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ANALYSIS OF THE IMPACT OF PUBLIC-PRIVATE PARTNERSHIP ON ECONOMIC INDICATORS

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Abstract
In the world countries are making great efforts to bring sustainable development to a new level. Our government uses all available factors to further increase the economic potential of the country. This study is aimed at studying and analyzing one of the factors influencing the economic growth of the country, a factor adopted as a new measure - improving the mechanism of public-private partnership and increasing its impact on our national economy. There is analyzed the relationship between digitalization on the economic changes of the economy on the example of Uzbekistan in this article. The degree of effectiveness of the investment factor in such circumstances is also considered. The research work of a number of scientists has been studied and the necessary aspects for research have been presented. The main factor determining the level of digitalization is the gross value added of the digital economy to Gross Domestic Product. The next factor influencing structural change is the inflow of investment in fixed assets. An econometric analysis was performed to determine the relationship between the factors and a conclusion was drawn based on the results. The research was conducted from 2016 to 2020 years of the Uzbekistan's economy.
Key words. Action strategy, PPP mechanisms, PPP development agency, infrastructure projects, private partner, transport, tourism, public services, medicine, construction, GDP, economic employment.

Introduction

Countries are making great efforts to bring themselves to a new stage of sustainable development. Including, the government is using all available factors to further increase the economic efficiency of the Republic of Uzbekistan. In particular, measures for the development of the private sector in the country's economy are being rapidly implemented.

Paragraph 1.2 of the Strategy of Actions on Five Priority Areas of Development of the Republic of Uzbekistan in 2017-2021, approved by Decree 4947 of the President of the Republic of Uzbekistan on February 7, 2017, states that public-private partnership aimed at increasing the effectiveness of mutually beneficial cooperation in the implementation of tasks for the socio-political and socio-economic development of the country it is necessary to introduce modern mechanisms. According to the Decision "On the first measures to create a legal and institutional basis for the development of public-private partnership" signed by the President of the Republic of Uzbekistan on October 20, 2018, the Public-Private Partnership Development Agency was established under the Ministry of Finance.

In our previous article, we presented a tariff for the public-private partnership mechanism. According to him, we have defined the concept of the attitude of representatives of the private sector to meet the needs of the general society. It follows that the state will join forces with the private sector in the implementation of its social and infrastructural projects, powers will be shared, and the interests of both parties will be protected based on a contract. The partnership is two-way, but the benefit is three-way. These three benefits are that, first, the State performs the function of social life without any financial cost and has an additional source of income, and second, the private partner uses the power, privileges and property of the state to create a new direction for its own capital at risk, and it is also its own. in turn, it creates an additional source of income, thirdly, the welfare of social life and infrastructure for the society will be improved, new jobs will be created naturally, and a small part of unemployment will be eliminated. The interests of the population are partially or fully satisfied. From both a social and economic point of view, this PPP approach is considered the optimal way to ensure sustainable economic growth.[1]

This article aims to study and analyze the improvement of the public-private partnership mechanism affecting the country's economic growth and increase its impact on our national economy. The practical importance of the research is determined by the fact that the recommendations and conclusions sent to the state authorities and economic entities can be used in national, regional and PPP-related state programs, as well as in specific projects aimed at their development.

In the scientific literature, many studies of foreign and local scientists devoted to the study of the issues of PPP organizations have been studied. In particular, the scientific-theoretical features of the CIS were developed by K.A. Antonova, A.A. Alpatov, O.S. Belokrylova, I.E. Bolekhov, B.G. Varnavsky, E.A. Dynin, L.I. Efimova, V.A. The works of scientists like Mikheev were reviewed in the lectures of the World Bank.

Economist I.E. And Bolekhov "A field of joint actions." "Public-private partnership as a sign of innovative economy" states that "DPP is a mutual alliance of state agencies and private business, and its purpose is to create and develop projects of social importance, from strategic sectors of the economy to the provision of services at the national level or in some of its regions." is enough.

In addition, V.G. Varnavsky, A.V. Klimenko and V.A. "Public-private partnership" co-authored by Korolev. In the instructional manual "Theory and Practice" "DDS is between the state and the private sector about the services performed and provided by state and public agencies, institutions and enterprises to implement socially significant projects in state and public property objects, as well as in a wide range of economic activities. shows a legally

[1] Public-private partnership relations in ensuring sustainable development -Economy and education / 2021, issue 5

strengthened form of interaction. E.A. Dynin also points out that "PPS is the process of combining material and non-material resources of society (state or local self-government) on a long-term and mutually beneficial basis to create social benefits or provide social services." Public and private partnership is interpreted differently by various international financial organizations, foreign and national economists and experts.

In particular, the Organization for Economic Co-operation and Development (IHRT, see OECD - Organization for Economic Co-operation and Development) is a mutual agreement between the government and one or more private partners (may be a mutual executing or financing organization), according to which the partners ensures that services are provided in such a way that the goals of the state to provide services and the profit of the private investor are mutual and notes that the effectiveness of this relationship depends on how the risks are distributed to the private partner.

M. B. Gerrard states that PPP combines the attraction of private capital and sometimes the attraction of public capital to improve the quality of social services or manage public assets. In the definition given by the International Monetary Fund, it is defined as "a PPP is an agreement aimed at the provision by the private sector of infrastructural assets and services traditionally provided by the state." On the economic and organizational possibilities of public-private partnership O.S. Belokrylovoy, B.G. Varpavskogo, L.I. Efimovoy, O.A. Lomovtsevoy, V.A. Mikheeva, T. Sannikovoy, B. Stolyarova and A. All works of scientists like Shmarova have been studied.

Meanwhile, Patrick T.I. Lam, Wenjing Yang (Patrick T.I. Lam, Wenjing Yang) in their research results show that not all projects are suitable for the PPP form, or will be ineffective. He pointed out that there may be different views on decision-making between the public and private sectors and on which projects to use the PPP mechanism.

Paul Hartman, Jeff Ogden, and Ross Jackson (Paul Hartman, Jeff Ogden, Ross Jackson) "Contract Duration: A Barrier or a Bridge to Public-Private Partnerships?" in their scientific articles on the subject, they highlighted two general questions related to the issues of investment by suppliers. First, how do public agencies operate and what is the impact of contract duration on private suppliers' risk perception? Second, how does contract duration affect private investment? On the basis of round discussions, questionnaires, and interviews, opinions were collected.

Nannan Weng, Zeng Gong, Yunfei Lui and Craig Thomson (Nannan Wang, Zheng Gong, Yunfei Liu, Craig Thomson) in the article "The influence of public governance on the Implementation of a public-private partnership system in the case of the UK and China: a systematic comparison" evaluate PPP and have developed a systematic and innovative analytical framework for comparison for Great Britain and China. As a result of the research, they propose a conceptual model for the implementation of PPP management by the government. The scientist who covered the topic of economic, institutional and management aspects of the public-private partnership is A.S. Kolosov, professor of the Belarusian State University of Informatics and Radio Engineering is counted.

In the article, the theoretical and methodological foundations of PPP were studied, as well as the official data of the State Statistics Committee of the Republic of Uzbekistan, the PPP Agency, and the United Nations Organization were used for comparative, structural and comparative analysis. Analysis, comparison and comparison of statistical data, as well

as scientific observation and comparative analysis methods were used in the learning process.

According to Russian expert N. Agazaryan, the global development of public-private partnerships is divided into three stages.

First stage: Latin America, Eastern Europe, as well as the CIS countries. They are working on the development of legal documents and standards for partnership, they are starting to form the market in this direction, and to identify the projects to be introduced first. The analyst said that these countries are trying to establish such cooperation without sufficiently understanding the way in which public-private partnership should be implemented, and what the risks (risk) in this regard may lead to.

The second stage: covers developed countries such as the USA, Canada, New Zealand, Japan, Russia, Germany, France, Spain, and Italy. In them, the structure of public-private partnership was formed, the regulatory legal framework was created, and the scope of projects in this field was expanded with the addition of new sectors.

The third stage: only Great Britain, Australia, South Korea and Ireland are occupied. In these countries, it is observed that the mechanism of public-private partnership has been improved, legal obstacles to its development have been removed, a certain flow of partnership projects has appeared, and the number of investors willing to join such cooperation in the infrastructure sector has increased.

The main principles of public-private partnership are as follows:

- equality of public partner and private partner before the law;
- transparency of rules and procedures in implementation of public-private partnership;
- debate and impartiality in choosing a private partner;
- non-discrimination;
- prevent corruption.

From an economic point of view, PPPs require specific institutional and management relationships. The development of the society takes the path of development in the framework of partial partnership of institutions, together with the private entities of production and service provision, which are organized on the basis of maintaining the institutional base of the society.

From the point of view of management, the private sector should take the initiative to use public property in the prescribed manner in public-private partnership relations. There is a unique specialized organizational relationship between the state and the private sector. Representatives of the private sector receive income as a result of consumption of the provided service or created products.

India accounted for 4% of total investment in 2018, or $1.2 billion. Leading the way with 73 PPP projects in the 100 Smart Cities program with US dollars. China, Japan and Korea are examples of this. Jacobson proposed more than 45 PPP-based smart city projects in the journal. In Uzbekistan, a total of 45 large and small PPP projects were developed in 2 years, of which 12 projects in the energy sector, 12 projects in the field of communal services, 4 projects in transport, 14 projects in the health sector, education and 4 projects were developed in the field of culture and 1 in the field of tourism.

Table 1

Projects implemented by the PPP Development Agency in Uzbekistan[2]

№	Industry	Projected		Being projected	
		Type	Number of projects	Type	Number of projects
1	Health care	Organization of hemodialysis centers	1	Establishment of the Oncology Center in cooperation with the Farm Committee	1
				Establishment of a rehabilitation center	1
				Building a multidisciplinary hospital	1
				Diagnostic center	1
				Establishment of a sterilization center	1
2	Transport	Building bridges	2	Modernization of bus terminals	1
3	Communal economy		3	Water and heat supply works (in the section of separate areas)	2
4	Energy	Construction of heat and solar power stations	9		
5	Education system			Modernization of 11 schools in Sergeli district	1
6	Agriculture			Multidisciplinary agricultural service centers	1

According to the dates of the State Private Partnership Agency, there are currently 15 large PPPs with a value of $6.8 billion. the project is being implemented. Of them, 9 projects are being implemented in the field of energy, 2 projects in the field of transport, 3 projects in the field of communal economy and 1 project in the field of health care. In the field of energy, the private partner of the project with a capacity of 100 MW in the Navoi region, based on the PPP project, is the UAE company "Masdar", which won the tender with an offer of 2.67 cents for 1 kW/h of electricity, and the construction work is currently ongoing.

In addition, it is planned to organize 10 more projects together with the agency. Of these, 5 projects are being planned in the field of healthcare, 1 in the field of education, 1 more in the field of transportation and 2 projects in the field of communal economy. But one thing should not be forgotten. In the implementation of large projects in harmony with nature, it is considered appropriate to implement them on the basis of experts' conclusions about environmental problems and the future consequences of these projects.

The following table analyzes the number and share of preschool educational institutions in the Republic of Uzbekistan in terms of their organizational structure. The result shows that the effect of public-private partnership is evident and 58% of the total number of kindergartens are institutions based on PPP projects.

[2] Was developed by the author based on the information of the PPP Development Agency under the Ministry of Finance of the Republic of Uzbekistan

Table 2

Quantitative analysis of preschool educational institutions[3]

Type of preschool educational institutions	Number
Total	19 316
Including:	
State	6 258
Private	795
Public-private partnership and family type	11 212
Non-Government	1 051

A total number of 19,316 pre-school educational organizations have been established in the republic, of which 6,258 are state and 13,058 non-state (795 private, 11,212 family and 1,051 non-state MTT based on PPP) preschool education organizations. 1,760,808 children or 62.4% of the population of preschool age are covered in these preschool educational institutions.

The primary school enrollment rate is 100%, but data on secondary education (grades 5-9) show that there are children who do not attend school or are left behind for the second year, as the enrollment rate in this period is only 94%. In addition, only 91% of students successfully complete grades 5-9. Only 12% of people aged 25-30 across the country have higher education. The result is that access to pre-primary education, quality general secondary and higher education differs greatly for women and men, for children with disabilities, for urban and rural children, and for children from low-income families compared to children from well-off families.

The interests of several participants play a role in the implementation of public-private partnership projects. Based on this, each has its own interests and at the same time each has its own importance in this process (Table 3).

In this case, the political decision-makers, i.e. the government members, undertake to create legal conditions for PPPs. Based on the formation of the legal framework in this field, the state government can support PPP projects.

The enterprise implementing the PPP is mainly engaged in the implementation of the project and ensuring its effectiveness. In this case, the management of the company may make changes and additions to some parts of the project.

Table 3

Average summary.

Variable	Obs	Mean	Std. Dev.	Min	Max
GDP	18	24.2	.7553	22.9	25.1
GDP per capita	18	7.1	.6734	5.9	7.8
infrastructure	18	14.6	.2787	14.3	15.1
Start-ups number	18	1.8	.4696	1.1	2.3
Time requirement	18	2.3	.7365	1.1	3.3
expenditure	18	24.2	.7901	22.9	25.1
DPI	18	22.2	.3787	21.7	22.8

[3] Compiled by the author based on information from the official website of the Ministry of Preschool Education

All variables have risen over the period. GDP rose average $24.2 million, GDP per capita increased $71 for per person, infrastructure went up 14.6 meter per person. The number of start-ups has risen about 2 number over the period, and time requirement for running business took about 2 days. Government expenditure $24.2 million to their purchases. The amount of Domestic Private Investment was about 22.2 million dollar during the time.

Table 4.

Correlation between variables

	Gdp	Gdppc	Start-ups	Time	infrastructure	expenditure	DPI
Gdp	1						
Gdppc	0.9935	1					
Start-ups	0.9772	0.9736	1				
Time	-0.9384	-0.9078	-0.9574	1			
infrastructure	0.9002	0.8518	0.9033	-0.9548	1		
expenditure	-0.1006	-0.0461	-0.0197	0.1141	-0.1754	1	
DPI	0.1228	0.0728	0.1886	-0.3840	0.3755	0.1502	1

Table 4 presents the correlation between the dependent and independent variables. GDP per capita, the number of start-ups, infrastructure and Domestic Private Investment (DPI) have positively correlation to the all variables, just only correlation among infrastructure, DPI and time is negative. However, requirement time and government expenditure have negatively correlation to the all variables only without correlation between expenditure and requirement time.

Table 5

FE regression results

	GDP	GDPpc	infrastructure
Gdp	1	.6987***	6.76***
		(0.000)	(0.000)
Gdppc	1.41***	1	-4.74***
	(0.00)		(0.000)
Start-ups	.1044**	-.0703**	.4827*
	(0.002)	(0.006)	(0.014)
infrastructure	-.1780***	.1256***	1
	(0.000)	(0.000)	
Time	.0956*	-.0675**	.3938+
	(0.010)	(0.010)	(0.066)
Expenditure	.0435	-.0325	.1273
	(0.641)	(0.620)	(0.793)
DPI	.0128+	-.0093*	.0645+
	(0.056)	(0.043)	(0.063)
N	14	14	14
R^2	0.9995	0.9996	0.9876

legend: * p<0.05; ** p<0.01; *** p<0.001; + p<0.100;

Table 5 presents the results of our research. GDP per capita, the number of start-ups, time requirement and Domestic Private Investment have positive significant effect on the

dependent variable (GDP), but infrastructure has negatively effect on the GDP. In the 2nd column we determined the effect of variables to GDP per capita because of positive effect on GDP. GDP and infrastructure have positive effect to GDP per capita, however, the number of start-ups, time requirement and DPI have negative significant effect to the dependent variable. Next our dependent variable is infrastructure. We also tried to examine which variables have impact to infrastructure. GDP, the number of start-ups, time requirement and DPI have positively impact on the dependent variable which is infrastructure. Only GDP per capita has negative effect to infrastructure.

Log(GDP)=b1+b2×log(GDPpc)+b3×log(start-ups) +b4×log(time) +b5×log(infrastructure) +b6×log(expenditure)+b7×log(DPI)+e

Log (GDP)= 0.69+1.41* log(GDPpc)+0.1044* log(start-ups)+0.956* log(time)-0.1780* log(infrastructure)+0.0435* log(expenditure)+0.128* log(DPI)+e

In PPP projects, the role of consumers, investors and strategic consultants is important. Consumers are especially important in this. Because PPP projects are implemented precisely to meet the demands of consumers. Consumers evaluate the quality of services offered by demonstrating their ability to pay. In addition, consumers determine the quality of services and provide feedback to identify their strengths and weaknesses.

Conclusion

In the conditions of reduced economic activity, PPP projects (Transportation, tourism, public services, medicine, construction...) face great difficulties in generating income. In many cases, the risk of force majeure is weakly foreseen or not foreseen at all in PPP projects, which rely on revenue generated from consumer payments. Due to the quarantine, it is necessary to think about the impact of the lack of cargo at the seaports, the lack of flights, the lack of fuel charges, the lack of income of the service providers on the roads (hotels, catering and other paid services) due to the quarantine, and the decrease in the ability of new patients to pay in private hospitals. In the countries of the world, the consumer price index in France increased in April by 1.5% in the USA, in China by 4.3%, in Russia by 2.5%, in Iceland by 2.3%, in Pakistan by 9.5%, in Belgium by 0.6%, In Egypt, it increased by 10%.

It can be concluded that compared to developed countries, there is a sharp increase in inflation in underdeveloped countries and in countries whose economy depends on tourism or transport. As a result, the country's population's demand for consumer goods will decrease sharply, and some economic sectors and services will fail. In the context of this crisis, the local production of food products and raw materials should be urgently implemented. For this, it is appropriate to attract investments in these areas, regardless of whether they are large or small.

The PPP mechanism has a great role in mitigating the global epidemic and its future consequences. It is necessary to further increase the attractiveness of domestic and foreign investment by improving the PPP mechanism in relation to economic organizations that are fully state assets. It is possible to direct foreign investments, but it is appropriate to invest in organizations whose activities are failing due to the pandemic or other reasons.

In the scientific and practical study of the factors influencing the country's economic growth, scientific conclusions were formed based on the use of statistical data, selective determination, theoretical-philosophical, objective approach, and methods of economic

analysis. Methods such as systematic and logical approach were effectively used based on the collected data.

At the same time, PPP relations can be implemented in the field of science, technology, medicine, culture and other fields. In order to get out of the economic crisis and prevent the situation from getting worse, the state and banks will have to increase their intervention in important sectors of the economy and make their own investments. The state does not have the capacity to cover all sectors. Organizations established on the basis of public-private partnership will have to increase their activity.

In our opinion, innovative growth of the economy within the framework of new organizational forms and mechanisms of interaction between business and the state will be the basis for further acceleration. We believe that public-private partnership should be considered as an accelerating mechanism of innovative development. Together with this, we conclude that it is necessary to reform the projects organized on the basis of the PPP mechanism, taking into account their ecological, economic, political and, of course, social consequences. The reason is that the next generation should not waste time and money to correct the mistakes made by us today and to fight against the global problems that arise on the basis of wrong decisions. Otherwise, reaching the level of sustainable development may remain a problem.

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