



IMPROVING THE FINANCING OF INFRASTRUCTURE PROJECTS BASED ON PUBLIC-PRIVATE PARTNERSHIPS (PPP)

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ABSTRACT	KEYWORDS
<p>This article examines the development, implementation, and key challenges of public-private partnership (PPP) mechanisms in Uzbekistan, with a focus on their role in infrastructure financing and socio-economic development. The study analyzes national legal and institutional frameworks, including the Law on Public-Private Partnership and strategic government programs such as the “Development Strategy of New Uzbekistan 2022–2026” and “Uzbekistan–2030”. It also explores sectoral PPP initiatives in energy, transport, education, healthcare, and water management, highlighting their contribution to improving public services and attracting private investment.</p> <p>The research draws on statistical data from national ministries and international organizations, including the OECD and Asian Development Bank, to assess investment trends, project implementation dynamics, and regional distribution of PPP projects. The findings indicate that while Uzbekistan has made significant progress in expanding PPP practices and attracting foreign and domestic investment, several challenges remain. These include inefficient risk allocation, growing contingent liabilities, delays in user payments, macroeconomic volatility, and regulatory uncertainties.</p> <p>The study concludes that PPPs play a crucial role in addressing infrastructure gaps and enhancing economic efficiency, but their success largely depends on effective governance, transparent institutional mechanisms, and balanced risk-sharing between public and private partners. Strengthening these aspects is essential for ensuring sustainable infrastructure development and long-term economic growth in Uzbekistan.</p>	<p>Public-Private Partnership (PPP), infrastructure development, investment, risk sharing, public sector, private sector, financing, economic efficiency, Uzbekistan, institutional framework.</p>

Introduction

Today, the need to support the large-scale reforms being implemented in our country to improve the welfare of the population, enhance living standards, and further develop public-private sector cooperation is steadily increasing. The practice of establishing public-private partnership mechanisms for infrastructure development and investment attraction has already been formed, and the experience of developing countries also confirms this. Increasing the participation of the private sector in those

sectors of our economy that require significant capital investment remains another pressing issue that needs to be addressed at present.

The Law of the Republic of Uzbekistan No. 112 “On Public–Private Partnership”, adopted on 10 May 2019, stipulates that, in accordance with the legislation on public–private partnerships, the public partner is required to provide guarantees and ensure free access to information on PPP rules and procedures. In the implementation of public–private partnerships in our country, both the public partner and the private partner must have equal rights. The rules and procedures governing public–private partnerships should also be open, transparent, and understandable to all stakeholders. In addition, compliance with PPP regulations and processes, the use of competitive selection mechanisms based on the best alternative to ensure impartiality, and decision-making based on fair and objective standards for selecting private partners are essential principles. It is of great importance that the government treats all parties equally in the process of selecting a private partner and implementing cooperation. In these processes, ensuring equal rights of tender participants, maintaining impartiality and transparency in the selection of private entities, and, most importantly, preventing corruption and conditions conducive to it are necessary.

Literature review on topic

A. O. Hirschman (1958) and later D. Biehl (1994) described infrastructure as capital that provides public services. Infrastructure is, by its nature, like a crossroads: it is successful when governments or governing entities, together with a strong private sector, work jointly to achieve development objectives or desired outcomes such as production, transport, communication, healthcare, and education. [1].

The views expressed by R. Nurkse highlight the impact of infrastructure projects composed of elements that serve productive capacity. He also emphasized that infrastructure, despite resembling a small-scale sector in structure, is in fact highly important and significant, and that the public–private partnership mechanism plays a crucial role in its development and formation. [2].

In the research works of N. N. Oblomurov, it is emphasized that it is appropriate to encourage the implementation of investment projects with the participation of foreign direct investment in priority sectors such as road construction and transport infrastructure, alternative energy sources, and social facilities, including tourism infrastructure projects, based on the principles of public–private partnership. [3].

According to J. J. Qurbonov, “relations between the public and private sectors are primarily focused on the provision of goods and services to the population, as well as the delivery of infrastructure services. Private sector funds play a significant role in the implementation of socially important infrastructure projects.” [4].

According to T. Atamurodov and B. Hamroyev, “the economic and social problems arising from insufficient or underperforming infrastructure worldwide have become a pressing issue of the time, requiring joint solutions from governments and businesses.” [5].

Research methodology

This study employs a qualitative and quantitative research approach to analyze the development and implementation of public–private partnership (PPP) mechanisms in Uzbekistan. The research is based

on a systematic review of scientific literature, national legislation, government programs, and international reports related to PPP practices and infrastructure development.

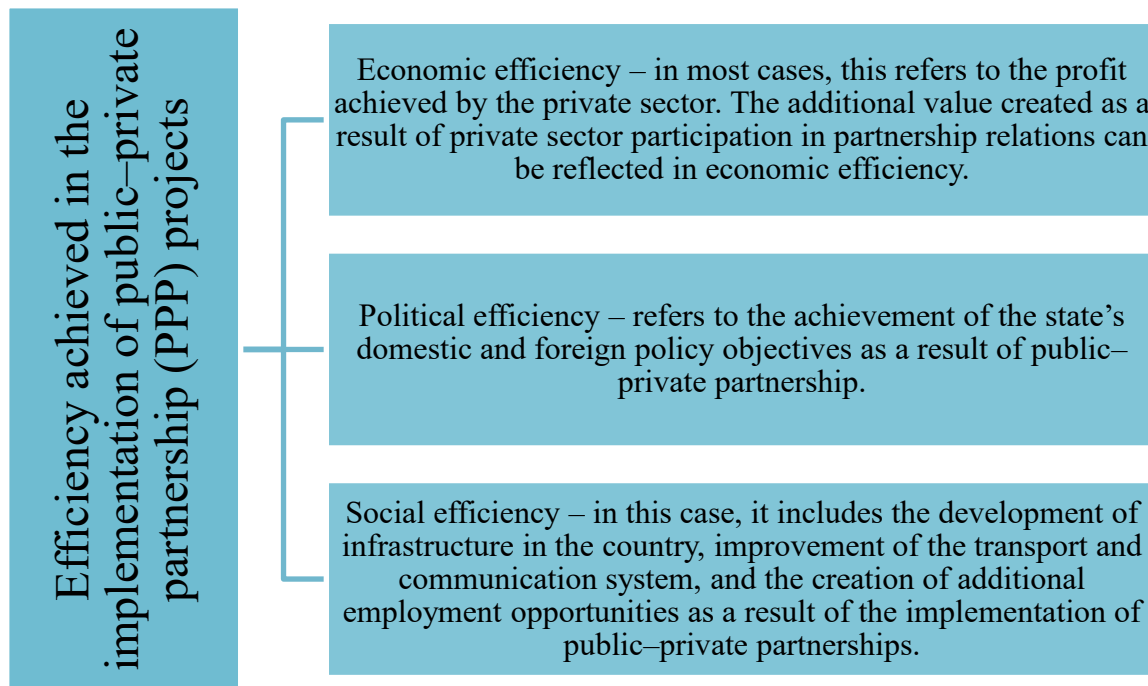
The qualitative component includes content analysis of legal documents such as the Law of the Republic of Uzbekistan “On Public–Private Partnership” and strategic frameworks like the “Development Strategy of New Uzbekistan 2022–2026” and “Uzbekistan–2030” strategy. In addition, academic publications by local and international scholars are analyzed to identify theoretical perspectives and conceptual approaches to PPP implementation.

The quantitative component is based on secondary data collected from official sources, including the Ministry of Economy and Finance of the Republic of Uzbekistan, the Asian Development Bank (PPP Monitor: Uzbekistan), and OECD reports. Statistical analysis is used to evaluate investment volumes, sectoral distribution of PPP projects, and regional implementation dynamics.

Comparative and descriptive analysis methods are applied to assess international experience and compare it with Uzbekistan’s PPP development trends. The study also utilizes trend analysis to examine changes in PPP project implementation over time.

Analysis and discussion of results

The public–private partnership (PPP) mechanism is considered one of the alternative approaches to financing infrastructure development or modernization. As an alternative to public procurement-based financing, it can accelerate the infrastructure development process. Although funds for infrastructure projects are sometimes provided not from the state budget but by the private partner (in the form of private equity or debt capital raised through a PPP company), many projects are still financed or supported by the public sector to attract and facilitate private participation. However, many PPPs may not affect public debt levels, provided that they meet certain criteria, depending on the national accounting standards of the country concerned. It is well known that the main internal sources of investment attraction in the economy are, first and foremost, the state and private business entities operating within the country. Therefore, according to economists, cooperation between the public and private sectors in economic activity represents an institutional and organizational partnership aimed at attracting and implementing investments in socially and economically significant projects across a wide range of sectors. Since social problems such as hunger, poverty, and inequality cannot be resolved in the short term, long-term investment and management strategies implemented through public–private partnerships can create higher social value in the country [6]. Public–private partnership is an institutional and organizational alliance between the public and private sectors aimed at implementing socially important projects and programs across various fields, ranging from research activities to service provision. The effectiveness achieved in the implementation of PPP-based projects can be classified into three types (Figure 1).



* Compiled by the author based on scientific studies.

Figure 1. Types of efficiency achieved in the implementation of public-private partnership projects

According to paragraph 105 of the State Programme approved by Annex 2 of the Decree of the President of the Republic of Uzbekistan dated 28 January 2022 No. PF-60 “On the Development Strategy of New Uzbekistan for 2022–2026”, it is planned to implement 154 public-private partnership (PPP) projects worth approximately USD 14 billion in sectors such as energy, transport, healthcare, education, ecology, communal services, water management, and other areas. [7].

In the Republic of Uzbekistan, significant progress was achieved in the first quarter of 2026 in the development and expansion of public-private partnership (PPP) mechanisms. According to data from the Ministry of Economy and Finance of the Republic of Uzbekistan, during the first three months of 2026, a total of 59 new PPP project agreements worth USD 547.2 million were signed and officially included in the national registry.

The Resolution No. 308 within the framework of the “Uzbekistan – 2030” Strategy is a comprehensive plan aimed at further improving the country’s infrastructure and economic environment during the 2024–2030 period through the development of public-private partnership (PPP) projects. This resolution envisages attracting USD 30 billion in private investment to key sectors in order to significantly improve the country’s socio-economic infrastructure.

Below, detailed information is provided on the sectors of the economy and types of projects to be implemented.

1. Electricity generation and distribution: Transfer of management. One of the most important initiatives in the energy sector involves transferring the management of electricity and natural gas distribution networks to more efficiently operating private operators by 2027. This measure is expected to improve the efficiency and reliability of energy resource distribution across the country.

2. Transport infrastructure: Expansion of highways. According to the plan, the construction of 1,000 kilometers of modern toll highways is envisaged in order to significantly improve the country's transport network. Among the most important projects are the Tashkent–Samarkand and Tashkent–Andijan highways. These projects are expected to ensure more convenient, faster, and more efficient movement of goods and passengers between key economic regions.

3. Education sector: Schools and preschool education institutions. The large-scale development of education infrastructure is planned, with the construction and management of at least 100 schools and preschool education institutions annually starting from 2026. This initiative is aimed at meeting the growing demand for quality educational facilities and is expected to significantly contribute to the education and comprehensive development of the country's youth.

4. Healthcare infrastructure: Multispecialty hospitals. Particular attention is being paid to the establishment of multispecialty hospitals operated under private management in the healthcare sector. This approach is aimed at expanding access to high-quality medical services for the population and ensuring that a larger number of citizens benefit from modern and advanced healthcare facilities. The transition of hospitals to private management is expected to introduce advanced experience, modern approaches, and higher efficiency in their administration. As a result, the quality of services and operational efficiency of these medical institutions are expected to further improve.

5. Implementation and governance: Role of regional authorities. The Resolution No. 308 places special emphasis on the responsibility of regional authorities, assigning them personal accountability for land allocation within their territories as well as for the successful implementation of projects. This decentralized approach is aimed at ensuring the effective planning and implementation of projects, taking into account local needs and existing conditions. As a result, the specific characteristics and development requirements of each region are considered, contributing to improved efficiency and effectiveness of project outcomes.

6. International promotion and development of expertise. The Ministry of Investments, Industry and Trade is responsible for promoting these PPP projects at the international level and attracting global investors and partners. In addition, a special project office established within the Ministry of Economy and Finance focuses on the professional management of projects, as well as on training and developing qualified specialists in the PPP field. This ensures the effective implementation of projects and their alignment with international best practices.

According to a 2019 report by the Organisation for Economic Co-operation and Development (OECD) on sustainable infrastructure development in the region, Uzbekistan's energy and water sectors require substantial investment to address technological inefficiencies and meet growing demand. At the same time, the country's transport infrastructure has not been developing in line with population growth and economic expansion. The report notes that outdated technologies in the energy sector and inefficient demand management result in capital costs of approximately USD 1.5 billion annually. Furthermore, the heavy reliance on natural gas for electricity generation increases risks related to energy security and vulnerability to climate change.

The low quality of water management and irrigation infrastructure results in economic losses of up to 8% of GDP annually, making investments in sustainable water resource management in this sector critically important.

Transport infrastructure is also lagging behind population growth and economic development. By 2050, traffic volume on roads is expected to increase by 50%, which will require expanding road

capacity by up to 1,365%. In addition, railway transportation is projected to grow from 7.2 million tons in 2018 to 8.5 million tons by 2035, mainly due to the construction of new routes in the Kyrgyz Republic and Tajikistan.

In 2024, total investments in the social sector amount to approximately USD 6.1 billion and are distributed as follows (Table 1).

Table 1 Distribution of social sector investments in 2024

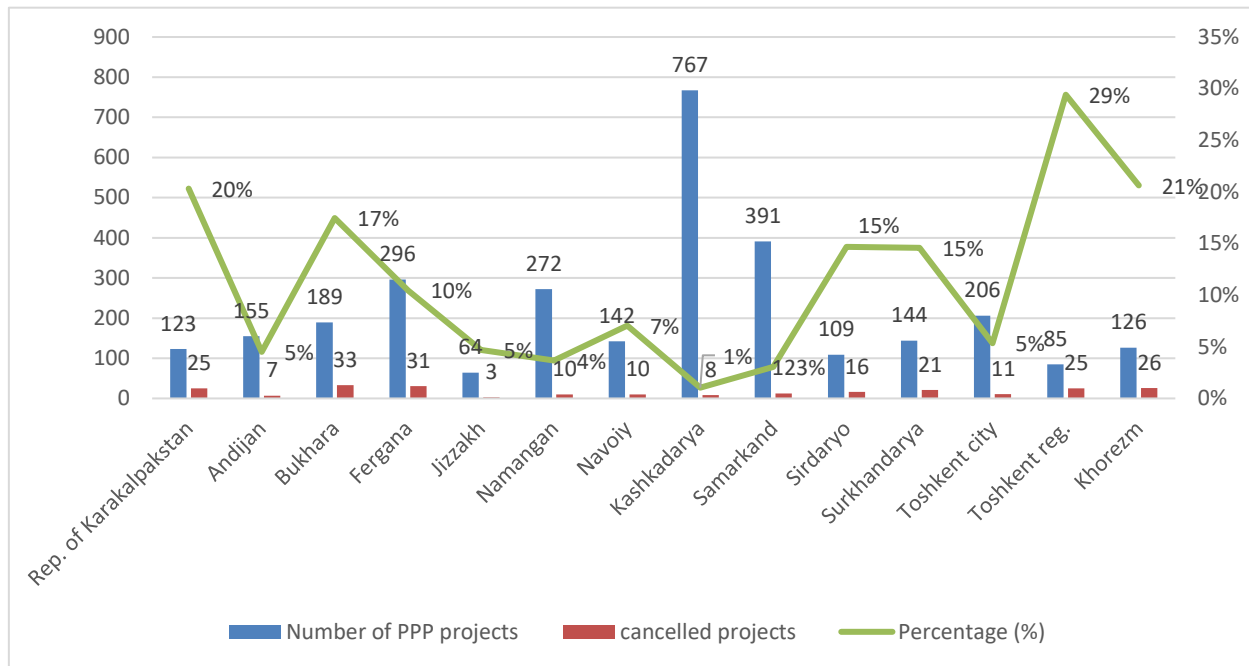
Social sector	Implemented projects	Allocated investment
Preschool education	Construction and equipping of 100 preschool education institutions in the Republic of Karakalpakstan and the city of Tashkent.	USD 410 million
Schools	Construction of 13 schools in the city and region of Tashkent, 15 schools in each of the Andijan, Samarkand, Fergana, and Namangan regions, as well as 100 schools in the Republic of Karakalpakstan and the city of Tashkent.	USD 4.1 billion
Higher education	Construction of student dormitories in higher education institutions and the creation of a total of 17,000 bed spaces.	176 million US dollars
Healthcare	Establishment of multispecialty hospitals in the Bukhara and Andijan regions, construction of 800-bed hospitals in the Fergana and Samarkand regions, as well as the establishment of medical diagnostic centers in the Jizzakh, Namangan, and Kashkadarya regions.	USD 1.4 billion

** Prepared by the author based on data from the Asian Development Bank’s Public–Private Partnership Monitor: Uzbekistan.*

During the period 2022–2026, negotiations are being conducted in the water management sector on the implementation of projects to operate pumping stations in the Jizzakh and Syrdarya regions using alternative energy sources in cooperation with Germany’s “Mikara” company, as well as a project to operate pumping stations in the Republic of Karakalpakstan using alternative energy sources in cooperation with the UAE’s “Alcazar” company.

In accordance with paragraph 216 of the State Programme, it was planned to construct 47 student dormitories with a total capacity of 18,800 places in 2022 on the basis of public–private partnership (PPP), and the relevant measures are being implemented to carry out these projects.

In addition, in accordance with Resolution No. 563 of the Cabinet of Ministers, it is planned to construct 228 student dormitories with a total capacity of 91,200 places on the basis of public–private partnership (PPP) for students of higher education institutions during 2022–2025.



* Prepared by the author based on data from the official website of the Ministry of Economy and Finance.

Figure 2. Dynamics of projects included in the PPP register (contracts concluded during 2021–2025)

Referring to the above figure, it can be observed that during the period 2021–2025, a large number of PPP agreements were concluded across all regions of the country based on their respective development potential. However, a significant share of these agreements was also cancelled. For instance, the highest number of agreements was concluded in the Kashkadarya region, with a total of 767 projects, of which a relatively small share—about 1% (8 projects)—was cancelled. At the same time, the Jizzakh region had the lowest number of agreements, with only 64 PPP projects signed, of which 3 projects (approximately 5%) were cancelled. The region with the highest cancellation rate relative to the number of signed agreements is the Tashkent region. In this region, a total of 85 large PPP agreements were signed, of which 25 projects, or about 29%, were cancelled.

Conclusion and suggestions

In conclusion, it can be stated that existing challenges in the development of public–private partnerships have been analyzed, and their impact on project implementation and financing has been studied. Since most PPP projects are large-scale, the private partner does not fully finance them from its own funds and inevitably attracts debt financing. It is well known that lending institutions carefully assess whether the income generated by a project will be sufficient to repay the borrowed funds. PPP projects are not purely commercial, profit-oriented ventures; rather, they are socially significant initiatives aimed at infrastructure development. This, in turn, inherently creates risks for banks and other credit institutions.

Today, public–private partnership (PPP) entities differ from other forms of economic business entities due to their specific nature; therefore, there is a need to provide an economic definition that corresponds to current development requirements. Considering that entrepreneurs and specialists operating in the economic sector must quickly understand the rules of the market economy, the proposed definition should enable any reader or entrepreneur to simultaneously recognize both the public and private investor aspects, and to fully understand its economic essence, content, and significance.

Some of the other challenges arising in the implementation of PPP projects include the improper allocation of risks between the parties, delays in payments made by users, and the excessive growth of the government’s contingent liabilities to private investors. Additional risks also involve possible macroeconomic crises in the country, as well as increases in inflation and interest rates, among others. Public–private partnerships (PPPs) are widely applied in almost all countries of the world. International experience shows that many projects have been successfully implemented and that the role of the private sector in infrastructure development has been increasing. However, there are also cases where projects have failed to deliver the expected results and have collapsed, as observed in the experience of some countries.

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