

Leading approaches to Public Private Partnerships (PPP) and infrastructural investment

Elena Tarkhanova

University of Tyumen
Volodarskogo Street 6, 625003 Tyumen
Russian Federation
e-mail: tarhanova333@mail.ru

Artem Shikhov

University of Tyumen
Volodarskogo Street 6, 625003 Tyumen
Russian Federation
e-mail: artemwux@gmail.com

Daria Lazutina

University of Tyumen
Volodarskogo Street 6, 625003 Tyumen
Russian Federation
e-mail: 72ldv@mail.ru

Abstract This paper focuses on the leading role of the Public Private Partnerships (PPP) in providing infrastructure services using infrastructural investments. We focus on the role and the position of PPPs in the public and private sectors and discuss their leading role and their evolvement from their origins until nowadays.

We find that PPPs constitute an important contribution to development of the public sector through providing cheaper and more efficient opportunities and solutions. Moreover, they constitute the most innovative approach to the efficient infrastructural investment.

Our paper analyzes the examples of successful PPPs from all around the world for showing our main points and arguments. We conclude by highlighting the important and timely role of PPPs not only in today's Russia but worldwide.

1 Introduction

Public Private Partnerships (PPP) are defined as the cooperative arrangement between two or more public and private sector entities. These partnerships that provide benefits for all sides of the agreement and ease the financial burden gained particular popularity in the late 20th century and in the beginning of the 21st century (Li et al. 2005; or Berduygina et al. 2017). In a way, they constitute an effective tool that governments can use to provide the necessary infrastructure services.

Naturally, however, PPP approach is very popular in various forms of industries. In some countries, like, for example, India, there exists a sophisticated and strong private sector, so the companies are somewhat more apt to considering issues that are social-bound and may tend to associate with foreign FDIs and aid agencies such as USAID (Kuriyana and Ray 2009). The amount of innovation in the infrastructure sector in contrast to other areas and fields of production (for instance, the automobile industry) is much lower. As an innovative technology company that develop jobs and its main objective is to maximize its business. The building firm utilizing the concession contract draft would want to construct a financial model and earn a bid to get the job after already having procured the funding that is required (Feng et al. 2017).

It is a widely used practice that PPP agreements cover the development and management of new infrastructures, agreements to implement significant improvements in existing infrastructure (called PPP infrastructure) and contracts with a private partner who manages existing infrastructure or provides or operates only public services (known as PPP services) (PWC 2019).

In the above-described case, the private partner may be consortium of companies with a field of expertise, public company or a privately-owned business. A booming partnership and common goals of both businesses embrace, identifying price. Such partnerships are not new. Smartly designed partnerships will trump every second to laissez faire, and everybody will profit in the long run (De Graauw and Bloemraad 2017).

However, there are still numerous barriers and a few concerns also for PPP to overcome and to be conscious of. The significance of the overall and decent infrastructure market is apparent. The comprehension of the supply

chain, the neighborhood market and the way that they secure together with the relevant local and worldwide benchmarks might permit to add value to any proprietor's team on capital projects. And this is not to mention such issues as tax evasions, frauds, or corruption (Jiroudková et al. 2015).

To begin with, governments should bring talent that understands technology and will deliver services (Xing et al. 2018). It should understand and be aware of what services it must deliver, and companies understand they wish to help. The government has introduced several approaches to manage urban troubles. It should do it and stop the blame game that is too feeble. Most governments lack the suitable accounting methodology and do not have a combined selection of each their assets, let alone a valuation of their portfolios. The condition of transport infrastructure is a massive concern for governments (Groenfeldt 2018)

In case the opportunity of bringing investment is adjacent to none, the authorities in addition to the implementing bodies are not usually consulted with stakeholder and determines PPP projects. The undertaking would give a test case for rural electrification's impact. Regardless of the shipping method but with P3 agencies should consider the impact of design excellence. New port projects and logistics hubs have been in the process of working towards enticing global producers and further boosting the nation's competitiveness. Infrastructure development functions under the installation that similar with different industries. Data management and the data collection have to mitigate dangers created by infrastructure projects' complexity and long-term character (Whyte et al. 2016). There is also a danger of economic crimes, for example tax evasion that is characteristic for certain geographical areas or countries (Strielkowski and Čábelková 2015).

Listed infrastructure equities offer customers a liquid means to seek moderate term capital appreciation and revenue flows in the long run. In general, investors are delighted with the job of equity. In addition, investors are always willing to put money into public infrastructure which has a speed of return with escalations that are anticipated (Sihombing et al. 2018). Such investors have enough staff or experience in house to carry out due diligence on individual project-finance deals, but they are prepared to rate infrastructure portfolios that are large. Retail investors may need to look at doing the specific same. Plenty of investors came to that same decision over the last ten years while the market flourished, and the government started to stabilize itself. Above all, the investors and consumers are alert to the advantages of clean technologies and environmental impact, absence of incentives to produce their products.

Private equity funds are undertakings. Nearly all the financing is anticipated to come from private investors, although money strapped states and cities are going to be on the hook for the vast majority of the rest. It is just as important to invest it wisely while it's essential to have funding that is enough. What becomes clear, however, is that funds should find its solution to infrastructure projects. Public financing is very challenging to be utilized in infrastructure development. Moreover, one can clearly see that in addition to private procurement and public investment financing, PPPs have two other key features: the focus on services and investments in the private sector (Iossa and Martimort 2015).

With regard to the above, there is a standard and poor definition of PPP which is a medium to long-term relationship between the public and private sector which consists in the risk sharing and benefits of multisectoral skills, expertise and funding to achieve the desired political results. For example, there should be evidence of megapixel portfolios in the energy, transport and water industries that benefit from economic, social and environmental benefits.

It is important to note that if states are funding multi-million infrastructure projects, funding for more sustainable, decentralized and democratically run infrastructure or other budget priorities (e.g. social security, health care) will not increase (Giungato et al. 2017). In addition, the infrastructure scale and PPP initiative supported by national and multilateral G20 banks could benefit from massively large losses and therefore attempt to socialize losses.

2 PPPs and infrastructure in the world

Throughout the world, PPPs are often perceived as a means of contracting for the development and maintenance of infrastructure services, using the innovation and skills of the private sector to manage activities that often use private finance (Carbonara and Pellegrino 2018).

One can see that PPPs represent a means of contracting services, using innovation and experience in the private sector, and often using private finance. In addition, PPPs are best seen as a special type of contract in infrastructure provision, such as building and equipping schools, hospitals, transportation, water and sewer systems (Della Rocca 2017).

In other types (including PFI), the private sector invests capital on an agreement with the government to provide agreed services and the costs of providing services are wholly or partly or partly or partly or partly or partly borne by the government.

A common driver is the claim that PPPs allow the public sector to use the experience and efficiency that the private sector can bring to the supply of certain facilities and services that have traditionally been provided and offered by the public sector (Himmel and Siemiątycki 2017).

For PPP projects where the cost of using the service is to be borne exclusively by the end user, PPP is a "non - balance" method of financing the delivery of new or renewed public sector assets from the public sector perspective. Figure 1 that follows provides a classification of PPP types in a form of a neat diagram.

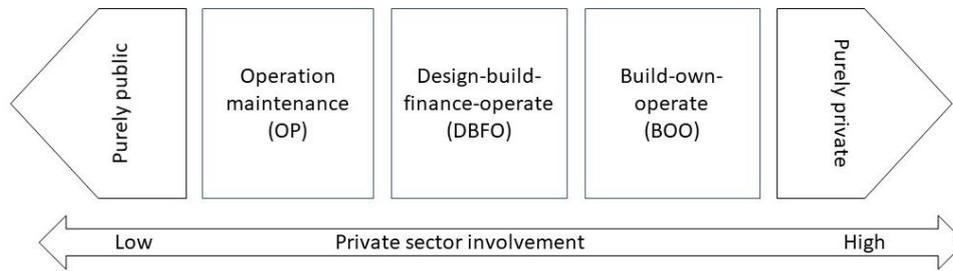


Fig. 1. PPP types and classifications
Source: Own results

In PPP projects, where the public sector intends to compensate the private sector for the availability of payments after the establishment has been established or renewed, the financing is, from the public sector's point of view, a "balance sheet", but the public sector will regularly receive significant deferred cash flows. Granting of "direct infrastructure financing" by raising taxes or issuing state bonds may be better, but it is a question of political issues.

Accounting practices enable nations to maintain future costs and unforeseen commitments in their national balance sheets, which means that the real costs of projects remain hidden. A controversial source of funding for government projects, PPPs are returning to the current IMF meetings of the World Bank in Washington, which are called mixed financing (Bayliss and Van Waeyenberge 2018). Thus, one can see that for example EU PPPs (as opposed to their American counterparts) cannot be considered a cost-effective option for the provision of public infrastructure.

In general, the cost of funding for PPP will be higher than for traditional public finance because the private sector will be higher in terms of capital costs. However, additional financing costs may be offset by the efficiency of the private sector, savings from a holistic approach to project or service delivery and improved long-term risk allocation. Investments in infrastructure in the public sector are seen as an important way to maintain economic activity, as the European Commission estimates (Crescenzi et al. 2016)). Infrastructure projects and investment initiatives are financially supported by governments, multilateral organizations and large institutions and individuals in the private sector.

Disaster management's public - private partnerships combine the private sector for PPP models with a toolbox of collaborative opportunities for resilience, capacity building and sustainable development. For example, it is quite common for a contractor or service provider to have equity in the capital structure of a project financing.

However, tax liabilities can increase significantly if the risks (e. g. in connection with the level of demand for infrastructure services, the shortage of fee collection, delays in the acquisition of land or construction plans, the escalation of foreign entries). For example, in July 2012, the Irish government announced plans to launch a new EUR1, 4 billion PPP public infrastructure investment program in response to the tax crisis as part of a larger 25-billion-euro stimulus (DPER 2012). Thus, it is clear that PPPs have played a very important role in facilitating the implementation of major infrastructure projects in various sectors.

3 Public and private sector cooperation

One can see that public and private sector cooperation provides crucial technical support to governments in developing strategies and frameworks for revenue management, taxation, public sector management, fiscal policy, budgeting, compensation, public sector spending, programme evaluation, privatisation and self-management.

Today's global economic volatility demands that public institutions have to build sound financial and process structures - strengthening public finance, promoting investment, growth, responsiveness and adaptability.

Thence, it is important to have a solid framework and strategy for public and private financial institutions to ensure sustainability, efficiency, growth and profitability. Rapid and huge changes in the public and private sector require solutions and services tailored to institutional processes, people and technology. Figure 2 that follows shows the critical success and failure factors for PPPs in a form of a chart.

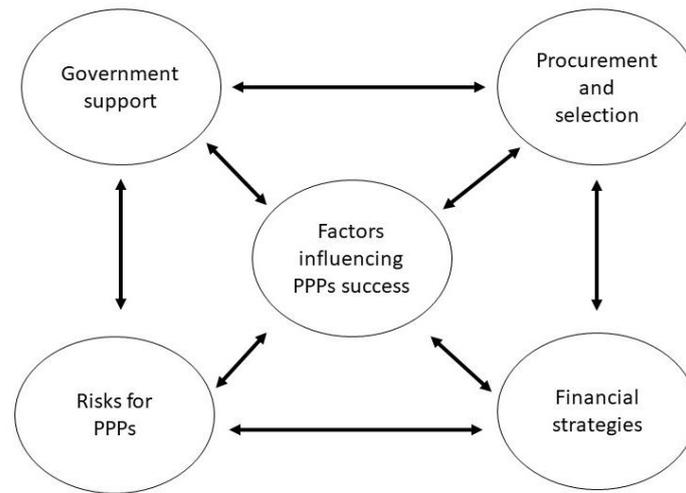


Fig. 2. PPP leading critical success and failure factors
Source: Own results

Generally, it already becomes clear that Public Private Partnerships are an important means of financing and supporting infrastructure projects and services. Strategic collaboration with other investment partners enables large corporations to create opportunities for private sector participation in infrastructure and public services in its programmes.

Through PPPs, large businesses are committed to mobilizing the capital, expertise and efficiency of the private sector to provide faster, better and more affordable services and achieve more sustainable results.

PPPs are best seen as a special type of contract in infrastructure provision, such as building and equipping schools, hospitals, transportation, water and sewer systems. In other types (including PFI), the private sector invests capital on an agreement with the government to provide agreed services and the costs of providing services are wholly or partly or partly or partly or partly or partly borne by the government.

A common driver is the claim that PPPs allow the private sector to use the experience and efficiency that the private sector can bring to the supply of certain facilities and services that have traditionally been provided and provided by the public sector. For PPP projects where the cost of using the service is to be borne exclusively by the end user, PPP is a "non-balance" method of financing the delivery of new or renewed public sector assets from the public sector perspective (Hossain et al. 2019).

As far as PPP projects are concerned, whenever a situation arises when the public sector intends to compensate the private sector for the availability of payments after the establishment of a company, the public sector will regularly receive significant deferred cash flows.

However, additional financing costs may be offset by the efficiency of the private sector, savings from a holistic approach to project or service delivery and improved long - term risk allocation.

Massive financial injections into the infrastructure of the public sector are perceived as an important way for fostering economic activity. Good management is a key factor in the provision of shared services and those services that are more difficult to monitor so that the municipal or public control would not be able to fully control or supervise it.

International Public Development Projects (PDPs) are typically created in order to enhance research and development of goods and services that are not profitable or viable for private companies. Projects funded by the public, with intellectual property rights and focused on the specific markets, are able to concentrate on their goals and objectives rather than to preoccupy about recovering development costs through the profitability of the goods and services they offer.

In addition, disaster management's public-private partnerships combine the private sector for PPP models with a toolbox of collaborative opportunities for resilience, capacity building, and sustainable development. For example, it is quite common for a contractor or service provider to have equity in the capital structure of a project financing. For example, in Canada, the government has set up a public partnership fund to develop and facilitate the financing and implementation of infrastructure projects across Canada. Comprehensive support programmes are invaluable elements of the most successful service offerings, including the british partnership initiative, the canadian construction Canada and the Victoria partnership programmes (Romoff 2014).

PPP partnerships provide technical support to public sector partners and formal training in the technical skills and knowledge base necessary to launch, manage and evaluate private partnerships.

Today, any PPP initiatives need an extensive experience in bringing innovation processes based on the realities of citizens and companies that promote collaboration across the public sector. Working with numerous

clients and geographical locations, any viable project should be checked for municipal charts, citizen information maps and participative. Budgeting here becomes a basis for direct discussions between citizen groups and service providers.

Government officials and service providers were obliged to take into account the demands of citizens and to respond with appropriate policies and solutions, as possible. Public performance reports were at the heart of any governmental strategy for improving public services. Public Private Partnerships in which the private sector is building, controlling and managing infrastructure projects under strict government supervision and regulation can help bridge this gap.

When deciding whether or not to use PPPs in a particular state, companies should look at the planned pipeline of projects in both countries and sectors, as the creation of local teams and consortium, as well as the conduct of a preliminary legal and market due diligence can be costly.

For example, in a central European country, electricity distribution companies have carried out detailed analyses of cost benefits and international benchmarking of smart meter deployment options for residential customers.

All in all, one can see that technology is a key mechanism for strengthening the government's position to improve operational performance, modernise systems, discover insights, manage risks and stimulate innovation.

4 Strategies for delivering public services and infrastructure

With the passing of time, as soon as there is a sector established, blending is essential. In other words, foreign direct investment goes where it is most protected and secured. Public financing is not an answer. Infrastructure investment is a huge market industry that is experiencing considerable financing challenges. It does not keep pace with an increasing population, particularly in large cities. There is another means of funding public sector infrastructure investments, and that's through the specialist management of their present wealth. While the private and public sector strategies are discordant, they are not entirely mutually exclusive.

Some enterprises may maintain a cloud for other technical solutions too. Department or a particular business might have several products. Firms are structured to maximize efficiency for a way to stay profitable. They are unique, therefore there's no one-size-fits-all strategy. The organization is employing the AWS support and enterprise support plan to deal with issues that spring up. High-tech businesses have already become uncatchable. Consequently, businesses should have answers that are strong if they wish to exist.

Since cloud providers are public hence it is dependent on the supplier about how they're taking good care of your information. Cloud services requires input from several disciplines in a organization. Managed cloud services supplies customers with solutions that run and are kept by HPE specialists using our standardized best practices, enabling you to concentrate on running your small business versus infrastructure services. Before picking cloud solutions, it is required that you locate. Concerning information jurisdiction, all of the important cloud providers eventually have operations and enable you to select where the sensitive information is stored.

A non-profit project can be shuttered for almost any range of reasons and quit doing its work. Since all information are operating together here the IT of an organization plays a role. It is not feasible for a single organisation to do it achieving a systemic approach is taken by impact throughout the industry. It is normal for organisations to have a tech strategy that is viable worldwide.

Future-proofing strategies are getting more and more critical for adapting the worldwide boom in urban populations, and also the continuing technological change that's changing the way we live and work. Equally, as a leader one needs to be developing a strategy that is technology-driven. Degree technician strategy often involves a whole lot more detail. Exciting plans for extra infrastructure development later on (such as railways) and the growth of new mega cities in the region will likely follow on from their present world firsts. In building a project successful no matter the shipping methodbut with P3 bureaus ought to think about the effect of design excellence. In spite of the rush of completing large-scale IT projects, there has been a failure. Projects ought to be carried out together with private businesses.

There is just one approach to end with success but innumerable methods to fail. Putting the success of any organization within an entire organisation making the same assumptions would be a wager that is large. To put it short and concise, any company's future nowadays depends upon the good IT.

The personal sectors contribution is necessary for all characteristics of the value series and they will need to come and encourage the efforts of the public sector to take care of the challenges related to urbanization and allow the delivery of solutions that are renewable human-centric. Tracking investments to be certain that the benefits are accomplished. The very first advantage is company agilitythe capability to check out new things . For instance, if one takes a look at the advantages of running sophisticated statistical prediction models, she or he can react to economic changes at a worldwide scale. The success of PPPs often depends on these solutions and approaches.

Infrastructure's capacity to bring opportunity and rise is determined by how one funds it. There is clearly a demand for some method without sacrificing the time to select the product from shelves and there is where PPS are important. Using private funding for infrastructure projects in the United States is not robust since funding needs a revenue stream to repay the loan.

Among the most efficient tools that can be observed is the capability to project to a merchandise or get the cloud application. Digital assets which may be leveraged throughout the organization are also created by such tools.

5 Conclusions

Overall, it becomes obvious that PPP have the potentials of producing a plethora of benefits for the public sector by increasing the value of funds spent for infrastructure services via offering efficient, cheaper and reliable services, reducing the financial burden on the public sector due to rising infrastructure costs, allowing risks to be shifted from the public to the private sector, just to name a few.

Generally, it become obvious that PPPs represent a useful approach to the creation of more efficient infrastructure development and enhancement projects not only in Russian Federation but also all around the world. Thence, it appears reasonable and wise to generate public support for such initiatives and to ease the administrative rules and regulations for their operation. PPPs might not lack some minor issues, but they also represent the most optimal approach to tackling important system changes and reforms.

References

- Bayliss K, Van Waeyenberge E (2018) Unpacking the public private partnership revival. *The Journal of Development Studies* 54(4):577-593. doi:10.1080/00220388.2017.1303671
- Berduygina ON, Vlasov AI, Kuzmin, EA (2017) Investment capacity of the economy during the implementation of projects of public-private partnership. *Investment Management and Financial Innovations* 14(3):189–198. doi: 10.21511/imfi.14(3-1).2017.03
- Carbonara N, Pellegrino R (2018) Fostering innovation in public procurement through public private partnerships. *Journal of Public Procurement* 18(3):257-280. doi: 10.1108/JOPP-09-2018-016
- Crescenzi R, Di Cataldo M, Rodríguez-Pose A (2016) Government quality and the economic returns of transport infrastructure investment in European regions. *Journal of Regional Science* 56(4):555-582. doi: 10.1111/jors.12264
- De Graauw E, Bloemraad I (2017) Working together: Building successful policy and program partnerships for immigrant integration. *Journal on Migration and Human Security* 5(1):105-123. doi: 10.1177/233150241700500106
- Della Rocca M. (2017) The rising advantage of public-private partnerships. <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/the-rising-advantage-of-public-private-partnerships>. Accessed 15 February 2019
- DPER (2012) Minister Howlin announces an additional €2.25 billion domestic infrastructure stimulus to create much needed jobs. <https://www.per.gov.ie/en/minister-howlin-announces-an-additional-e2-25-billion-domestic-infrastructure-stimulus-to-create-much-needed-jobs/>. Accessed 07 February 2019
- Feng K, Xiong W, Wang S, Wu C, Xue Y (2017) Optimizing an equity capital structure model for public–private partnership projects involved with public funds. *Journal of construction engineering and management* 143(9): 04017067. doi: 10.1061/(ASCE)CO.1943-7862.0001349
- Giungato P, Rana R, Tarabella A, Tricase C (2017) Current trends in sustainability of bitcoins and related blockchain technology. *Sustainability* 9(12):2214. doi:.3390/su9122214
- Groenfeldt, T (2018) 'Blended Finance' -- Lipstick on The Public-Private Partnership Pig? <https://www.forbes.com/sites/tomgroenfeldt/2018/04/20/blended-finance-lipstick-on-the-public-private-partnership-pig/>. Accessed 10 February 2019
- Iossa E, Martimort D (2015) The simple microeconomics of public-private partnerships. *Journal of Public Economic Theory* 17(1):4-48. doi: 10.1111/jpet.12114

- Himmel M, Siemiatycki, M (2017) Infrastructure public–private partnerships as drivers of innovation? Lessons from Ontario, Canada. *Environment and Planning C: Politics and Space* 35(5):746-764. doi: 10.1177/2399654417701430
- Hossain M, Guest R, Smith C (2019) Performance indicators of public private partnership in Bangladesh: An implication for developing countries. *International Journal of Productivity and Performance Management* 68(1):46-68. doi: 10.1108/IJPPM-04-2018-0137
- Jiroudková A, Rovná LA, Strielkowski W, Šlosarčík I (2015) EU Accession, Transition and Further Integration for the Countries of Central and Eastern Europe. *Economics and Sociology* 8(2):11-25. doi: 10.14254/2071-789X.2015/8-2/1
- Kuriyan R, Ray I (2009) Outsourcing the state? Public–private partnerships and information technologies in India. *World Development* 37(10):1663-1673. doi: 10.1016/j.worlddev.2009.03.005
- Li B, Akintoye A, Edwards PJ, Hardcastle C (2005) Perceptions of positive and negative factors influencing the attractiveness of PPP/PFI procurement for construction projects in the UK: Findings from a questionnaire survey. *Engineering, Construction and Architectural Management* 12(2):125-148. doi: 10.1108/09699980510584485
- PWC (2019) A growing market for public-private partnerships in the US. <https://www.pwc.com/us/en/industries/capital-projects-infrastructure/library/public-private-partnerships.html>. Accessed 17 March 2019
- Romoff M (2014) P3 innovation: the Canadian model. <https://publicsectordigest.com/article/p3-innovation-canadian-model>. Accessed 10 April 2018
- Sihombing LB, Latief Y, Rarasati AD, Wibowo A (2018) Project Financing Models for Toll Road Investments: A State-of-the-Art Literature Review. *Civil Engineering and Architecture* 6(3):115-127. doi: 10.13189/cea.2018.060301
- Strielkowski W, Čábelková I (2015) Religion, culture, and tax evasion: Evidence from the Czech Republic. *Religions* 6(2):657-669. doi:10.3390/rel6020657
- Whyte J, Stasis A, Lindkvist C (2016) Managing change in the delivery of complex projects: Configuration management, asset information and ‘big data’. *International Journal of Project Management* 34(2): 339-351. doi: 10.1016/j.ijproman.2015.02.006
- Xing Y, Liu Y, Cooper SCL (2018) Local government as institutional entrepreneur: Public–private collaborative partnerships in fostering regional entrepreneurship. *British Journal of Management* 29(4): 670-690. doi: 10.1111/1467-8551.12282