funds, insurance companies who are willing invest in infrastructure projects.

2.1.4. Regulatory environment

PPP will be more forthcoming if there is a favourable regulatory environment as well as good institutional framework that will facilitate successful and efficient infrastructure project development. This is possible if the relevant government agencies have sufficient capacity to produce such an environment.

2.1.5. Legal environment

The existence of favourable legal framework can enable all parties participating in the project work toward the successful completion of the project. This also is related with contract enforcement, contractual documents, procurement and other regulation issues such regional and municipal legislation. Among these, legislation concerning land acquisition needs to be established or refined because

investors often face obstacles in acquiring land for infrastructure projects especially in ASEAN countries.

2.1.6. Governance effectiveness

Government effectiveness is necessary to fostering sustainable and efficient PPP infrastructure projects. A government that promotes good governance through some generally accepted core principles, such as accountability, transparency, fairness, efficiency, participation, and decency will result in more efficient and effective implementation of public policies and outcomes. A transparent and efficient administrative environment will reduce red tape and bureaucratic procedures thus saving time and cost to the private investor.

2.1.7. Level of corruption

A country that has a low level of corruption will enhance its image in the eyes of infrastructure investors because they know they will not incur too much extra cost that can reduce their profit margins. Besides, an environment that tolerates corruption, bribery, kickbacks will not create conducive situation among the public and private participants in implementing the ventures.

2.1.8. Market conditions

Demand for services provided by a PPP facility will be also affected by the market conditions. If the market is large and the customers' purchasing power is high, then there would be strong demand which guarantees the sales of the services.

So far, to the writer's knowledge, no study has been made yet to investigate the effect of investment climate on PPP specifically in the bigger ASEAN countries as a whole. This study will attempt to fill this gap.

3. Materials and method

PPP data used in this exercise are obtained from the World Bank's PFI/PPP database. Governance indicator data are taken from the World Economic Forum data found in the World Bank's Worldwide Governance Indicator database. Economic data are derived from the World Bank Indicator data base. Although PFI/PPP data are available from the early 1990s for most countries, data for the latter case are limited and incomplete. For example, data for governance indicators are available every year only from 2002. Data for central government debt are missing for certain countries in some years. Therefore, to fill in the gaps, the author has tried to use data from some other sources, e.g. IMF Article IV Reports. Due to this limited data availability, this study covers only ten years from 2002 to 2011 by employing panel data model considering the 4 countries chosen in this study:

Indonesia, Malaysia, Thailand, and the Philippines are ASEAN members and middle-income countries. Although the 4- ASEAN countries are more or less comparable they may have different characteristics specific to each country.

The following multiple regression model is used in this study to test the impact level of central government debt, Gross Domestic Product (GDP) per capita, market capitalization, level of political stability and absence of violence, the degree of governance effectiveness, regulatory quality, level of legal environment and the degree of control of corruption on PPP.

The proposed model can be symbolically expressed as follows:

$$PPP = \beta_0 + \beta_1 CGD + \beta_2 GDPC + \beta_3 MC + \beta_4 POL + \beta_5 GOVEF + \beta_6 REG + \beta_7 CLEG + \beta_8 CORR + \varepsilon \quad (1)$$

Where PPP is the number of Public Private Partnerships projects, CGD is the level of Central Government Debt, GDPC is GDP per capita, MC denotes the measure of market capitalization of the listed companies, POL represents the level of political stability and absence of violence, GOVEF is the degree of governance effectiveness, REG denotes the measure of regulatory quality, LEG is the level of legal environment, and CORR represents the degree of control of corruption and ε denotes error term.

4. Estimation, findings and discussion

The panel set is balanced whereby there are 10 observations for each of 4 the cross-sections, therefore, total observations are 40 in this study. This balanced panel supports the use of the fixed effect method in order to capture the unique differences of the countries (Asteriou and Hall, 2007, p. 348). With the fixed effect method, we hope to find out the magnitude and significance of the independent variables on the PPP performance by controlling all inherent differences among the countries concerned, reflected in each intercept.

The results of the fixed model are reported in Table 2. It is evident from Table 2 that the variations in the independent variables used in this study can only explain 26.79 percent of the variations in PPP performance, which is in the case of panel data acceptable. The influence of special characteristics favorable to PPP investment existing in each country has been taken into account indicated by a separate constant (C) ranging from negative (Malaysia), almost zero (Thailand) and very positive for the Philippines.

The results demonstrate that all independent variables, except legal framework, have positive relations with PPP, which are in line with the hypotheses and most previous studies. Though most of the variables have no statistically significant

influence on PPP performance, theoretically there are close relationships between the dependent and most of independent variables. However, the relation between legal environment and PPP performance is negative and also significant where p value of 0.0409 is less than 0.05 (with the significance level of 5 percent level). This result which is not in line with the theory that predicts a positive relation may be due to the limited availability of data which have resulted in less than robust estimates during the period under the study.

Table 2. Regression results (dependent variable: PPP)

Variables	Coefficient	Std. Error	t-Statistic
CGD	0.008654	0.062465	0.138534
GDPC	0.009277	0.261839	0.035432
MKTC	0.029077	0.028795	1.009774
POL	11.68478	6.550320	1.783849
GOV	6.957269	12.69356	0.548094
REG	2.638642	22.00072	0.119934
LEG	-36.96947	17.24666	-2.143573
COR	17.05792	14.31299	1.191778
Indonesia-constant	3.075821		
Malaysia-constant	-2.964603		
Thailand-constant	0.227615		
Philippine-constant	4.041610		
R-squared	0.267950		
Durbin-Watson stat	1.990412		

5. Conclusion and policy recommendations

From the study results, we can see that, except one variable, the relationships between the PPP performance and the explanatory variables used in this exercise are positive. This means that based on this study, in respect of Indonesia, Malaysia, Thailand, and the Philippines, we can conclude that government debt levels, GDP per capita, market capitalization of listed companies, governance effectiveness, regulatory quality, and control of corruption tend to have a positive impact on PPP arrangement in those countries. The study further reveals that besides independent variables, there are also special factors specific to each country, which can be conducive or in-conducive to PPP investment. All of these factors should be considered by policy makers in creating the enabling environment for PPP in the region.

One interesting finding is that legal framework appears to have a negative relation with PPP, and this relationship is statistically significant. This result is not in line with the theory which presumes that a good legal environment would constitute a favourable situation for PPP. The limited data availability may have led to this counter-intuitive result. Therefore, this study suggests that another study using

more data series/observations possibly would produce more conclusive findings. Also due to the complex factors that affect PPP performance, the use of an econometric model which covers more relevant explanatory variables and sophisticated regression techniques could give a better explanation about this important development issue.

Note

- ⁽¹⁾ Association of Southeast Asian Nations (ASEAN): Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar (Burma), Philippines, Singapore, Thailand and Viet Nam. However, this study included only Indonesia, Malaysia, Thailand and the Philippines

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