Review on the Public-Private Partnership

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Traditionally, public goods and services have been provided by the government. In recent decades, however, public-private partnerships (PPP) were created to assist the best use of both public and private sector resources to enhance and extend public infrastructure assets and services. Throughout history, although governments have adopted such a combination of public and private ventures, the 1990s and early 21st centuries have witnessed a clear trend of governments across the world making significant use of different PPP arrangements. The rapid growth of PPPs has occurred since the 1990s throughout the globe as it was considered the preferred tool for public procurement of infrastructure and services. This paper examines the relevant literature of PPP and attempts to identify the historical development, the major reasons, the main types, forms, benefits of building PPP, as well as challenging issues facing the implementation of PPP in today’s world.

Keywords: public-private partnerships, types, forms and benefits of PPP, challenges in the implementation of PPP

Introduction

This study will investigate what the public-private partnership (PPP) is, its historical background, the forms, scope, benefits, and drawbacks of public-private partnership. Specifically, the study aims to investigate how society and organizations are benefited from the PPP and generate recommendations to improve the environment of the PPP and increase the efficiency of the cooperation in PPP.

Warsen, Greve, and Klijn (2019) emphasized that PPP is regarded as the hybrid arrangement and focuses on combining public-private practices that have been proven to be difficult to align with each other. PPPs are regarded as a new perspective for the development of the public sector. The popularity of PPP has grown over the past few decades as governments have increasingly welcomed private financiers and investors to take care of its provision. Current examples of public-private partnerships commonly used in transportation, construction, Information Technology (IT), education, finance, and so forth in order to get more quality infrastructure services.

Problem Statement

Challenges PPP issues include having different values and moral standards between the public and private sector, poor enforcement mechanisms, inadequate policies, unequal participation in decision-making processes, unclear agreements on the sharing risks and responsibilities. Dechev (2015) believes that lack of objective analysis, lack of expertise to access the real capacity, lack of public access to documents for selection, lack of...
control of correlation between resources input and quality, lack of reliable mechanisms for risk transfer, and lack of precise definition of risk management rule can be problematic in the implementation of PPP.

The main problem in PPP implementation involves the lack of planning of risk management. All failures in PPP are rooted in the lack of planning of risk management. Understanding the risks’ origin is problematic and requires lots of effort from both partners in PPP. Due to the lack of planning of risk management, PPPs confront risks in the areas of contracting, resources, differing goals, structure, partner commitment, and the external environment. The consequences of the lack of planning of risk management cause project implementation costs, risks of the shortfall (unexpected economic condition), and all other major risks. Therefore, having a clear plan to manage risks in PPP implementation is especially important to achieve the goals of PPP.

The Historical Background

The public-private partnership was believed as an innovation in public service and public policy. Historically, it was developed in Anglo-Saxon countries (Chen & Man, 2020). Since then, it has spread to many other countries in Europe, Asia, Africa, and anywhere else.

Dechev (2015) stated that the idea of public-private partnership was formed in Europe in the 19th century by Alfred Eiffel who designed and built the Eiffel Tower with his funds against the right to issue tickets for its visitors in 20 years ahead. His innovative idea gained more popularity in countries with developing economies. Therefore, the launch of PPP in Europe provided an example of an innovative approach to its market realization, founding more constructive methods for investment in the public interest by combining the advantages of public investment and private initiative. Up to now, this idea has been well preserved mainly in infrastructural projects.

According to Meng, Tang, Zhang, and Xu (2020), the British government first introduced PPP in 1952. Since then, various types of PPP models have been proposed.

Traditionally, public-private partnerships were created to assist the best use of both public and private sector resources to enhance and extend public infrastructure assets and services. Throughout history, although governments have adopted such a combination of public and private ventures, the late 20th and early 21st centuries have witnessed a clear trend of governments across the world making significant use of different PPP arrangements (Uddin & Aktir, 2021).

Catsi (2018) states that traditionally PPPs were utilized for horizontal infrastructure (roads, bridges, and transit). However, PPPs have been employed to fund vertical infrastructure including civic buildings, hospitals, prisons, and student housing in more recent times.

The Major Reason for Building a Partnership

Thompson and Arawosafe (2020) identified several factors that are responsible for the creation of PPP (p. 528). Those factors include the goal to minimize risk and cost of entering a new market by pooling human and financial together, assuring extension of operational performance, acquiring competence and technical know-how, ensuring efficient channel of distributions, forming new products and services, and attaining higher levels of productivity and economies of scale among others.

Practically, the public and private sector pursue their specific benefits although they share the same project goals (Nie et al., 2021). The public sector improves the quality of infrastructure, minimizes financial pressures,
maximizes infrastructure project investments, and enhances economic efficiency. On the other hand, the private sector increases brand value and secures profits. The major reason to form the PPP involves a solution where everyone benefits.

The major incentives for the public sector to seek the partnership of the private sector are improving multiple challenges including poor service quality, shortage of various resources such as money, workforce, and existing managerial problems (Baniassadi et al., 2020).

Besides, political motives for employing PPPs are getting significant. They include the desire to reduce the corruption and collision among investors, contractors, and government officials, and enhance greater transparency in procurement processes (Purbo, Smith, & Bianchi, 2020).

According to Lember, Petersen, Scherrer, and Agren (2019), the conceptual roots and political motivations behind contemporary PPPs include microeconomic, macroeconomic, and political rationales.

The Concept of Public-Private Partnership: What Is Public-Private Partnership?

Public-private partnership (PPP) refers to a term that can be utilized to define a broad category of activities and structures linking with public and private sectors (Strasser et al., 2021). The PPP is a long-standing concept of the combination of the public and private sectors and governments all over the world use (Elwakil & Hegab, 2019). According to Liman et al. (2021), public-private partnership involves a long-term contractual arrangement between the public and private sectors where mutual benefits are pursued.

The main philosophy behind PPP is that no single organization has all the strengths required to do alone although all organizations have strengths (Twinomuhwezi & Herman, 2020). The key goal of PPP is to deliver an efficient service that neither the public nor the private sector could do alone.

Wang and Ma (2020) highlight that PPP is an effective tool in ensuring sustainability. According to Maxfield, Garner, and Parekh (2017), a PPP refers to a collaboration between various stakeholder organizations including at least one nonprofit organization, to accomplish a shared objective that is beyond the capability of any one stakeholder.

PPPs have become an essential form of inter-organizational relationship to provide public value (Maurya & Srivastava, 2019). Meng et al. (2020) pinpoint that PPP is a comprehensive concept of project development that is utilized in all aspects of the project life cycle (design, construction, financing, management, marketing, operation, service, and maintenance).

Thompson and Arawosafe (2020) highlighted that the PPP refers to a lasting legal association between two or more partners. Of these partners, at least one must be a public entity and the other must be a private entity.

The collaboration between governments and businesses is involved in public-private partnerships. Both sides bring resources such as authority, knowledge, money, and property to the partnership. Particularly with limited fiscal resources, partnership depends on the expertise, organizational models, technology, and soft skills of the private sector (Dordevic & Rakic, 2021).

According to Dechev (2015), the public-private partnership is a development of cooperation between public administrators and the private sector business world which focuses to offer construction, financing, renovation, management, or maintenance of infrastructure, or the provision of a service.

Xiong, Chen, Wang, and Zhu (2018) defined the PPP as an innovative procurement method in which public and private partners cooperate to design infrastructure and deliver public services. PPPs in infrastructure
emerge in various sizes and forms. Scholars identified the difference between alliance and concession models among the various definitions of PPPs (Thompson & Arowosafe, 2020).

Brogaard and Petersen (2017) highlighted that many countries have considered the use of PPPs as developmental tool since the early 1990s.

The concept of PPP, respectively to the definition of PPP, is contributed by the national specificities in different countries that use the implementation of PPP (Dechev, 2015). Hence, each country has its concept and definition of public-private partnership depending on its own legislations system and strategic viewpoints.

Main Types of PPP Model

Tan and Zhao (2019) highlighted some major types of PPP models include BOT, BOO, TOT, ROT, and O&M.

BOT (Build-Operate-Transfer): BOT is widely adopted for new construction (Greenfield projects). This PPP model is used in 77.2 percent of all projects in China including a long-term contractual concession in which private sectors construct, design, finance, and operate a public facility before transferring the asset back to the government at the end of the concession. According to Bartelli (2018), the BOT agreement has attracted the greatest theoretical interest. Economic theorists have defined the BOT as the canonical form of infrastructure PPP.

BOO (Build-Own-Operate): BOO is similar to BOT arrangements; however, the private sector partners keep ownership of the facility after the contract ends. Hence, in this PPP model, contractors undertake full responsibilities.

TOT (Transfer-Operate-Transfer): Brownfield projects are conducted through TOT.

ROT (Rehabilitate-Operate-Transfer): Governments and local bodies allow the private entity to rehabilitate the facility during the concession period and the project must be transferred back to local bodies after the period.

Operation and Management Contract (O&M): Private partner operates and maintains an asset for a public partner based on an agreed level with specified obligations.

Forms of PPPs

Karnes (2020) proposes three forms of PPP including management contract, acquisition, and Greenfield investment.

The first form of PPP refers to the management contract. In this form, the management part of the State-Owned Entity (SOE) is taken over by a private entity. The SOE makes investment decisions since ownership remains with the state.

Next, the second form of PPP is associated with acquisition. In this form, the private entity acquires the SEO’s property. The private entity becomes the principal of the privatized facility when the state hands over both ownership and control rights in the assets.

The third form of PPP refers to Greenfield investment. In this form, the Greenfield facility is invested by private entities. This form enables both entities to claim ownership and the control rights of the project.

An Overview of PPPs Across the Globe

Countries around the world are at different stages of PPP development due to differences in the origin of PPPs, and in growth rates, economic conditions, financial development, and liberalization (Dao,
Marisetty, Shi, & Tan, 2020). Some developed countries including the UK and Australia are already in the advanced stage of PPP with diverse private funds and sophisticated models, whereas almost all developing countries are in the early stage of PPP development and are concentrating on creating an official legal framework.

PPP’s resurgence in the developing world has received strong support from the World Bank as well as other multilateral development institutions, bi-lateral donors, national governments, and numerous other organizations (Bayliss & Waeyenberge, 2018).

According to Narbaev, Marco, and Orazalin (2019), some countries have adopted PPP due to budgetary constraints and ineffective public procurement, whereas others have adopted PPP for its operational and management effectiveness and active private sector involvement.

Some countries have been skeptical of the benefits of PPPs; however, others have enthusiastically adopted PPPs and established extensive PPP programs (Casady, Eriksson, Levitt, & Scott, 2020). As a result, the divergence of PPP policies, legislation, and agency formation built a huge diverse PPP institutional setting across Europe, North America, Asia, Latin America, and Africa.

Makovšeka and Moszorob (2018) stated that various countries strived to determine when a PPP would be expected to provide a better value for money than traditional infrastructure procurement.

According to Fleta-Asin and Munoz (2021), PPPs are being used in more than 134 developing countries, adding to 15-20 percent of their total infrastructure investment.

In BRICS and developing countries, there is clearly a PPP agenda (Hodge & Greve, 2016). Uddin and Aktir (2021) highlight that the role of PPPs in infrastructure investment across the world’s developing regions is viewed as relatively minor (averaging between 15 to 20 percent). Besides, these regions inequitably distribute PPP investments.

In the South Asian region, Gujarat Gas Company implemented PPPs in India in 1988 through a Greenfield project. This project was implemented in the Build-Own-Operate (BOO) model. The rest of South Asian countries started launching PPP projects during the 1990s.

As of 2017, East Asia and the Pacific region invested in PPP projects the most, whereas the Sub-Saharan African region invested in PPP projects the least.

Verhoest, Petersen, Scherrer, and Soecipto (2015) researched by comparing the governmental PPP support across 20 European countries based on three dimensions of the PPP Government Support Index (GSI) evaluation. Three dimensions include (1) policy and political commitment, (2) legal and regulatory framework, and (3) PPP supporting arrangements.

Looking at Asia, specifically, China is now considered as the country with the largest number of PPP projects along with the highest PPP investment amount (Xiong, Whetsell, Zhao, & Cheng, 2021). For Instance, there were 8,654 PPP projects valued at approximately USD 1.89 trillion by the end of 2018 as China PPP Center analyzes. China’s “One Belt, One Road” initiative was launched in 2014 and it is a massive example of PPPs (Dao et al., 2020).

In the years 2000, nongovernmental organizations emerged to support PPP projects and develop the infrastructure investment market across the world (Calugareunu, 2019). The first such organization is “Partnership UK” from the UK and then South Africa, Australia, and other countries have established nonprofit organizations to support the PPP mechanism.
Benefits of Using PPPs

Sharing of Resources, Risks, and Responsibilities

PPP projects aim to achieve a win-win situation between the government and the private sector (Nie et al., 2021). A methodology was developed by Carbonara and Pellegrino to determine the optimal maximum and minimum values of the revenue for attaining equitably risk sharing, and win-win conditions between the government and private sector.

In terms of the option to transfer risks from the public to the private sector, PPP has a notable advantage compared with other forms of contracting (Dechev, 2015). Risks might have an impact on the interests of both partners, and the interests of only one of the partners regardless of the phases on which they occur.

The development of the PPP is characterized by non-hierarchical processes based on shared resources, responsibilities, and risks. Hence, the partners can learn from each other and create new knowledge (Brogaard & Petersen, 2017). Both partners also can share competencies, knowledge, and expertise in the concept of sharing resources. The PPP plays a key role in the whole life cycle to reduce the risk of a project for fulfilling the highest benefits (Meng et al., 2020).

PPP is seen as an alternative both to the monopoly of the public sector as well as the full privatization (Daskalova, 2019). With the help of this model, public and private sectors obtain rights of ownership and joint responsibility in providing quality infrastructure services.

In PPPs, both public and private sectors bring together their resources. Resources can be tangible (financial, physical, or human capital) and intangible resources (knowledge) (Xiong et al., 2021).

Bogavac, Dodig, and Lugaric (2021) emphasize that a private partner is responsible for significant risks associated with financing, construction, operating, and maintenance of infrastructure, whereas the public partner bears the risks relating to regulatory issues and pays only for services received.

The PPP projects’ risks are minimized through the identification of risk, assessment, and accounting of PPP project risks, risks’ audit and control, and the formation of analytical and information databases (Hrytsenko et al., 2021).

Cost Reduction, Quality Enhancement, and Increased Efficiency

The advantage of PPPs is that they are faster and more efficient than traditional forms of investment (Chojnacka, 2021). Additionally, the quality of service is much better, owing to the experience of the private partner.

For instance, PPPs have become a fast-growing trend in U.S. higher education (Farakish, Jaggars, & Fay, 2020). Colleges can take advantage of the economies of scale of private companies to offer traditional or new services at a reduced cost.

The main objective of the PPPs is to achieve effectiveness, ensure high-quality products, better deal and accountability on the part of the government, efficiency in product and service delivery, and reduction of cost in project delivery (Dechev, 2015).

Yu, Chen, and Sun (2018) state that PPP contracts are considered powerful tools for governments to increase the quantity and improve the quality of public services by leveraging the private sectors’ financing capacity, technology, managerial knowledge, and experience.

According to Dordevic and Rakic (2021), the PPP model encompasses an incentive for the private partner in designing and building assets at a low price and cutting maintenance costs until the asset is returned to the
public sector and contract term ends. The private sector involvement in PPP can help to reduce the over-employment problem in the public sector as it needs to be a more decentralized and flexible structure with fewer hierarchy levels.

Pinz, Roadyani, and Thaler (2017) highlighted that the financial sustainability of PPPs contributes to an enhanced cost-efficiency of public service delivery.

**Economic Benefits**

The Asian Development Bank (Dordevic & Rakic, 2021) reported that PPP has a very positive impact on national development by improving access to infrastructure, enhancing technical and institutional capacity, transparency, and organizational skills, facilitating the allocation of public resources, and attracting private savings through long-term investments.

According to Chechrita (2009), five possible channels of PPP have an impact on some macroeconomic factors including impact on aggregate private and public investment, impact on government budget balance, impact on government debt, impact on fiscal risks, and impact on GDP growth rate.

**Enhancement of the Welfare of the Population**

PPPs make a substantial contribution to the reduction of the significant social-economic disparities in different regions in the country (Daskalova, 2019). It provides economic development and enhancement of the welfare of the population.

Dordevic and Rakic (2021) emphasizes the 5P or “Pro-Poor Public-Private Partnership”. It aims to create a utility that will support poor societal groups through PPP. For instance, these projects provide energy through eco-friendly sources and make it available to people with the lowest income. 5P projects are mostly implemented in underdeveloped countries.

Iyer et al. (2017) highlighted that PPPs were targeted at poor populations of sizes varying 3 million to 27 million in Kenya, Uganda, Bangladesh, and Nepal.

**Challenges in the Implementation of PPP**

Paanakker and Raynaers (2020) highlighted that PPPs form an unusual context in which public and private values or moral standards meet and clash. Values and moral standards of the private sector differ from the values and morals of public sector standards. Therefore, the cooperation between the public and private sectors can be problematic.

Nuhu, Mpambije, and Ngussa (2020) emphasize that the PPP setting is highly affected by tweak governance mechanisms including poor enforcement mechanisms, inadequate policies, lack of transparency, and unequal participation in decision-making processes.

Huque (2021) highlights challenges that PPP might face include accessing and controlling financial resources, having a lack of trust between partners, ineffective monitoring, and enforcement mechanisms, and unclear agreements on the sharing responsibilities and risk-sharing.

Reich (2018) states that PPPs often bring together organizations with strikingly different cultures including different interests, values, and views and these cross-sector collaborations between public and private sectors are complex and time consuming due to a lack of standards or norms about how these new organizations should work.
PPPs also face the risk of premature termination due to some serious problems including contractual disputes, court injunctions, delayed construction, a project outright abandonment, and the socio-economic expenses related to the deterioration of uncompleted projects (Odoemena & Horita, 2018).

Dechev (2015) identified several types of challenges including in the implementation of PPPs: lack of objective analysis, lack of expertise to access the real capacity, lack of public access to documents for selection, lack of control of correlation between resources input and quality, lack of reliable mechanisms for risk transfer, and lack of precise definition of risk management rule.

The opportunity to share risk is one of the major reasons for implementing PPP. However, the absence of reliable tools for risk assessment results in the incorrect evaluation and inequitable distribution between partners. Moreover, some possible risks appear, as an agreed term does not cover risks. For instance, the risk of the occurrence of the economic and financial is a major example. Carbonara and Pelligirino (2018) emphasized that the massive size of the investment, long payback periods, and several other unpredicted circumstances that might occur during the life of the projected increase the riskiness of infrastructure PPP projects.

Despite positive benefits, partners in PPP often face some challenges to implement the project. In healthcare industry PPPs, partners found out several major areas where PPP implementation challenges appear including financial and budget constraints, rapid changes in business models, and global healthcare markets (Strausser et al., 2021). For example, multiple stakeholders identified one challenge that priorities of different partners did not always align.

Exceeding the cost of production refers to the endogenous risk, usually the private sector entity bears and controls, whereas service or product demand is associated with an exogenous risk; usually public sector entity bears it (Dordevic & Rakic, 2021).

According to research, the greatest risks in PPPs exist in the areas of contracting (59%), resources (58%), differing goals (45%), structure (40%), partner commitment (39%), and the external environment (36%) (Gobikas & Cingiene, 2021).

Conclusion

The PPP model has been a significant way of accomplishing goals in the terms of cost reduction, operational efficiency, quality assurance of products and services, shared risk management, stability, and enhancement of the welfare of the population. Most countries have implemented the PPP model as it provides flexible opportunities for quality enhancement and provision of different infrastructural projects with related services. On the other hand, several challenges occur during the implementation process of the PPP. Both partners are required to carefully plan the risk and design the form of the PPP before the implementation. The efficient planning of risk management and designing of the PPP model are the most important step to build to achieve the project objectives. As we have seen, many PPP projects failed in various countries due to a lack of planning of risk management. It often leads to reducing the sustainability of PPPs and the failure of the PPP implementation.

References


