



**Public Private Partnerships: Past, Present and Future**

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## Public Private Partnerships: Past, Present and Future

### Introduction

The Public private partnership (PPP) model is a part and parcel of infrastructure delivery systems of many countries. In recent years, the implementation and potential use of this model has been in trouble for a variety of reasons like failure to meet the value for money goals, challenges faced in the mobilisation of equity and debt from the market, financial hardships owing to reduced demand for facilities in times of COVID-19 pandemic, and renegotiations. As a result, in recent years, governments across the world have begun leaning towards infrastructure delivery models involving public funding and involvement of private sector in design and/or construction process only, such as the other alternative contracting methods, e.g., Design-Build and Construction Manager/General Contractor. However, the move towards publicly financed infrastructure models does not mean the traditional “PPP” model has left the race. In fact, governments are facing a financial crunch in developing new infrastructure and rehabilitating and maintaining existing built assets, owing to increased budgetary allocations made to tackle COVID-19 pandemic and boost health infrastructure facilities. Hence, asset monetization has become a buzzword with the adoption of PPP models like “Transfer – Operate – Transfer” and “long-term lease concessions”, which provides revenue streams to the government from already built assets to ensure quality service delivery to the customers.

Still with the uncertain path of some current PPPs, the new technological realities may provide for further lifelines with more private participation in infrastructure delivery. The greater emphasis towards green economy and reduction in carbon footprint provided impetus to renewal energy projects. Also, concepts like Artificial Intelligence, Internet of Things, and Digitalization have taken the infrastructure architecture by storm. Governments are promulgating smart cities, smart grid and smart roads for making infrastructure planning, design, construction and operation “smarter”. The usual infrastructure delivery model would need to be upgraded to deal with techno-economic complexities associated with the delivery of “smart infrastructure”. As a result, many governments are eyeing for greater private sector involvement in smart delivery. This is expected to be the norm in coming years where governments will formulate more innovative procurement models for greater private sector participation. In the context of this emerging landscape, this special issue aims to:

1. Chart the journey of PPP models by “looking back” and suggest meaningful innovations in this model for embracing “future” demands and priorities
2. Investigate the gaps and obstacles in planning, designing, financing, procurement, construction, and operation of PPP projects in the current era responsible for the poor performance of PPP projects
3. Map potential future courses of action for researchers, professionals, policy makers and practitioners to continuously revamp PPP models to meet the emerging realities while making them more resilient to withstand disruptions.

The context for this special issue along with the above-mentioned aims are clearly relevant and contribute to the policy discourse. The PPP model at this critical juncture will be subject to many tests for its relevance and could play an important role in tiding over the current turbulent times. Therefore, this special issue is being published at such an appropriate time that would help in taking stock of the PPP Body of Knowledge by looking at “past” and “present”, and then suggesting improvements for “future”. The knowledge creation in the process of this inquiry is unique and well assimilated in this special issue. The COVID-19 pandemic has severely disrupted infrastructure creation and delivery over the world. It opened debates for crafting infrastructure delivery models, which are more resilient, flexible, and socially relevant. As the PPP model has been used prominently for infrastructure delivery,

naturally, it was expected that the crafting of PPP models must take into consideration facets like agility, while factoring in potential challenges. The current evidence is limited to very few scholarly studies investigating the impacts of COVID-19 on PPPs and, most of the evidence is in the form of media reports, showing a different picture. Many operational PPP projects have faced daunting scenarios in terms of reduced demand, difficulties in meeting debt obligations and changed performance specifications. This situation demands a soul-searching exercise towards revamping, revitalizing and reinvigorating the PPP model. In this context, it is pertinent to say that this special issue should help to fulfil much anticipated needs of researchers, policy makers and professionals in bringing innovations and new thought processes in PPP project delivery.

### **Overview of the Special Issue**

There are seven papers in this special issue that have been accepted for publication following the BEPAM review process. The Guest Editors of this issue revisited these papers with keen attention and reflected on the theme of this special issue - *Public Private Partnerships: Past, Present and Future*. It was obvious that all seven papers have aligned to the theme of this special issue, considering the well-crafted call for papers released among the PPP researchers across the world and rigorous screening and review process for papers submitted to this specific issue. After revisiting these seven papers, the editors were amazed by the knowledge that is imbibed in each paper and realized that these papers can be sequenced and discussed in this editorial through the three lenses – Past, Present and Future. According to these lenses, the first paper by Ke, Yongjian; Cheng, Zhe; Zhang, Jingxiao; Liu, Yong brings to the attention of PPP researchers and practitioners that there is yet no universally accepted definition of PPPs. Hence, this study refers to the “past” by performing a comprehensive content analysis of the 50 most cited journal articles to define PPPs using an innovative Sunflower Model. The findings of this study have substantial implications for the “future” in terms of using the PPP Sunflower Model as a practical tool for evaluating the authenticity and viability of PPP projects. Furthermore, this paper can serve as a catalyst to advance the dialogue in the PPP field for more coherent and effective communication in the “future”.

The second paper by Nayyer, Mojahedul; Mukkai R, Aravindan; Annamalai, Thillai Rajan investigates whether there exists a significant difference between the toll and annuity projects implemented in the “past” – before the enactment of transparency law in India, and at “present” - after the enactment of the transparency law. This paper focuses specifically on the post-award development phase of these projects. The third paper by Nayyer, Mojahedul; Annamalai, Thillai Rajan continues the sectoral focus on highway PPPs. This paper investigates the “present” state of art of Indian highway PPPs from the perspective of procurement authorities, which can be the Federal/National Government or State Governments. The findings of this study show that the financial closure of highway PPPs was not influenced by the type of procuring authorities, however, the construction of state highway PPPs commenced earlier than national highway PPPs, and further state highway PPPs had a lower time overrun.

The fourth paper by Castelblanco, Gabriel; Guevara, Jose; De Marco, Alberto journeyed into the “past” to unearth the lessons from global crises for crisis management in PPPs. Based on the bibliometric and network analysis, the paper has identified six research avenues for the PPP crisis agenda namely public interest, relational governance, risk management, user pay PPPs, crisis management and financial performance. This paper provides a more nuanced understanding of the effects of crises on PPPs, which can inform future research and policy decisions.

The next two papers focus on the emerging trend of smart infrastructure. Among these two papers, the fifth paper by Nguyen, Tiep; Hallo, Leonie; Gunawan, Indra identifies critical risks and major categories of risks to be considered by PPP investors while investing in smart transport infrastructure projects. The sixth paper by Jayasena, Nimesha; Chan, Daniel; Kumaraswamy, Mohan analyses the benefits, enablers, and barriers in deploying PPPs for smart infrastructure in non-urban areas. Both these papers take forward the discourse of PPPs in the “future” with smart infrastructure.

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3 Finally, the authors of the seventh paper, Akomea-Frimpong, Isaac; Jin, Xiaohua; Osei-Kyei, Robert;  
4 Tetteh, Portia; Tumpa, Rokhsana; Addo, Joshua; Pariafsai, Fatemeh, focuses on circular economy model  
5 in the context of PPPs, which has gained increasing attention in the “present” and will be an important  
6 facet for all “future” PPPs. This paper has identified key success factors for contributing to developing  
7 our envisaged circular economy, through PPP infrastructure projects, namely environmental factors,  
8 sustainable economic growth, effective stakeholder management, sufficient funding, utilisation of low  
9 carbon materials and effective supply chain and procurement strategies. Identified focus areas for  
10 circular economy business models are extension of project lifecycle value, circular inputs, and recycling  
11 and reuse of built components and built assets themselves.  
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