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IIUC

24 June 2023

Online at https://mpra.ub.uni-muenchen.de/117747/
MPRA Paper No. 117747, posted 26 Jun 2023 13:22 UTC

Review of Potentialities and Challenges of Public Private Partnership: Evidence from Bangladesh

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Abstract

Public private partnership plays significant roles bringing foreign investment into Bangladesh. The objective of the paper is to find of Potentialities and Challenges of Public Private Partnership Implementing Mega Project in Bangladesh. Furthermore, the paper also looks for critical success factors for implementing public private partnership in Bangladesh namely strong legal and regulatory frameworks, transparent procurement processes, stakeholder engagement, and effective risk allocation. The authors have been able to review more than thirty investigations over a ten years period, from 2013 to 2022. The paper is theoretical and analytical in nature and secondary method has applied. The findings of the study suggest that Public private partnership have the potential to accelerate infrastructure development in Bangladesh, but their implementation requires arobust legal and regulatory framework, an effective procurement process, andstrong institutional capacity. The study also underscores the need for collaboration between the public and private sectors to create an environment that fosters Public private partnership and promotes sustainable infrastructure development in Bangladesh. Overall, this paper provides valuable insights for policymakers, investors, and other stakeholders interested in the potentialities and challenges along with several success factors of Public private partnership in implementing mega projects in Bangladesh.

Keyword: Public private partnership, Challenges, Potentialities, Factors, Bangladesh

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1. Introduction

The Public Private Partnership (hereafter, P3) is a "long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance. P3 concept emerged in developing countries in the mid-nineties. Since then, P_3 investment has grown significantly. In P3 projects, the private sector's participation can complement public sector financing and allow projects to go forward that otherwise would have been discarded due to fiscal constraints, creating an incentive mechanism aligning the private and public interests (Fu, Sun, Meng, & Li, 2022). Bangladesh recently set her vision to dramatically developed the country's infrastructure along with draw the attention of foreigners to invest into the country. As a part of this vision government has given special focus on ongoing mega development projects as it has provided for yearly required fund allocations to complete the works in due time.

The issue that has been raised is not only confined within the country but also international concern. Dolla, & Laishram (2020) analysis conducted by P3 at Municipal Solid Waste in neighboring country, India. They have shorted out more attractive factors and negative factors those are significantly affects the study. The most attractive factors such as Provide an integrated solution for public, facilitate creative and innovative approaches, reduce total project time and reduce delivery time, promote local economic development while negative factors such as reduce project accountability, high cost on relaying private sector, delay for political debates and negotiation, lack of experience and appropriate skill among others. Sinha, & Jha (2021) studied on P3 those faced financing problem at road construction project in India. The commercial banks play dominance role in financing to the P3 infrastructure projects, especially in the road sector. The non-banking financial companies and other intermediaries were still in their infancy then, and a corporate bond market was growing steadily, though slowly. Financing problems faced by the developers resulted in unwarranted time and cost overruns emanating from delay in land acquisition and grant of approvals, with these being the two major barriers to private sector participation. Even schedule overrun finally resulted in increased construction and financing cost. Accordingly, Kaur, & Malik (2020) said that investors are refrain from investing in P3 project due to low institutional quality and deficiencies of P3 farmwork.

Ahmad, Mubin, Masood, Ullah, & Khalfan (2022) stated that P3 is become the developmental tool for the developing country. However, they urged that government must have to create awareness among the stakeholders. Furthermore, author suggested that developed preformation evaluation framework (PEF) is the mostly important or essential for implementing P3 in developing countries.

Three major challenges are notified by the author to the application of P3 in Pakistan. For example, week institutional arrangement, lack of expertise, lack of adequate regulatory framework (Shah, 2019). Moreover, the study emphasizes on the three stages of competitiveness factors of P3 namely, basic infrastructures (institutional framework & infrastructure), efficiency enhancers (human capital & non-human capital) and innovation (project finalization & innovation).

Neupane (2020) has conducted research in Nepal. He quoted that infrastructure development has been demanded by huge amount of rapid urbanization and hance the importance is new no bound. The challenges can be come out from the parties those are involved in the typical structure of P3. Following as shown the typical structure of the P3.

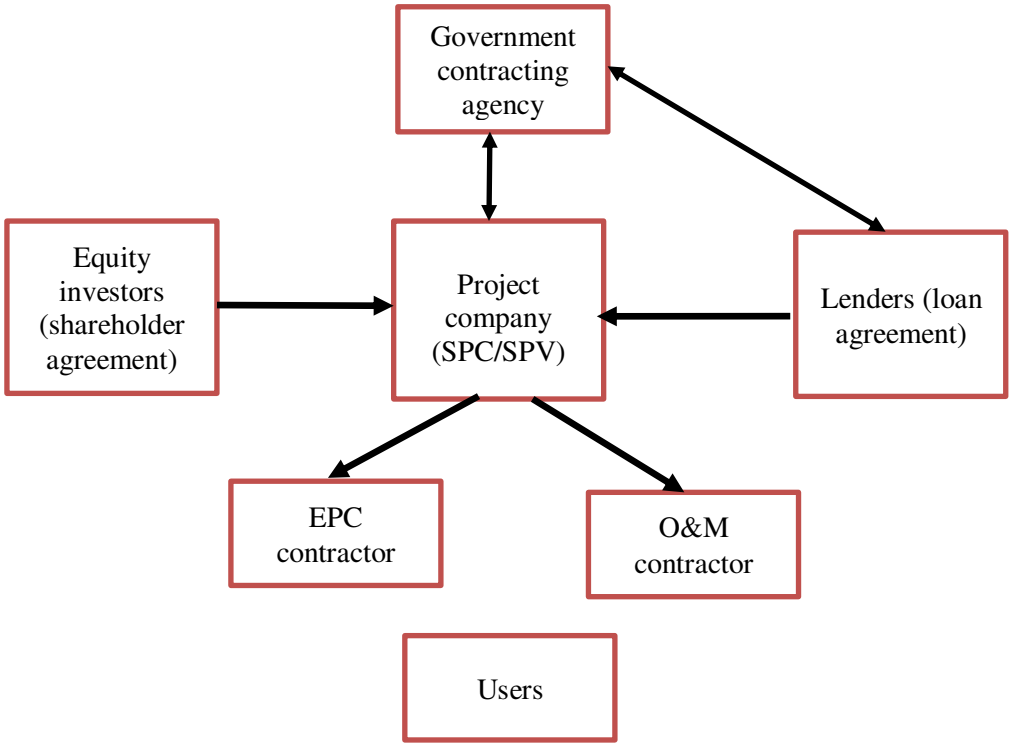

Figure 1; Typical structure of P3 (Sources: Neupane, 2020)

Government agency can directly with project company namely special purpose company / special purpose vehicle as well as lenders. Financing can come from both equity investors and lenders. And hance Project company make loan agreement with equity investors as well as lenders. After than project company make another contract with engineering, procurement, construction company (EPC) and operation and management contract (O&M). Finally goes to the user. Overall concluded as the typical structure of P3.

Fernando (2019) studied Challenges to Attract Public Private Partnership (P3) Investments to Power Generation Infrastructure in Sri Lanka. He has reported a few numbers of challenges such as effective leadership for trust building and coordination, modification of bureaucratic structure of organization with changing environment to attract private investment. Moreover, the main challenges have been identified such as state credibility and inconsistent policies.

Batjargal, & Zhang, (2021) has conducted the study in Malaysia. They find out many challenges those are not given emphasise by concern parties. And hance, they urged that those challenges should

be given importance to overcome the problem and ensure continuous development of P3. The challenges are (1) different organizational cultures and goals between the partners, (2) poor institutional environment and support, (3) weak political and legal frameworks, (4) unreliable mechanisms for sharing risk and responsibility, (5) inadequate procedures for the selection of PPP partners, (6) inconsistency between resource inputs and quality, (7) inadequate monitoring and evaluation of PPP processes, (8) lack of transparency, and (9) the inherent nature of PPPs.

Ozioma, Abomeh, & Nkiru, (2020) analysed public-private partnership and infrastructural development: implications for economic diversification in Abuja, they find out that poor quality of infrastructure development is often stated as the major challenges to economic growth and economic diversification. Table 1 shows the summary of PPP challenges in the worldwide context. Based on the above discussions, this paper goes through identification of various challenges in the context of Bangladesh.

Table 1; Summary of PPP Challenges Worldwide

SL	Author (s) and year	County	Challenges
1	Ozioma, Abomeh, & Nkiru, (2020)	**Nigeria**	poor quality of infrastructure development is often stated as the major challenges to economic growth and economic diversification
2	Batjargal, & Zhang, (2021)	**Malaysia**	different organizational cultures and goals between the partners, poor institutional environment and support, weak political and legal frameworks, unreliable mechanisms for sharing risk and responsibility, inadequate procedures for the selection of PPP partners, inconsistency between resource inputs and quality, inadequate monitoring and evaluation of PPP processes, lack of transparency, and the inherent nature of PPPs.
3	Fernando (2019)	Sri-Lanka	effective leadership for trust building and coordination, modification of bureaucratic structure of organization with changing environment to attract private investment, credibility and inconsistent policies.
4	Neupane (2020)	Nepal	Challenges may be emanate from Government agency, project company (SPC/SPV), equity investors, landers, engineering, procurement, construction company (EPC) and operation and management contract (O&M).
5	(Shah, 2019)	Pakistan	week institutional arrangement, lack of expertise, lack of adequate regulatory framework.

6	Dolla, & Laishram (2020); Sinha, & Jha (2021)	India	attractive factors and negative factors those are significantly affects the study. The most attractive factors such as Provide an integrated solution for public, facilitate creative and innovative approaches, reduce total project time and reduce delivery time, promote local economic development while negative factors such as reduce project accountability, high cost on relaying private sector, delay for political debates and negotiation, lack of experience and appropriate skill among others. studied on P3 those faced financing problem at road construction project in India.

Public private partnership (P_3) originated to expand countries' infrastructure development. It is a form of medium/long term contractual arrangement betweenthe public and the private sector. An effective P3 shares resources, risks, and benefits. P3 in mega-projects has attracted increasing attention worldwide and its seen as a promise for the future. Privatization of infrastructures has been realized worldwide in the telecommunication and energy sectors based on the idea that the market will provide more funds, greater efficiency, better service provision and more innovation.

Infrastructure megaprojects are the critical catalyst for accelerating economic growth for a developing country like Bangladesh. The rapid pace of economic development, growing middle-class with the higher purchasing power, and huge domestic demand of around 165 million people are attracting all of its developmentpartners to invest in the mega-projects of Bangladesh. The interest in P_3 is growing, notably due to the growth in the demand for infrastructure, limited public funds to meet current and future needs and acceptance for the private sector in the provision of infrastructure. The underlying principle behind P_3 is that, although the public sector may need to be responsible for the delivery of a particular service,it does not have to be responsible actually providing the service or for undertaking the investment themselves. In this way, all actors of a public private partnershipcan concentrate on doing what they are likely to do best.

Potentialities of Public Private Partnership (P3) in Implementing Mega Projectsin Bangladesh several studies have highlighted the potentialities of P3 in implementing mega projects in Bangladesh. One potentiality is that P_3 can mobilize private sector resources and expertise to support public sector initiatives. This can lead to more efficient and effective delivery of infrastructure services. It can also enhance the quality of infrastructure services by promoting competition and innovation in the provision of services. Furthermore, P3 can provide opportunities for technology transfer and capacity building, which can helpto develop local expertise and generate employment opportunities.

Challenges of Public Private Partnership (P3) in Implementing Mega Projects in Bangladesh despite its potentialities, P3 in Bangladesh also faces several challenges. One of the challenges is the lack of a clear legal and regulatory framework for P3 projects. Another challenge is the limited availability of funding for P3 projects.

The private sector may contribute to national development under the following: jobcreation and employment, contribution to national income, delivery of critical goods and services, equity financing, tax revenues, efficient flow of capital for production diver's engagement in a form of social interventions through corporate social responsibility (CSR) initiatives. P3 is utilized on toll highways, bridges, airports, healthcare, power plants, and telecommunications infrastructure. Public- private partnerships (P3) are critical to Bangladesh's rapid economic growth since they provide stakeholders with a "win-win" solution. Many P3 projects have been undertaken in Bangladesh.

This paper aims to primarily focus on the challenges of the public-private partnership (P3) along with key success factors. The flow of the paper is next section literature review, discussion on the mega project and conclusion and recommendation.

2. Literature Review

2.1 Overview

To create an enabling environment for attracting private investments on a continued basis, Government of Bangladesh (GoB) has taken a series of measures. Earlier, GoB hadissued the Bangladesh Private Sector Infrastructure Guidelines (PSIG) for implementing the P3 Projects. There was some success in attracting private investment through P_3 in the telecom, power and anergy, solar system, tourism, health, industry, housing, and infrastructure etc. These and other sectors need more investment and other sectors such as railway, roads, ports, wastemanagement, water supply, education, e-service delivery, tourism etc. need more investment. To develop the infrastructure sectors, P3 is being widely considered as a unique window for countries like Bangladesh. But Bangladesh has very limited experiences in P3, and a need for information and clarification on the subject is high. In regard to gradual increase of the use of P3 in a wide variety oftypes of public infrastructure, it is appropriate to consider development of a model P3 law.

2.2 Contribution of Public-Private Partnerships (P3)

Public-Private Partnerships (P3) can have a range of contributions and policy implications in different contexts. In general, P3 can contribute to the development of infrastructure and provision of public services in a more efficient, cost-effective, and innovative manner. Some of the key contributions and policy implications of P3 are:

2.2.1 General Contribution

Improved efficiency: P3 can bring together the resources, expertise, and innovation of both the public and private sectors. This can lead to more efficient project delivery, resulting in lower costs, reduced timelines, and increased quality.

Risk Sharing: P3 allow for risk sharing between the public and private sectors. This can help mitigate risk and reduce the financial burden on the public sector while also incentivizing the private sector to take on more responsibility for project outcomes.

Access to financing: P3 can provide access to private sector financing, which can help fund infrastructure projects that might not otherwise be feasible for the public sector to undertake.

Innovation: P3 can encourage innovation in the design, construction, and operation of infrastructure projects. Private sector partners may bring new ideasand technologies to the table, which can help improve the overall quality and effectiveness of infrastructure development.

Job creation: P3 can create jobs and stimulate economic growth by increasing investment and

generating new opportunities in the local economy.

Improved service delivery: P3 can lead to better service delivery, particularlyin areas such as healthcare, education, and transportation. Private sector partners may be able to provide higher quality services or bring new services to underserved areas.

2.2.2 Specific Contribution

Win-Win-Win Benefits: Ultimate goal is the improvement of the involved parties (e.g., consumer, government & private sector) in the project. And hance it is called win win win benefits. Win win win benefits imply benefit of three parties such as consumers, government, and private sector. **Consumer:** delivery of a services that people want and would not have access to at the same price, in a business-as-usual situation. **Government:** fulfillment of a political need, social obligation, development imperative. **Private Sector**: generate a profitable revenue stream andexpand market access.

Targeted Outcomes: As we know project management deals with triple constraints such as time, budget and quality. Therefore, it focusses and tasks are based on targeted outcome that is ultimate goal of the project management. It includes accelerating investments, improved quality, timely delivery, reduced costs, innovative solutions.

Moreover, **Risks are managed more effectively:** Starting with the basics of PM: a proper definition of projects; solid governance in place; and identified and proactively managed risks. **Productivity increases** with clear definition of roles, responsibilities and deliverables; empowered PMs; and faster launch of projects through the use of knowledge sharing. **Communication becomes easier** as all use common terminology, methodology and KPIs; customers get greater visibility and satisfaction with plans, schedules, actual performance against objectives and commitments.

2.3 Factors to Public-Private Partnerships (P3)

The results showed that the three most important factors are: “a strong and good private consortium”, “appropriate risk allocation” and “available financial market (Kavishe, & Chileshe, 2019). Most effecting factors such as cost, time, quality, and innovation used as the dependent variables while risk transfers, collaboration, building, private financing, and performance dependent payment sort out by the Koppenjan, Klijn, Verweij, Duijn, van Meerkerk Metselaar, & Warsen (2022). Those factors significantly affect the P3.

Positive and negative factors are discussed by Dolla, & Laishram (2020). They analysis P3 at Municipal Solid Waste in neighboring country, India. They have shorted out more attractive factors and negative factors those are significantly affects the study. The most attractive factors such as Provide an integrated solution for public, facilitate creative and innovative approaches, reduce total

project time and reduce delivery time, promote local economic development while negative factors such as reduce project accountability, high cost on relaying private sector, delay for political debates and negotiation, lack of experience and appropriate skill among others. Sinha, & Jha (2021) studied on P3 those faced financing problem at road construction project in India. The commercial banks play dominance role in financing to the P3 infrastructure projects, especially in the road sector. The non-banking financial companies and other intermediaries were still in their infancy then, and a corporate bond market was growing steadily, though slowly. Financing problems faced by the developers resulted in unwarranted time and cost overruns emanating from delay in land acquisition and grant of approvals, with these being the two major barriers to private sector participation. Even schedule overrun finally resulted in increased construction and financing cost. Accordingly, Kaur, & Malik (2020) said that investors are refrain from investing in P3 project due to low institutional quality and deficiencies of P3 farmwork. Table 2 shows the summary of studies to the factors of P3

Table 2: Summary of Literature on Factors of Public-Private Partnerships (P_3)

SL	Author (s) and year	Factors
1	Kavishe, N., & Chileshe, N. (2019).	A strong and good private consortium", "appropriate risk allocation" and "available financial market".
2	Ahmadabadi, A. A., & Heravi, G. (2019)	Favourable legal and political support, Stable macro-economic, Available finance market, Favorable social support, Economic viability, Reliable contractual arrangement, Equipment/labor procurement, Government guarantee and experience, Strong and good partnering, Reliable private consortium.
3	Koppenjan, J., Klijn, E. H., Verweij, S., Duijn, M., van Meerkerk, I., Metselaar, S., & Warsen, R. (2022).	Cost, time, quality, and innovation
4	Dolla, T., & Laishram, B. (2020), Kaur, S., & Malik, S. (2020). Sinha, A. K., & Jha, K. N. (2021).	The most attractive factors such as Provide an integrated solution for public, facilitate creative and innovative approaches, reduce total project time and reduce delivery time, promote local economic development while negative factors such as reduce project accountability, high cost on relaying private sector, delay for political debates and negotiation, lack of experience and appropriate skill among others.

2.4 Challenges and Potentialities of Public-Private Partnerships (P3)

Public-Private Partnerships have great potential for implementing mega projects in Bangladesh, as they provide access to finance, risk-sharing, improved efficiency, improved service quality, and technology transfer. When Government craving to implement public private partnership program or arrangement, it is needed to consider early on the development whether there are any aspects of the existing law of the country that would limit the possibility of the project. A particular law can help to diminish the level of uncertainty and ambiguity surrounding P3project arrangements and have increased investors confidence. To avoid conflict over many instruments that include private contract law, company law, tax law, labor law, competition law, consumer protection law, insolvency law, infrastructure sector laws, property law, foreign investment law, intellectual property law, environmental law, public procurement law or rules, acquisition or appropriation law and many other laws, Bangladesh have enacted special legal and regulatory instruments for P3. Although in Bangladesh, P3 laws are more recentthan the other countries' P3 law, this law has been in force since late 2015. It is a strong belief that P3s are a significant tool for generating investments in infrastructure projects and creating efficiency in public services. Given the fact that P3 was actually initiated and now is being extensively applied in Bangladesh, Cabinet Committee on Economic Affairs (CCEA) and Line Minister (LM) approved 61 projects under Public Private Partnership Program. Public Private Partnership (P3) is an important approach to mobilize private sector resourcesand expertise to undertake mega projects in Bangladesh. In recent years, the government of Bangladesh has initiated several mega projects, such as the Padma Multipurpose Bridge, Dhaka Metro Rail, and Karnaphuli Tunnel, with the aim of developing the country's infrastructure and boosting economic growth.

The legal framework for P3s in Bangladesh is governed by the P3 Act 2015,which establishes the framework for the selection, negotiation, and implementationof P3 projects in the country. The Act provides for the establishment of the P3Authority, which is responsible for facilitating the selection and implementation ofP3 projects, as well as ensuring compliance with the relevant regulations andguidelines. Under the P3 Act 2015, P3 projects are subject to a competitivebidding process, where the government invites private sector entities to submit proposals for the design, financing, construction, and operation of infrastructure Projects. The legal framework for P3s in Bangladesh is also supported by various regulations and guidelines, including the P3 Rules 2016 and the Guidelines forUnsolicited Proposals for P3 Projects 2018. These regulations and guidelinesprovide further details on the selection, negotiation, and implementation of P3projects, as well as the responsibilities of the government and private sector entitiesinvolved in the projects. In addition to the legal framework, P3 infrastructure projects in Bangladesh are also subject to environmental and social impactassessments, which are conducted to ensure that the projects do not have adverseimpacts on the environment and local communities.

Despite its potentialities, P3 in Bangladesh also faces several challenges. One of the challenges is the lack of a clear legal and regulatory framework for P3 projects (Islam & Rashid, 2018). The absence of clear guidelines and regulations can lead to uncertainty, delays, and disputes. Moreover, Corruption, political interference, and lack of transparency (Rahman & Rahman, 2019). Table 3 indicates the summary of challenges of P3.

Table 3: Summary of Literature on Challenges of Private Public Partnership (P3)

SL	Author (s) and year	Challenges
1	Yu, C. and Lam, K. (2013),	concession period and price determination: the toll fee, traffic flow, cost, inflation rate, interest rate, expected return rate and capital investment.
2	Jayasuriya, S., Zhang, G., & Jing Yang, R. (2019)	risk management, financial management, stakeholder management, managing operational phase, project procurement,
3	Kavishe, N., & Chileshe, N. (2022)	the lack of competition, delays, corruption, inadequate feasibility study and contrasting goals between partners contributed towards the failure of these projects, poor risk allocation and management,
4	Batjargal, T., & Zhang, M. (2022)	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.

3. Conclusion and Policy Recommendation

This paper reviews and discusses several challenges of private public partnership (P3) in the context of Bangladesh. For that, a number of papers are scrutinized from national and international context. The paper reports and finds out a number of challenges to the context of Bangladesh. For example, regulatory framework, lack of expertise, efficient enhancers, 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. Concern people should emphasis on the stated challenges so that P3 can bring out prosperous outcome for the development of the country. The paper concludes a number of policy recommendations along with future research direction.

3.1 Policy Recommendation

Based on the review and discussion, a number of policy recommendations are concluded. Firstly, developing clear contractual arrangements (i.e., roles,responsibilities, and expectations) of all parties involved. Secondly, establishing robust monitoring and evaluation mechanisms to ensure that P3 projects are delivering on their objectives and that risks are being managed effectively. Thirdly, ensuring that there is transparency and accountability in the P3 process, withclear rules around disclosure, reporting, and public participation. Fourthly, establishing strong governance frameworks that prevent conflicts of interest,corruption, and other unethical behavior. Lastly, providing capacity building support to public sector entities to ensure that theyhave the skills and expertise necessary to manage P3 projects effectively.

3.2 Future Research Direction

Future research on P3 in Bangladesh should focus on addressing the challenges identified in the literature. Specifically, research is needed to develop clear legal and regulatory frameworks for P3 projects in Bangladesh. Additionally, research should examine ways to increase the availability of funding for P3 projects, including exploring alternative financing mechanisms such as green bonds and impact investing (Ahmed & Islam, 2018). Further research is also needed to address issues related to corruption, political interference, and lack of transparency in P3 projects in Bangladesh.

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