

FACTORS AFFECTING THE RELATIONSHIP BETWEEN THE GOVERNMENT AND THE PRIVATE SECTOR OF INFRASTRUCTURE IN INDONESIA

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Abstract: *One of the company's main marketing strategies is a strong relationships with Public Institutions. It will make big opportunities increase the sales and profit. The purpose of this study is to find out the determinants of success (Key Success Factor-CSF) in the implementation of Public Private Partnership (PPP) in Indonesia. This study used a survey method to get the primary data using questionnaire instruments and Factor Analysis using SPSS 21.0 version was also used to analyse the data.*

This research concludes that the factors determining the success of cooperation between the government and the private sectors in infrastructures are : 1) Positive Attractiveness Factors: Technology for Better Development, Budget Solution and Transferred Risk, and Funding Efficiency Factors in Public Sector. 2) Positive Attractiveness Factor : High cost economy (Economic High Cost) and Lack of Experience.

Keywords: *PPP, CSF, Factor Analysis.*

INTRODUCTION

Indonesian government has responsibility to provide the infrastructure (facilities) for the people and/or citizen in the country. However, the government has limited sources and capabilities, so the role of the private sector is required to fill not only the funding gap, but also the managerial gap and the adoption of new technological advances. As we know, the infrastructure has an important role in term of the economic, social, cultural support, as well as the unity of nation, especially as the capital in facilitating interaction and communication among people and also linking the areas. To support the achievement of infrastructure development targets, Public Private Partnership (PPP), privatizations, corporate social responsibility and local government and community participation have been done.

This study is aimed at finding out the determinants of success (Key Success Factor-CSF) in the implementation of PPP in Indonesia.

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LITERATURE REVIEW

(a) Public Private Partnership (PPP)

Ke *et al.* (2009) defined PPP as arrangements where both public and private sectors bring their complementary skills to a project, with varying levels of involvement and responsibility, for the purpose of providing public services or projects. Maskin and Tirole (2008) concluded that PPP is a long-term development and service contract between the government and the private partner. Akintoye *et al.* (2005) stated that PPP is a combination of resources of the public and private sectors in the quest for the more efficient service provision”.

Webb and Pulle (2002) stated that PPP is partnerships between the public and the private sector for the purpose of designing, constructing, financing, operating and maintaining infrastructure, and the public sector paying for these service. Pierce and Little (2002) stated that PPP is the government and private party working together under a long term arrangement, whereby payments to the private sector depend upon its continuing to deliver the specific services to the agreed performance standards.

Based on Gunningan (2007), there are various types of PPP. Every type of PPP involves public services with combination of designs as: build, finance, operate, maintain, lease, own, and transfer. The various types of cooperation could give the flexibility to each party, both in private sector and government to build the collaboration. Kintanar *et al.* (2003) devided the form of PPP as follows: Build Operate Transfer (BOT), Build Own Operate (BOO), Contract Add Operate (CAO), Develop Operate Transfer (DOT), Rehabilitate Own Transfer (ROT), Rehabilitate Own Operate (ROO), Build and Transfer (BT), Build Lease Transfer (BLT), and Build Transfer Operate (BTO).

(b) Critical Success Factor (CSF)

Rockart (1982) defined the critical success factor (CSF) as “those few key areas of activity in which favourable results are absolutely necessary for a manager to reach his/her goals.” Boynton and Zmud (1984) defined CSF as: “Those few things that must go well to ensure success”. Brotherton and Shaw (1996) defined CSF as the essential things that must be achieved by the company or which areas will produce the greatest competitive leverage, in the other definition, Guynes and Vanecek (1996) defined CSF as critical to an organization’s current operating activities and to its future success.

Boynton and Zmud (1984) as well as Leidecker and Bruno (1984) stated that CSF could be used to assess the performance of the organization. CSF deals with the most important issues of organization, such as the operation and the success in the future. Further, these factors reflect the area or field required to keep the managerial performance of organization. Making the integrated

framework by the management is the important thing. Thus, the performance should be measured and reported in a way that could produce actions.

CSF methodology is a procedure that attempts to make some explanation of the key areas in order to be successful in managerial areas. This method has been used as a measurement of management since 1970 in the financial services and information systems (Rockart, 1982), manufacturing industry (Hardcastle *et al.*, 2002) and construction management (Sanvindo *et al.*, 1992, Yeo, 1991). Application of the CSF method is very promising. CSF can be used directly for an organization in the business - the business development of formulation, implementation and evaluation of strategy (Munro, MC and Wheeler, BR, 1980).

(c) Review of Previous Studies

Previous researches using CSF analysis were done such as by: Tiong (1996) which used CSF to private contractors in the competitive bidding and negotiations for BOT projects, Jeffries *et al.* (2002) in the BOOT procurement system, Qiao *et al.* (2001) for BOT projects in China, Azis (2007) for large-scale construction projects in the UK.

Azis (2007) used 39 key success factors in his study. While Akintoye *et al.* (2001) used 14 key success factors. On the other hand, Cheung *et al.* (2010) used 15 key factors that are considered as positive factors and 13 factors considered as

Table 1
Positive Attractiveness Critical Success Factors

<i>Code</i>	<i>Critical Success Factors</i>	<i>Reference</i>
P1	Transparency in the procurement process	Ke <i>et al.</i> 2009
P2	Competitive <i>procurement</i> process	Ke <i>et al.</i> 2009
P3	Transferred risk to the private sector	National Audit Office 1999, NHS 1999
P4	Restrictions costs for maintenance	Tiong and Anderson 2003
P5	Reduce administrative costs in public sector	Bennet 1998
P6	The reduction of public money in capital investment	Jones <i>et al.</i> , 1996
P7	Answer the problems of public sector budget constraints	Akintoye <i>et al.</i> , 2001
P8	Limited funding from government	Carrick, 2000, Akintoye <i>et al.</i> 2001
P9	Reduce overall project inefficiencies	Hambros, 1999
P10	Developing the development	Hambros, 1999
P11	Accelerate the development of the project	Hambros, 1999
P12	Saving time in project implementation	Kintanar <i>et al.</i> 2003
P13	Improving maintenance	Hambros, 1999
P14	Regional economic development	HM Treasury, 2000
P15	Transfer of technology to local companies	Hammami <i>et al.</i> 2006
P16	Making creative and innovative facilities	Chua <i>et al.</i> 1999; Government of Nova Scotia, 2000
P17	Integrated solutions from government	Sohail, 2000

negative ones in terms of considering the assessment perception of private public partnerships in construction projects.

The summary of CSF was divided into the positive perception (Table 1) and negative perception (Table 2) which become the determinants of infrastructure projects based on the results of previous studies which will be used in this study.

Table 2
Negative Attractiveness Critical Success Factors

<i>Code</i>	<i>Critical Success Factors</i>	<i>Reference</i>
N1	Government involvement in underwriting	Ke <i>et al.</i> 2009
N2	Lack of work experience and work ability of infrastructure projects	Jane and Laughin , 2003; Ezulike <i>et al.</i> , 1997
N3	Excessive restriction in the project	Akintoye <i>et al.</i> , 2005
N4	High participation costs	Ezulike <i>et al.</i> , 1997; Tiong and Anderson, 2003
N5	High risk when relying on the private sector	Akintoye <i>et al.</i> , 2005
N6	Delay due to political debates	Infrastructure Journal, 2001a, b
N7	Delay due to negotiation process	Ezulike <i>et al.</i> , 1997
N8	Reduce accountability to the project	Infrastructure Journal, 2001 b; John <i>et al.</i> 2006
N9	Less employment opportunities	Public Services Privatization Research Unit, 2000
N10	Long time in the preparation of contract transactions	Ke <i>et al.</i> 2009
N11	High inflation	Ke <i>et al.</i> 2009
N12	High interest rates	Ke <i>et al.</i> 2009
N13	Changes in the membership of the House of Representatives	Ke <i>et al.</i> 2009
N14	Public opposition	Ke <i>et al.</i> 2009

d. PPP Practice in Indonesia

In Indonesia, the government mostly uses cooperation in the form of Build Operate Transfer (BOT), as quoted in Gunawan (2010). This option implies the strong form of the government's role in controlling the PPP, in which the government provides most of the budget to finance the investment. The private sector also chooses this form because of the collateral as well as government support in terms of financial risk, including support in access to capital from the banks.

Presidential Regulation No. 13 of 2010 on Public Private Partnership in the Provision of Infrastructure describes in more details about the types of infrastructure that can be cooperated between the government and the private sector, namely:

- 1) Transport Infrastructure: airport services, port services and railway infrastructure; 2) Road Infrastructure: toll roads and toll bridges; 3) Water Infrastructure: raw water bearer channels; 4) Drinking Water Infrastructure: buildings, transmission lines, distribution networks and water treatment plants; 5) Wastewater Infrastructure: wastewater treatment plants, collection networks, the major network and also the facilities including waste and landfill cover; 6) Telecommunications Infrastructure and Information: telecommunications networks and e-government; 7) Electricity Infrastructure: plants, such as developing a power that comes from geothermal, transmission, or distribution of electricity; 8) Oil and Gas Infrastructure: transmission and or distribution of oil and gas.

METHODOLOGY

(a) Sample Description

The data comes from a survey to private companies listed in Indonesian Stock Exchange (IDX) which are engaged in the infrastructure services and government agencies which are related or have authority in field of investment, national development planning, procurement policies government agencies, some state-owned enterprises engaged in infrastructure development, and some big consultants (Table 3).

Table 3
The Institutions

<i>No</i>	<i>Name of Institutions</i>	<i>Status</i>
1	Indonesia's Investment Coordinating Board (Badan Koordinasi Penanaman Modal- BKPM)	Government Agency
2	PT Indika Energy	Private
3	PT Arpeni Pratama Ocean Line, Tbk	Private
4	PT Pembangunan Perumahan, Tbk	State-Owned Enterprises
5	Ernst & Young	Consultant/Private
6	Sidarta Consulting	Consultant/Private
7	PT Wijaya Karya	State-Owned Enterprises
8	PT Jasa Marga, Tbk	State-Owned Enterprises
9	PT Indosat, Tbk	State-Owned Enterprises
10	PT Telkom, Tbk	State-Owned Enterprises
11	PKPS - BAPPENAS	Government Agency
12	PT Sarana Multi Infrastruktur (SMI)	State-Owned Enterprises
13	PT Total Bangun Persada, Tbk	Private
14	PT PALYJA	Joint Venture
15	LKPP	Government Agency
16	PT Nusantara Infrastruktur, Tbk	Private
17	PT Adhi Karya (PERSERO), Tbk	State-Owned Enterprises
18	Deloitte	Consultant/Private

This study used a survey methodology to get the primary data using questionnaire instruments. The questionnaire instruments consist of 17 questions about positive key factors and 14 negative key factors scoring from 1 (not important) to 5 (most important).

The questionnaire was given directly to the institution through a sealed letter and sent back during November-December 2014. This study also used a convenience sampling technique because PPP in Indonesia is still rather novel and no standardized database is available. The questionnaire is submitted to a few competent people from each institution in order to be filled out.

(b) Method of Analysis

The study used *Factor Analysis* of SPSS 21.0 version. Factor analysis is the interdependence technique meaning that there are no dependent or independent variables. The data were analyzed in the form of numerical data. This process is trying to find a relationship factor analysis (interrelationships) among a number of variables (variables are mutually independent with each other). Thus, it can be made of one or a set of variables smaller than the number of initial variables.

Things related to factor analysis are:

1. Variance of the origin variable (X)

$$\text{Var}(X_i) = c_{i1}^2 + c_{i2}^2 + \dots + c_{ip}^2 + \phi_i$$

$$\text{Var}(X_i) = h_i^2 + \phi_i; \quad h_i^2 = \sum_j c_{ij}^2$$

Component called as communality indicates the proportion of variance X that can be explained by the p factor. Component is the proportion of variance X due to specific factors or error (error).

2. Eigenvalue

The factors are considered valuable if the *eigenvalue* is one or more than one ($\lambda \geq 1$)

3. Variance between X and F

Loading factors are:

- a. Use for interpretation of valuable factor.
- b. Big *loading* is the biggest loading in one variable.
- c. The positive or negative sign shows the direction.

4. Factor score

Covariance matrix input:

$$S-Fa = c'S^{-1}(x_j - \bar{x})$$

Correlation matrix input:

$$S-Fa = c'R^{-1}Z_j.$$

ANALYSIS AND CONCLUSION

1. Distribution of the Questionnaire

This study distributed 148 questionnaire forms to 18 selected institutions, but according to the set time only 70 forms (47,3%) were returned and filled in of steps. The distribution of the questionnaire is seen in Table 4.

Table 4
Distribution of the questionnaire returned

<i>Institutions</i>		<i>Distribution</i>	<i>Returned</i>	<i>Percentage</i>
Public	Agency	25	13	52.0
	State-Owned Enterprises	65	30	46.1
Private	Company	18	11	61.1
	Consultant	32	16	50.0
	Others	8	0	0.0
Total		148	70	47.3

Source: Primary data

2. Summary of Confirmatory Factor Analysis and Conclusion

(a) Positive Attractiveness Factors in determining the successful of PPP

From the Confirmatory Factor Analysis (CFA), we can conclude that the positive factors:

1) From the 11 variables, by the factoring process those could be reduced into 3 factors.

2) The formed factors:

Factor 1: Consists of restrictions costs for maintenance, Limited funding from government, Developing the development, Transfer of technology to local companies, Making creative and innovative facilities. These factors could be called as **Technology for Better Development Factors**.

Factor 2: Consists of transferred risk to private sector, Answering the problems of public sector budget constraints and Saving time in project implementation. These factors could be called as **Budget Solution and Transferred Risk Factors**.

Factor 3: Consists of Reduce administrative costs in public sector, The reduction of public money in capital investment, and Reduce

overall project inefficiencies. These factors could be called as **Funding Efficiency Factors in Public Sector**.

(b) Negative Attractiveness Factors in determining the successful of PPP

From the Confirmatory Factor Analysis (CFA), we can conclude that the negative factors:

1) From the 10 variables, by the factoring process those could be reduced into 2 factors.

2) The formed factors:

Factor 1: Consists of High participation costs, Less employment opportunities, High inflation, High interest rates, Public opposition. These factors could be called as **Economic High Cost Factors**.

Factor 2: Consists of Lack of work experience and work ability of infrastructure projects, High risk when relying on the private sector, Delay due to political debates, Delay due to negotiation process, Long time in the preparation of contract transactions. These factors could be called as **Lack of Experienced Factors**.

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