



ANALYSIS OF FINANCING INFRASTRUCTURE PROJECTS WITH PRIVATE SECTOR PARTICIPATION IN INTERNATIONAL PRACTICE

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Abstract

Keywords: financing, public-private partnership, green energy, banking and financial products, green bonds, The development of the private sector and entrepreneurship, PPP projects.

This article focuses on the important aspects of public-private partnership in the development of "green" economy. The concept of "green" economy, its essence has been revealed, it is based on the importance of introducing "green" technologies, which allow the transition from a wasteful business model to an environmentally friendly model. The main directions for the development of the "green" economy, which is widespread in most countries, including Uzbekistan, have been defined

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Introduction

It is known that the main internal sources of investment in the economy are, first of all, the state and private business entities operating in the country. Therefore, according to economists, public-private partnership in economic development is an institutional and organizational cooperation aimed at attracting investments in projects of high socio-economic significance in a wide range of areas of activity and their implementation. "Due to the lack of opportunities to solve problems such as hunger, poverty, and social inequality in society in the short term, high social value can be created in the country through long-term investment and management strategies



through public-private partnership ¹.” Public-private partnership is an institutional and organizational alliance between the state and private business to implement socially significant projects and programs in areas ranging from research to services. We can distinguish three types of efficiency gains from implementing projects based on public-private partnerships:

1. Economic efficiency – in most cases, refers to the benefits that the private sector will achieve. The added value created as a result of the private sector's participation in the partnership should be reflected in economic efficiency.

2. Political effectiveness is understood as the achievement of the goals set by the state in domestic and foreign policy as a result of public-private partnerships.

3. Social impact - as a result of the implementation of public-private partnerships, aspects such as the development of infrastructure in the country, improvement of the transport and communication system, and creation of additional jobs are taken into account.

Currently, from the experience of developed countries, we can observe that public-private partnerships play a major role in developing the country's economy, effectively implementing large infrastructure projects, and improving social infrastructure in the country. In this regard, studying the experience of developing countries and introducing their practices to our country is an important task.

it is urgent for governments and businesses to address ²the economic and social problems caused by inadequate or dysfunctional infrastructure around the world .” In this regard, the main factors that can hinder the economic growth of our country are the underdevelopment of infrastructure sectors such as transport, energy, and utilities, as well as the lack of investment in these sectors to implement the necessary investment projects for the development and modernization of infrastructure facilities, and the low level of attraction of modern technologies. One of the most effective methods in world practice for solving such problems is the implementation of investment projects based on public-private partnerships.

In his Address to the People of Uzbekistan in the Oliy Majlis, our President Shavkat Mirziyoyev emphasized the need to make full and effective use of the opportunities of public-private partnership in the implementation of investment projects. Indeed, in our country we have achieved great results in the areas of preschool education, housing and communal services, "neighborhood" work, investment, public services, and public-private partnership. The

¹Howard W. Buffet and William B. Eimicke. Social value investing: a management framework for effective partnerships, Columbia University Press, 2018

²Atamurodov T., Hamr oyev B. Private network and public cooperation . Monograph, Toshkent Financial Institute . - T.: —Iqtisod-M o liya, 2013. - 96 p.



development of the private sector and entrepreneurship has become an irreversible process. The activity of our population, their desire for modern technologies and professions is increasing. New directions and areas are being created in our economy every day . At the same time, our President Shavkat Mirziyoyev emphasized that "it is necessary to fully and effectively use the opportunities of privatization and public-private partnership in attracting active investments ³. "

In the conditions of a modern market economy, public-private partnership is an effective tool for economic and social development at the national and regional levels, and is a means of attracting and implementing funds for investment projects aimed at maintaining control by state and local government bodies and establishing effective economic cooperation with the private sector. In investment projects based on public-private partnership, the private sector performs the functions of financing and managing investment projects on the basis of the conditions and requirements established by the state. The use of private sector funds in the development of infrastructure is of great importance for developing economies.

According to scientific research, an increase in the volume of private sector investments in the economy contributes to a significant increase in GDP for developing countries. Improving infrastructure using private sector funds is one of the important factors ensuring the economic development of a developing country.

The generally high expenditure or debt requirements of low-income and developing countries may reflect their overall public balance sheet performance. In these countries, the lack of funds to finance large-scale infrastructure projects, the general government budget deficit, and fiscal constraints may increase the interest of countries in expanding PPPs. It is also predicted that "higher macroeconomic instability will lead to greater PPPs", but this may reduce the attractiveness of PPP projects for private investors who prefer a business environment with lower financial risk. Other factors, such as inflation and public debt, which are theoretically important predictors of macroeconomic stability (or instability), are not the main important factors of PPP practice. In general, it can be assumed that the level of inflation will have a negative impact on the number of PPPs, since the lack of price stability may reduce the risk appetite of private investors and thus discourage them from investing in PPP projects. In our opinion, one of the arguments for the lack of a positive relationship between inflation and PPPs is that many private enterprises may be more inclined to receive price or revenue guarantees, minimum profitability guarantees, from the state to protect themselves from the negative effects of high inflation.

³of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Parliament and the people of Uzbekistan .
<https://president.uz/oz/lists/view/5774>, 20.12.2022

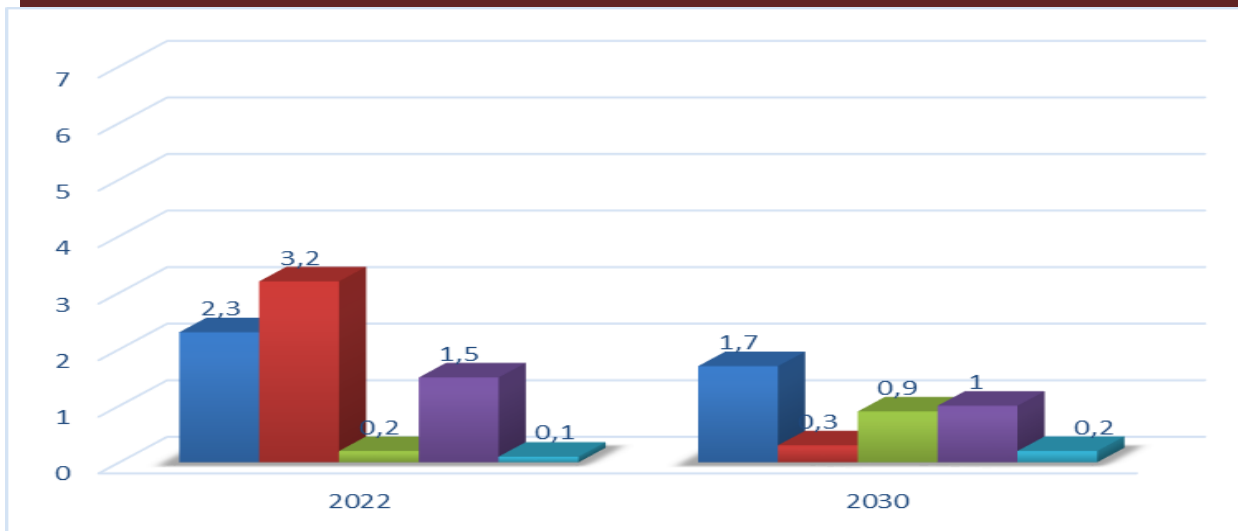


Figure 1. Amount of funding required to achieve high performance on the Sustainable Development Goals by 2030 in developing and middle-income countries (as a percentage of GDP)⁴

When analyzing the amount of investment required to achieve high performance in the Sustainable Development Goals in developing and middle-income countries by 2030 in relation to GDP, it can be observed that by 2030, the demand for infrastructure in such countries will decrease, in particular, the volume of investment projects expected to be implemented in healthcare, education, energy, transport and water management is on a downward trend compared to today. At the same time, the amount of investment funds expected to be allocated to the education and healthcare sectors is 5.5 percent of GDP in 2022, while this indicator is projected to be 2 percent by 2030.

Private sector investment in infrastructure in 2021 amounted to US\$76.2 billion across 240 projects, representing 0.26 percent of GDP in all low- and middle-income countries. This represented an increase in investment compared to US\$51.0 billion across 251 projects in 2020. Private sector investment increased by 49 percent compared to 2020, showing clear signs of recovery. However, investment in 2021 was 12 percent below the previous five-year average (2016-2020). The number of projects decreased by 4.4 percent from 2020 levels (Figure 2.1). Despite a lower number of projects compared to 2020, more countries reported PPP projects in

⁴ Prepared by the author based on information from <https://unsdg.un.org/2030-agenda/financing>.



2021. There were 50 countries with PPP investments in 2021 , up from 45 in 2020. Of the 50 countries with PPP projects, 19 are located in Sub-Saharan Africa.

According to the United Nations' analysis of the 2030 Sustainable Development Goals, low-income developing countries in the world currently need about 4.7 percent of their gross domestic product to achieve high economic efficiency, and this figure is projected to exceed 15 percent by 2030. The largest share of this is observed in the areas of health, education, and transport infrastructure. In our opinion, further expansion of public-private partnerships in financing the infrastructure of developing countries will play an important role in meeting the demand for infrastructure in countries.

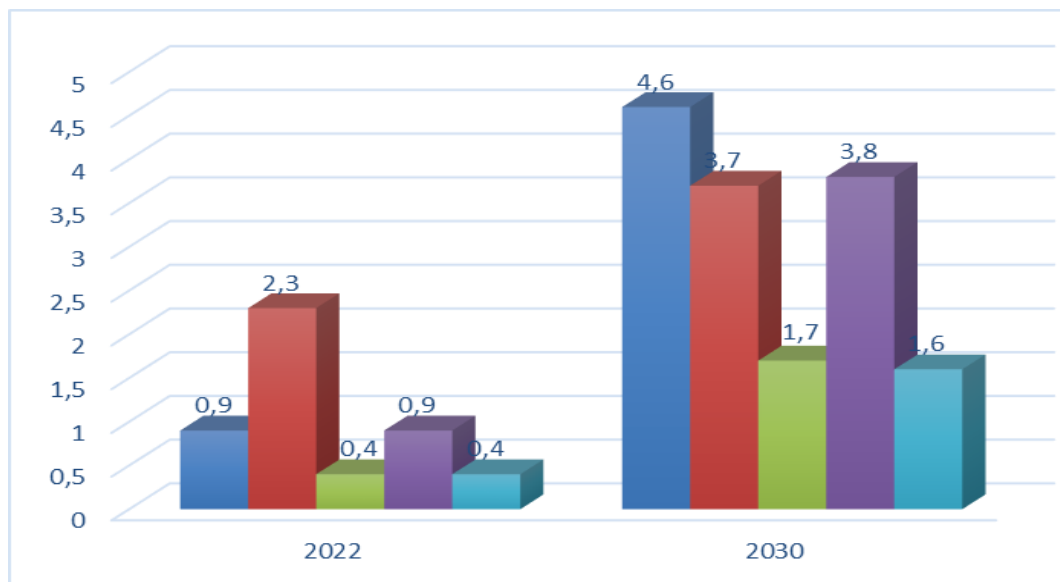


Figure 2. Low-income developing countries by 2030: Amount of funding required to achieve high performance on the Sustainable Development Goals (as a percentage of GDP)⁵

The recovery in private sector investment in infrastructure (as well as private participation in infrastructure) in low- and middle-income countries of the world, which began after the COVID-19 pandemic, continued through 2022. Overall, the private sector achieved investment of US\$91.7 billion across 263 projects, equivalent to 0.25 percent of gross domestic product (GDP) (Figure 2.2). This represents a sustained recovery in total investment to pre-pandemic levels, exceeding the previous five-year average (2017-2021) by 4 percent in 2022.

⁵ Prepared by the author based on information from <https://unsdg.un.org/2030-agenda/financing>.



However, the total number of private infrastructure participation projects in the region (low- and middle-income countries) has decreased to 263, down from the pre-pandemic level of 300 projects.

Most regions—Europe, Central Asia, and Sub-Saharan Africa (excluding South Africa)—have seen significant improvements in PPPs compared to the previous year. Although Sub-Saharan Africa (SSA) has seen relatively low levels of PPP investment, it has reached the milestone of having 19 countries with PPPs by 2021, the highest number recorded in the history of the private investment operations database.

18 countries in the DRC received investments worth US \$4.7 billion in 30 projects in 2022. This represented a 26.1% increase in investment compared to 2021 and a 22% decrease from the previous five-year average of US\$6.1 billion (25 projects in 15 countries).

This significant increase in PPP investments can be explained by the large growth of the road sub-network. Investments in roads are historically the largest sector. Investments in the transport sector, which doubled in 2021 compared to 2020, recorded a further increase in 2022.

To highlight the importance of putting climate change issues on the agenda, the World Bank launched a public-private partnership database, and data collection on electric vehicle charging stations began in 2022. Tajikistan became the first country to have an electric vehicle charging station in the PPP database .

The energy sector accounted for a significant share of global private investment in 2022, accounting for 28% of total private infrastructure investment (\$25.9 billion , 136 projects). This represents an increase of 21% compared to the previous year.

PPP investments in the energy sector are increasingly focusing on environmental sustainability. In terms of additional capacity, 85 percent of new power generation projects in 2022 will be renewable, compared to an average of 63 percent in the previous five years.

Private sector participation in infrastructure projects through decentralized financing increased in 2022 , with 68 projects approved. This accounted for 26 percent of all PPP projects, an increase from 2020 and 2021. Approximately 35 percent of PPP financing came from government sources, 50 percent from private sources, and 15 percent from decentralized private sector financing projects.



Of the 263 projects registered in 2022, 114 (44%) were sponsored by foreign entities. This is compared to 45% in 2021 and 44% in 2020. Foreign sponsors are focusing on energy, with 85 (63%) of the 136 projects in this sector. 34% of the investment volume (US\$30 billion) was sponsored by foreign entities.

Post-pandemic private participation in infrastructure recovery continued in 2022. PPP investments in 2022 amounted to US\$91.7 billion across 263 projects, representing 0.25 percent of the GDP of all low- and middle-income countries. This compares to US\$74.5 billion across 235 projects in 2021. This reflects the ongoing level of recovery prior to the pandemic, with total investments in 2022 4 percent higher than the previous five-year average (2017-2021). However, the total number of PPP projects decreased to 263 from the pre-COVID-19 level of 380.

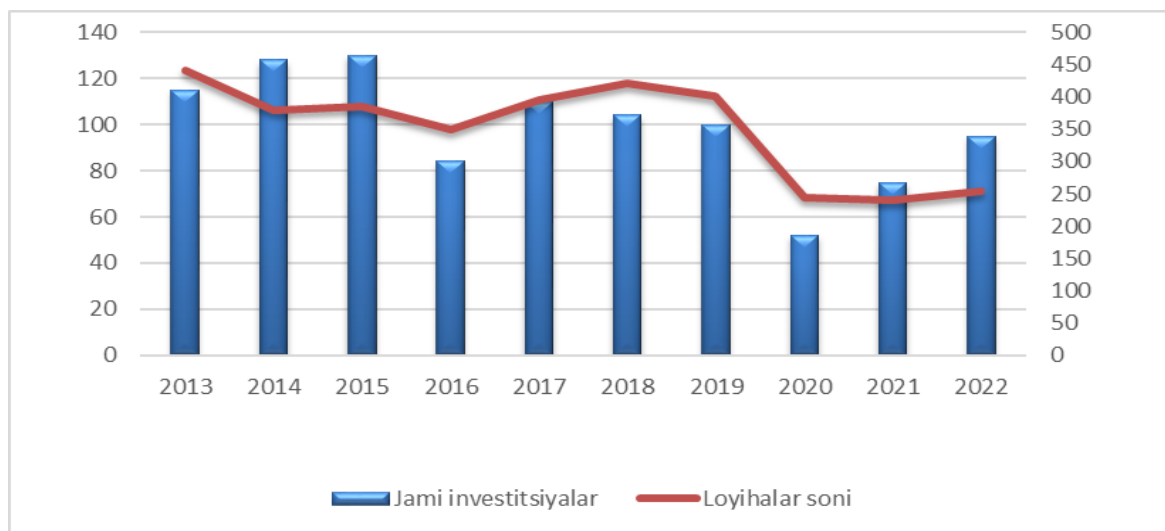


Figure 3. Investment in infrastructure projects involving PPPs in low- and middle-income countries, 2013–2022 (in billions of US dollars)⁶

All regions except Europe and Central Asia and Sub-Saharan Africa recorded significant improvements in PPPs compared to the previous year. Investments in East Asia and the Pacific, Latin America and the Caribbean and South Asia reached pre-pandemic levels in 2022. In addition, there was significant growth in the Middle East and North Africa. PPP investments increased in

⁶Prepared by the author based on the World Bank annual reports.



2022 compared to the previous year. However, although the South Asia region had a lower level of PPP investments compared to 2022, it reached a significant milestone in 2021 with investments in 19 countries. This means that in 2022, China, Brazil, India, Indonesia and Vietnam had the largest share of PPPs in absolute terms. These five countries together attracted US\$68.3 billion. The five countries with the highest investment levels as a share of national investment in 2022 were: Palau, 10.1 percent of GDP, Lao People's Democratic Republic, 5.6 percent; Senegal, 4.6 percent, with PPP investment.

CONCLUSIONS

As a result of the conducted scientific research, we can make the following proposals regarding the use of public-private partnership mechanisms in the development of the green economy :

- It is necessary to speed up the energy reform and introduce mechanisms that encourage the efficient use of energy. It is appropriate to allow rapid depreciation in the national economy, where energy consumption is 2 times higher than in other countries .
- Financial support to private investors through the introduction of "green energy" bank finance products in public-private partnership projects in the field of energy , as a result, allows expanding the scope of attracting investors to projects . At the same time, it increases the possibility of using new and cheap financial resources in the financing of PPP projects.

The Agency for the Development of Public-Private Partnerships should form a database of investment projects based on public-private partnerships and provide information about these projects to any private sector representatives. This database should contain information about whether investment projects are at the republican or local level, in which region they will be implemented, which sectors or industries they cover, and their current status (planned, in the tender process, construction and operation, etc.). In addition, the cost of the implemented projects, their implementation period, specific features, and information about the private partner should also be provided. The Department of the Development of Public-Private Partnerships under the Ministry of Economy and Finance of the Republic of Uzbekistan, as an authorized body in the field of public-private partnerships, shall:

- to keep track of infrastructure projects implemented and under development in our country, to identify the sources of funds allocated to them and planned to be spent in the future;



- development and implementation of measures to prevent the monopoly of private investors in the implementation of investment projects as an institutional structure coordinating public-private partnership relations;
- Development of a separate government program so that our country can also have the QI (Quality Infrastructure) index, which determines the level of development of countries' infrastructure at the international level;
- to generate real data on the investments being made in infrastructure in our country, especially the amounts of private investments, and on completed and ongoing infrastructure projects, and to ensure their accessibility to users, in particular, to ensure their reflection in the research databases of international organizations and international financial institutions, such as The Global Infrastructure Hub.

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