



AN OVERVIEW OF CRITICAL SUCCESS FACTORS OF PUBLIC-PRIVATE PARTNERSHIP IN THE DELIVERY OF URBAN INFRASTRUCTURE AND SERVICES

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Abstract

The inability of the public sector to independently meet the increasing demand for infrastructure and services has prompted many governments to adopt Public-private partnership (PPP) as an alternative strategy. In worldwide practices, however, there are mixed results and controversy in the application of PPP model. The Public-private partnership has, for this reason, become an increasingly active research area mainly to establish the Critical Success Factors (CSFs) towards improving the PPP model. This article reviews the current debate on the subject of PPP and compares the findings of different literature regarding the relative importance of CSFs of PPP projects. The authors argue that the CSFs of PPP projects are distinctive to the context of location and time. The article concludes that this subjectivity has implications for the “guaranteed” success of both existing and future PPP projects.

Keyword: Public-Private Partnership, Critical Success Factors, Infrastructure and Services delivery

INTRODUCTION

Rapid urban growth throughout the developing world is seriously outstripping the capacity of most cities to provide adequate infrastructure and services for their citizens. Most urban management agencies in developing countries of the world lack the institutional capacity and financial means to carry out many of the development task assigned to them (Agbola 1998). As observed by the UNCHS (1996), the provision of urban infrastructure is overwhelming as the cities appear to be growing beyond management capacities and available resources.

Having recognized the vital role that infrastructure and services play in the socio-economic development of societies, most governments entrusted their delivery to state-owned enterprises. However, in many places, particularly the developing countries of the world, the results were disappointing because public sector are inefficient (Harris 2003). This inability of the public sector to independently meet the increasing demand for enhanced service delivery (Birner & Wittmer 2006) has prompted many governments to seek for alternatives strategies (Rakić & Rađenović 2011). Subsequently, Public-Private Partnership is adopted (Hammami, Ruhashyankiko, & Yehoue, 2006; Abdel Aziz 2007)

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to help governments cope with the growing demand for public infrastructure and services (Alhomadi 2012).

Over the last three decades, Public–Private Partnership (PPP) has become fashionable (Klijn & Teisman 2003) around the world due to their benefits in delivering public infrastructure projects. However, in worldwide practices, the experience with PPP has not been totally effective (Batley 1996; Hodge & Greve 2007b; Jooste & Scott 2011; Loxley 2013). On one hand, the partnership has been used to deliver a significant number of projects. On the contrary, many partnerships encountered problems and suffered disastrous consequences (Cheung 2009; Alhomadi 2012). Consequently, some PPP projects were either abandoned by the sponsors or bailed by the host governments (Zhang & Chen 2013). The mixed results and the substantial interest over PPPs, therefore, call for an investigation into the explanatory factors for the success and failure of PPP projects towards the improvement of the model.

This article aims to present an overview of the Critical Success Factors for Public-Private Partnership projects. The article discusses the concept, benefits, critical success factors and application of PPP in infrastructure and services delivery through an extensive review of the literature. The article argues that the level of importance of CSFs for PPP projects is idiosyncratic to the dynamics of “location” and “time.” The article concludes by highlighting the implications of this subjectivity to the “guaranteed” success of both existing and future PPP projects.

METHODS

Although the subject of PPP has received wide academic discourse (Van Huijstee et al. 2007), the literature remains largely fragmented (Kivleniece & Quelin 2012). Also, many researchers presented a narrow review of PPP. They include Pantouvakis & Vadoros (2006) in construction, Amobi (2013) in infrastructure development and Roehrich et al. (2014) in the health sector. In contrast, the paper provides a broader range of theoretical backgrounds covering a wide spectrum of PPP application.

This article extensively reviewed the normative literature to provide a comprehensive understanding of Public-private partnership in infrastructure and service provision. The paper consolidates the current debate on the meaning, benefits, application and critical success factors of PPP. Having identified their importance within the framework of PPP research, the article focused on Critical Success Factors of PPP projects. The findings of other researchers regarding the relative importance of critical success factors for PPP projects were compared and contrasted. The article then distilled different viewpoints concerning the relative importance of CSFs, and implications for the success of PPP projects are highlighted (Figure 1).

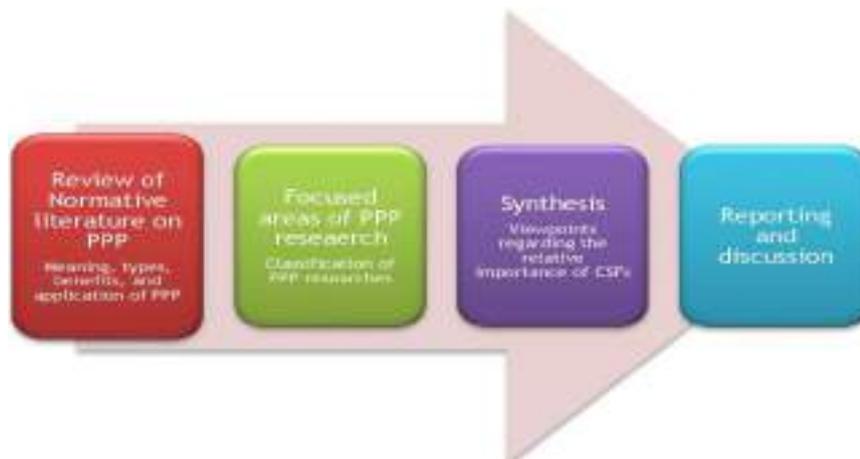


Figure 1: Literature Review Process

THE CONCEPT OF PPP

Since its conception, about three decades ago, the concept of PPP has been strongly contested (Bovaird 2004). Indeed, the overwhelming number and types of PPP makes a single definition difficult (Idris, Kura, & Bashir, 2013; Thomson, Goodwin, & Yescombe 2005). Different scholars, governments, and international organizations have described PPP in diverse perspectives. By seeking to introduce a market mechanism into government business, PPP is described as a derivative of the privatization movement (Savas 2000; Bovaird 2004). As observed by Abdul-Aziz & Kassim (2011), any attempt to shift government role to a private enterprise is tantamount to privatization.

On the contrary, Jamali (2004) and Lovells Lee and Lee (2009) see PPP as entirely different concept from outright privatization. As argued by Jamali (2004), PPP goes beyond privatization of public services but implies a sort of collaboration between two or more partners to pursue common goals. She argued that such collaboration must involve the joint definition of objectives and clear assignment of responsibilities in pursuit of common goals. The collaborating actors mutually agree to share risks, costs and benefits in the development of products or services (Hammami et al. 2006; Kee & Forrer 2008). In that regard, HM Treasury (1999) describes PPP as a long-term cooperation between public and private sectors for mutual benefits. The Ministry of Municipal Affairs British Columbia also defines PPP in line with its UK counterpart as “arrangements between government and private sector entities for the purpose of providing public infrastructure, community facilities, and related services. Such arrangement involves sharing of investment, risks, responsibilities and reward between the partners” (P.5: 1999). As submitted by Van Ham & Koppenjan (2010) PPP involves cooperation between public and private actors in which they jointly develop products and services and share risks, costs, and resources.

Others see PPP as a means of project financing that allows the public sector to reduce its financial constraints by utilizing private sector resources in service provision. As pointed out by Alinaitwe & Ayesiga (2013), many governments see PPP as a means of launching investment programs that would otherwise not be possible within the

available public-sector budget. PPP was predominantly viewed as a means of removing infrastructure costs from the public balance sheet and avoid the constraints of public-sector borrowing limits (Li et al. 2005). However, the WorldBank (2009) had a contrary view and argued that PPPs should not be merely a means of leveraging private sector resources but as a tool for reforming procurement and public service delivery.

Despite several definitions and perspectives of PPP, the critical elements, that characterized a PPP, as identified by Kwak et al. (2009) are four. First, it involves cooperation (Klijn & Teisman 2003) between 2 or more partners. According to European Commission (2003), Public-Private Partnership is an agreement between two parties to work together towards a common goal. Although, the partnership is usually between the public and private sectors, the relationship may, however, involve a consortium of third party interests. The third party interest may include lenders, equity investors, and other interests or non-profit groups (Kwak et al. 2009; UN-HABITAT 2011). Second, the partners work cooperatively towards achieving mutual objectives and benefits. In this regards, Jamali (2004) argued that a relationship can be qualified as a partnership if it involves the joint definition of goals and clear assignment of responsibilities in pursuit of common objectives. Third, it is about the introduction of market mechanisms to achieve efficiency in service provision (Grimsey & Lewis 2004; Babatunde et al. 2012). As explained by Kee & Forrer (2008), PPP involves the introduction of the managerial skills, entrepreneurship, and expertise of the private sector towards increasing the efficiency of the public sector. The adoption of Private Finance Initiative (PFI) in the UK aims to introduce market discipline into the provision of public services (Hammami et al. 2006; Wall & Connolly 2009). Fourth, it involves sharing of risk between partners (Grimsey Darrin and Lewis Mervyn K. 2004; Idris et al. 2013). As submitted by Alinaitwe & Ayesiga (2013), PPPs are risk-sharing investments in the provision of infrastructure and services. The amount of risk transfer differentiates a public-private partnership from traditional procurement. Many relationships may not be considered as partnerships, even where a private company is involved, provided there is no substantial risk transfer.

The underlying logic of establishing a partnership is that both the public and the private sector have unique characteristics that provide them with advantages in particular aspects of service delivery. The principal arguments in favor of public-private partnerships are two. One, it allows for the utilization of private sector resources, expertise, and skills (Ong 2003) to achieve “value for money” (Armitage & Susilawati 2004). The value for money usually translates to improved quality of service, higher efficiency, and lower costs. Secondly, a partnership is a form of cutting cost strategy that allows the government to reduce the overall cost of social transfers. PPP, therefore, serves as a means to preserve scarce capital resources for other purposes (Muhammed 2008).

The essential feature of PPP is that the client (the public sector) usually define the services needed. The private investor then undertakes to design, build, and finance the operation before handing over at the end of the concession period (Kwak et al. 2009). However, in reality, specific project objectives and requirements determine the structuring of partnership arrangements. Therefore, many types of partnerships models are in use today in the pursuit of different project objectives. The types differ depending on the circumstances and dimensions of the business arrangement and the extent of the responsibilities of partners (Mcquaid 2009). Kwak et al. (2009) described different partnership options along a continuum in line with the extent of responsibilities given to

each partner in a PPP arrangement (Fig. 2). At one end, is the public provision where the public sector is fully responsible for all aspects of service provision. While, at the other extreme, is the private provision, where the private sector assumes all those responsibilities. Examples of PPP arrangement include Build-Own-Operate (BOO) and Build-Operate-Transfer (BOT), Design-Build-Operate models. The degree of private sector involvement increases along the continuum; and vice-versa.

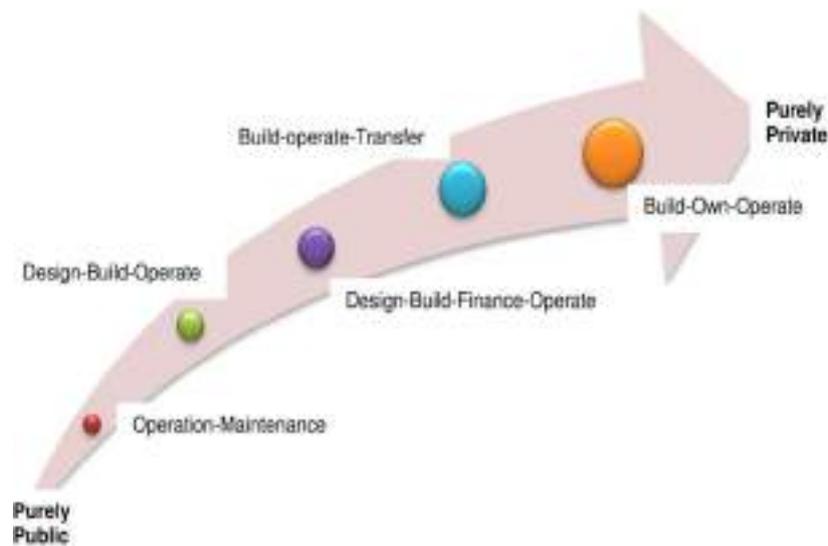


Figure 2: Models of Public-Private Partnership

Classification of PPP Research

The worldwide interest in PPP and the problems encountered in several countries has called for a better understanding of PPP. Many studies, to answer this call, have investigated five main aspects of PPP as follows:

- The roles and responsibilities of government in PPP (Kumaraswamy & Zhang 2001; Koch & Buser 2006; Abdel Aziz 2007)
- The concession selection (Zhang 2004; Zhang & Kumaraswamy 2001)
- Risks in PPP (Thomas et al. 2003; Bing et al. 2005; Nisar 2007)
- PPP finance (Levy 1996; Zhang 2005)
- Critical success factors for PPP (Qiao et al. 2001; Jefferies et al. 2002; Li et al. 2005; Hardcastle et al. 2005; Jamali 2004b; Wang et al. 2007; Babatunde et al. 2012; Hwang et al. 2013; Ismail 2013)

The conceptual framework (Fig 3) for the classification of PPP research highlights the significance of the Critical Success Factors (CSFs) towards improving PPP for effective service delivery.



Figure 2: Models of Public-Private Partnership

Research literature suggests that although the appeal for PPP all over the world is growing, systematic examination of the success and failure factors is limited (Jamali 2004b; Alinaitwe & Ayesiga 2013). The understanding of such factors will allow for the efficient allocation of scarce resources (Zhang 2005; Agrawal 2010) and the establishment of guidelines for PPP activities (Boynton & Zmud 1984). Such understanding is also required for the development of a workable and efficient PPP framework (Zhang 2005; Kwak et al. 2009). As observed by Milosevic & Patanakul (2005), critical success factors have a significant impact on the success of a project. Accordingly, many studies, therefore, focused on investigating the CSFs to improve the effectiveness of PPP as a service delivery model.

Critical Success Factors of PPP Projects

Rockart (1982) defines Critical Success Factors as "those few areas of activity in which favorable results are necessary for a manager to reach his/her goals" (Pg. 4, 1982). CSFs are those key areas that ensure the success of an organization or project (Kwak et al. 2009; Dulaimi et al. 2010; Alias et al. 2014). The CSF approach attempts to isolate key areas that are essential for management to achieve success. The CSF approach originated from management practice. However, it has been applied in financial services (Boynton & Zmud 1984); information systems (Rockart 1982); Textile industry (Asare 2012) and construction management (Jefferies et al. 2002).

Many researchers have identified different lists of CSFs of PPP projects based on review of other literature or through empirical studies. For instance, Akintoye et al. (2003) identified success factors that contribute to the achievement of the best value in (PFI) projects in the UK. Qiao et al. (2001) identified eight independent CSFs for Build-Own-Transfer (BOT) in China. Jefferies et al. (2002) identified CSFs from the reflection of an Australian stadium project. Zhang (2005) identified 47 CSFs for PPP projects at the international level. He later classified into five (5) main aspects of CSFs. Kwak et al. (2009) identified CSFs for PPP projects also from an extensive review of the literature (Table 1).

Table 1: List of CSFs in the Reviewed Literature

Author(s)	PPP Types	Regions	Critical Success Factors
Akintoye et al. (2003)	PFI	UK	Detailed risk analysis and appropriate risk allocation, drive for faster project completion, curtailment in project cost escalation, encouragement of innovation in project development, and maintenance cost being adequately accounted for
Qiao et al. (2001)	BOT	China	Appropriate project identification, stable political and economic situation, attractive financial package, acceptable toll/tariff levels, and reasonable risk allocation, selection of suitable subcontractors, management control, and technology transfer
Zhang (2005)	PPP	International	Economic viability, appropriate risk allocation via reliable contractual arrangements, sound financial package, reliable concessionaire consortium with strong technical strength, and favorable investment environment
Jefferies et al. (2002)	BOOT	Australia	Solid consortium with a wealth of expertise, considerable experience, high profile and a good reputation, an efficient approval process, and innovation in the financing methods of the consortium
Kwak et al. (2009)	PPP in general	International	Competence of the government; selection of an appropriate concessionaire; appropriate risk allocation between the public and private sectors; and a sound financial package

The Relative Importance of CSFs for PPP Projects

Many researchers have developed different lists of CSFs of PPP projects. However, while many factors are critical, it is quite obvious that the level of “criticality” of the identified factors varies in different places (Li et al. 2005). Accordingly, many studies have focused on investigating the relative importance of CSFs to enhance the understanding of PPP. For instance, Li et al. (2005) investigated the relative importance of 18 CSFs in the UK and concluded that the three (3) most important factors. Chan et al. (2010) investigated 18 CSFs of PPP in infrastructure development in China. The results of their study identified five underlying factors. Ismail (2013) examined the importance of 18 success factors for PPP implementation in Malaysia and established five top (5) CSFs. Hwang et

al. (2013) examined the relative importance of positive and negative factors influencing PPP projects in Singapore and discovered eight top factors. Babatunde et al. (2012) also considered the relevance of success factors between the public and private sectors in infrastructure delivery in Nigeria. The results of the study revealed eight critical success factors. Cheung, Albert P.C. Chan et al. (2012) compared the relative importance of 18 CSF for PPP projects in Hong Kong, Australia and the UK. The study indicated that while five CSFs are most critical in Hong Kong, the level of importance of those factors is quite different in Australia and UK (Table 2).

Table 2: Relative Importance of CSFs of PPP Projects

Author(s)	PPP TYPES	Regions	Top ranked CSFs
Li et al. (2005)	PFI	UK	A strong and good private consortium, appropriate risk allocation, and available financial market
Cheung et al. (2012)	PPP Projects	Hong Kong, Australia, UK	Favorable legal framework, commitment and responsibility of public and private sectors, strong and strong private consortium, stable macroeconomic condition and appropriate risk allocation and risk sharing are the five top success factors for Hong Kong
Ismail, S. (2013)	PPP Projects	Malaysia	good governance, a commitment by public and private sectors, favorable legal framework, sound economic policy, and available financial market are the top five (5) CSFs in Malaysia
Chan et al. (2010)	Infrastructure Development	China	Stable macroeconomic environment, transparent and efficient procurement process, shared responsibility between public and private sectors, stable political and social environment, and judicious government control
Hwang et al. (2013)	PPP Projects	Singapore	Well organized public agency, Appropriate risk allocation and sharing, Strong private consortium, Transparent procurement process, Clearly defined responsibilities, Clarification of contract documents, Favourable legal framework, Shared authority between public and private sector
Babatunde , et al. (2012)	Infrastructure Projects	Nigeria	Competitive procurement process, Thorough assessment of the cost and benefits, Favorable legal framework, appropriate risk allocation, Government guarantee, political support, stable macroeconomic condition, sound economic policy, availability of suitable financial market

From the review of the literature, some authors hold the view that certain critical success factors of PPP projects are common irrespective of geographic location. For instance, the success factor “Favorable legal framework” was found to be critical in both mainland China and Hong Kong (Cheung, Albert P C Chan et al. 2012). On the other hand, other authors (Zhang 2005; Brown et al. 2006; Mu et al. 2011) are of the opinion that critical success factors of PPP projects vary in different administrative settings. The authors argued that because CSFs are place-specific, their level of importance tends to

vary in different administrative contexts. Akintoye et al. (2003) also concluded that the achievement of optimum efficiency (success) in PPP projects is project-specific as the requirements for achieving it for one project may not be the solution for another. Although, the concept, process and key principles of PPP are essentially identical; many aspects of PPP are either project, sector and country-specific (Zhang & Chen 2013). As submitted by Zhang (2005), environmental peculiarities influence the success of PPP projects. For this reason, the relative importance of CSFs of PPP projects is determined by the specifics of political, cultural and institutional context (Mu et al. 2011; Brown et al. 2006).

REPORTING AND DISCUSSION

Many studies investigated and developed a different list of factors that are critical to the success of PPP projects. However, there seems to be an agreement on the relevance of some of the factors due to the recognition they received in the various literature (Table 3). The analysis records the number of times the reviewed literature mentioned each factor.

Table 3: Relevancy of CSFs of PPP Projects

S/N	Critical Success Factors	Authors													Frequency		
		1	2	3	4	5	6	7	8	9	10	11	12	13			
1	Competitive/Transparent procurement process		*	*		*	*					*					5
2	Transparent and efficient legal framework		*		*	*	*	*									5
3	Appropriate risk allocation and sharing					*	*		*	*				*			4
4	Strong private concessionaire	*			*		*	*	*	*							4
5	Judicious government control				*		*				*				*		4
6	Favorable investment environment		*	*		*				*							4

Authors

1-Jefferies et al. (2002), 2-Li et al. (2005), 3-Chan et al. (2012), 4-Abdul- Aziz and Kassim (2011), 5- Babatunde et al (2012), 6-Hwang et al (2012), 7- Ismail (2013), 8- Kwak et al (2009), 9- Zhang (2005), 10- Helmy (2011), 11- Zhao et al (2010), 12- Jamali (2004), 13-Tam (1999).

Similarly, the review presented two divergent views from the reviewed literature regarding the relative importance of CSFs of PPP projects. On one hand, proponents hold the views that CSFs of PPP projects are, indeed, common irrespective of geographic location. On the contrary; opponents maintained that CSFs are location-specific. For instance, Cheung, Albert P. C. Chan et al. (2012) compared the relative importance of 18 CSFs for PPP projects in Hong Kong, Australia and the UK (Fig 4). They observed that

the factor “stable macroeconomic condition” is considered top success factor in Hong Kong. However, the same factor was rather unimportant due to a relatively stable economic condition in Australia and the UK. Similarly, while respondents in Hong Kong also ranked “favorable legal framework” top success factor, respondents in Australia and the UK were not very much concerned about their existing legal framework. The ranking is because Australia and the UK have an already established legal system to handle PPP matters.

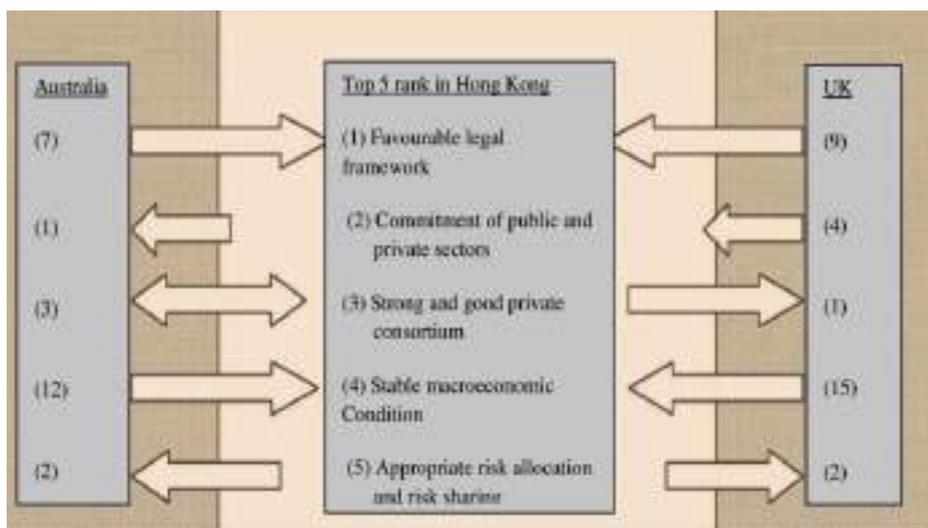


Figure 4: Relative importance of CSFs in Hong Kong, Australia, and the UK
 Source: Cheung et al. 2012

The two viewpoints have received credence in literature. However, another significant consideration implied from the reviewed literature is that of “time” dimension as an essential element that influences the criticality of CSFs for PPP projects. For instance, Mu (2008) attributed the failure of a highway project in China to time-related factor. He observed that the absence of adequate laws and regulations for PPP construction and operation in the 1980s caused the failure of “Shen-Da Expressway.” Similarly, Chan et al. (2010) identified the success the factor “macroeconomic environment” as very critical in a study in China in 2010. He, however, recognized that the level of criticality of the same factor is likely to change due to the then prevailing changes to the global financial climate. Similarly, Li et al. (2005) attributed the criticality of the success factor “favorable legal framework” to the absence of any specific law on PPP projects in the UK in 2005. However, Cheung, Albert P.C. Chan et al. (2012) discovered that the same factor “favorable legal framework” was not important in the UK seven years later. They ascribed the “change” in the importance of the factor to a well-established legal framework in the UK in 2013. For this reason, a factor identified as critical at a time, may due to changing circumstances, be no longer be of importance at a later date.

The identification of the “time” factor as a determinant of the relative importance of CSFs has far and wide reaching implications. The socio-political and economic systems of many countries and administrative regions are complex and dynamic. This complexity implies that simply focusing on a factor identified as critical for a particular PPP project in a particular context, may not guarantee the success of similar PPP projects in another context. Similarly, focusing on a factor identified as critical at a given time, may not guarantee the success of another PPP project in the same context at a later date. The continuous evolution of PPP procurement process, therefore, requires an ongoing evaluation of PPP projects so as to prioritize the relevant CSFs for efficient delivery of PPP projects.

CONCLUSION

This article distilled the CSFs for PPP projects and crystallized the various viewpoints concerning the relative importance of Critical Success Factors of Public-Private Partnership projects. The authors also argue that other than a project and location-related factors, the time factor also has a significant influence on the level of importance of the factors considered critical to the success of Public-Private Partnership projects. The paper buttresses the subjectivity regarding the significance of CSFs for Public-Private Partnership projects. Given this subjectivity, future studies on PPP projects may want to reassess the efficacy of the CSFs for PPP projects on a continuous basis. While this study has re-resonated the “timing” as a factor, solutions for improving PPP projects on this factor are limited. Future research agenda may, therefore, explore the influence and dynamics of “time-related” factors on the success of PPP projects.

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