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ABSTRACT

of the dissertation for the degree of Doctor of Philosophy

**ENHANCING THE PUBLIC-PRIVATE PARTNERSHIP
MECHANISM IN ACHIEVING SUSTAINABLE
DEVELOPMENT**

Speciality: 5308.01 – “General economy”

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OVERALL OVERVIEW OF THE STUDY

Relevance of research topic and degree of elaboration.

Enhancing the public-private partnership mechanism in achieving sustainable development of the country require a comprehensive review of many complex problems and identification of the most important aspects of the activity of state structures, interaction between public and private sector subjects, as well as ensuring the stability of the national economy and society as a whole. In the current conditions of deep transformations in the existing mechanisms in all spheres, including the economic sphere, the state should ensure the harmonization of interaction between the public and private sectors in solving the problems accumulated in the development of the national economy and society, thereby creating more reliable relations between the state and society in solving the dynamic development of the national economy by taking into account the reduction of socio-economic problems, improving the living conditions of the country's population, increasing income and reducing unemployment.

In 1992, at the Conference of the UN Committee on Environment Protection and Development, the "Agenda for the 21st Century" was adopted - a global program of partnership aimed at taking human civilization to a new level of development. This agenda describes the essence of sustainable development.

This program is implemented on the basis of the following principles: Ensuring the health of people, meeting the basic needs of the population, improving the quality of life of the population, creating a rational structure of production and consumption, ensuring environmental safety, formation of environmental awareness and morality in the educational process, formation of civil society, elimination of all possible forms of violence against people and nature, global partnership, etc.

Strengthening the mechanism and interaction between the public and private sectors during the impact of the COVID-19 pandemic can increase the effectiveness of measures to reduce tension in society and prevent crisis events. In addition, during the 44-day war that started on September 27, 2020, Azerbaijan, under the leadership of the Supreme

Commander-in-Chief of the country's Armed Forces and thanks to its heroic army, liberated the occupied territories from the Armenian usurpers. In this context, large-scale restoration work has begun in all areas of the liberated lands. In the coming years, a number of projects are planned to be implemented in the newly created economic regions of Karabakh and East Zangezur to create social and industrial infrastructure, ensure the uninterrupted functioning of social services and return refugees to their native lands. We believe that intensive interaction and partnership of public and private structures is necessary to intensify the planned work.

It is necessary to conduct basic research in all these directions, to study the most important areas and mechanisms that can ensure effective public-private partnership in modern conditions. All these factors determine the relevance of the chosen thesis topic.

The most important problems and issues of the theoretical and methodological bases for enhancing public-private partnership mechanism in achieving sustainable development, the development and implementation of more effective mechanisms have been explored in the scientific works of domestic experts and foreign scientists. Azerbaijani scientists and researchers such as A.A. Nadirov, Z.A. Samadzadeh, U.K. Alakbarov, A.Kh. Nuriyev, Sh.M. Muradov, A.K. Alasgarov, A.J. Muradov, A.Sh. Shakaraliyev, T.Kh. Huseynov, A.G. Alirzayev, M.A. Ahmadov, I.M. Abbasov, T.N. Aliyev, Sh.T. Aliyev, R.A. Balayev, F.A. Ganbarov, V.A. Gasimli and others may be included in this list.

Moreover, the theoretical and methodological aspects of enhancing public-private partnership mechanism in the sustainable development have been analyzed in the works of numerous scientists and researchers around the world, such as A. Smith, P. A. Samuelson, U. D. Nordhaus, M. Porter, R.N. Cooper, P. Krugman, E. Engel, R. Fischer, A. Galetovich, A.P. Gradov, S.N. Baburin, A.D. Ursul, V.G. Varnavskiy, A.V. Klimenko, V.A. Zimin, A.O. Ivanova, E.R. Yescomb, A.S. Korchagina, S.A. Kochetkova and others.

In addition, the public-private partnership mechanism needs to be deeply improved to ensure sustainable development in the short and long term.

The object of research is public and private structures and processes involving the interaction of public and private sector issues.

The subject of research is methods and regularities for enhancing mechanisms for deepening public-private partnership in achieving sustainable development of Azerbaijan.

Research goals and objectives. The main goal of the dissertation is to enhance public-private partnership mechanism in achieving sustainable development of the country in modern conditions. In this context, it is aimed to fulfill the following tasks:

- analyzing the theoretical and methodological foundations of public-private partnership in the context of global transformations in achieving sustainable development;
- identification of methodological approaches and features for improving and the public-private partnership mechanism under the current conditions;
- review and generalization of international experience on public-private partnership mechanism in the countries of the world;
- analyzing and evaluating of the state of public-private partnership mechanism in Azerbaijan;
- assessment of the main factors for utilization of the existing potential in the public-private partnership mechanism in Azerbaijan;
- identification of the top priorities and perspectives for enhancing the public-private partnership mechanism in Azerbaijan;
- development of mechanisms for strengthening the institutional base in the public and private sectors of Azerbaijan;
- identification of the strategic importance and priorities of deepening public-private partnership in the regions of Azerbaijan;
- development of scientifically based proposals on the main directions of enhancing public-private partnership mechanism in ensuring sustainable development of Azerbaijan in the modern era.

Research methods. The methodological basis of the study was formed from the works of various research scientists of the world, including Azerbaijani scientists, on the problems and issues of improving the mechanisms of strengthening public-private partnership in ensuring sustainable development. Commonly known economic methods were

used during the research, including methods such as analysis, synthesis, comparison, generalization, and author's approaches to the researched issues.

The main clauses defended. In accordance with the structure of the research, the following clauses of the dissertation are submitted for defense:

there is an urgent need to update and deeply improve the existing mechanisms and instruments of cooperation between the public and private sectors in the context of ensuring sustainable development;

- it is necessary to conduct a deep and well-founded study to develop methodological approaches, systematize the methodological tools and strengthen the mechanisms of cooperation between the public and private sectors in modern conditions;
- it is necessary to conduct a comprehensive study, systematize and make adequate decisions on the use of advanced international experience to improve interaction between the public and private sectors;
- an objective analysis and assessment of the scope of cooperation between the public and private sectors in Azerbaijan is necessary in the context of the main requirements of the country's sustainable development;
- an objective assessment of the main areas of activity and provision of mechanisms of cooperation between the public and private sectors with the full disclosure of the existing potential in this area is of strategic importance;
- it is necessary to strengthen the institutional base in strengthening interaction between the public and private sectors in the difficult conditions of the modern world economy;
- it is necessary to thoroughly study and define the main directions and priorities for deepening cooperation between the public and private sectors in the regions of the country, taking into account the rational use of economic resources; □ there is an urgent need to substantiate and define the main directions for improving the mechanism of cooperation between the public and private sectors to ensure the sustainable development of Azerbaijan in the context of increasing global threats.

The scientific novelty of research consist of:

- Scientific and practical approaches to improving mechanisms of cooperation between the public and private sectors in ensuring sustainable development have been developed and important principles of public-private cooperation in modern conditions have been defined; The main elements of the theoretical aspects of public-private partnership mechanism in the context of sustainable development in modern conditions are defined;
- The most important methodological approaches to public-private partnership are developed in the context of new challenges, taking into account the conservation and efficient use of resource potential;
- The main goals and tasks, basic principles of enhancing public-private partnership with the participation of state and business organizations are substantiated and defined;
- The stages of implementation of the public-private cooperation project in accordance with the sustainable development of the country have been defined and substantiated;
- An algorithm-scheme of the main aspects of distribution of responsibility between partners for the implementation of public-private cooperation projects has been prepared;
- Effective directions for improving public-private partnership in the regulatory, organizational, financial spheres and in the sphere of contractual relations have been defined;
- Organizational and economic mechanisms for managing the development of cooperation between the public and private sectors in the regional context have been proposed in order to achieve sustainable socio-economic growth of the country's economy and the efficient use of regional resources;
- In the context of the revitalization of the territories liberated from occupation in the post-epidemic period of Azerbaijan, the main directions of enhancing public-private partnership mechanism in achieving sustainable development are substantiated and identified.

The theoretical and practical significance of the research. The main scientific and practical results of the dissertation may be useful for researchers, specialists and representatives of government agencies who

are engaged in the organization of continuous purposeful work in public-private partnership and are responsible for complex measures, strategies and practical mechanisms for strengthening this area.

The materials of the dissertation work can be used in the preparation of lectures, textbooks, teaching aids, and subject programs.

Approval and implementation. A total of 9 scientific works, including 6 articles, 3 theses (of which 1 article and 1 abstract abroad) were published. The results of the research are presented in the article entitled “Strengthening public-private partnership in achieving the sustainable development of Azerbaijan” (Journal of “Geostrategy”, Baku, 2020), “Actual problems of enhancing public-private partnership mechanism in the context of sustainable development” (Journal of “News” (Institute of Economics of ANAS, Baku, 2020), “Experience of the countries of the world on improving public-private partnership in modern conditions” (Journal of “News” (Institute of Economics of ANAS, Baku, 2021), “The most important aspects of theoretical and methodological approaches that take risks into account in public-private partnership projects” (Journal of “Geostrategy”, Baku, 2022), “Assessment and prospects of strengthening public-private partnership mechanism in Azerbaijan” (Journal of “Financial economy”, Russia, Moscow, 2022) and in the thesis entitled “Important aspects of public-private partnership in the conditions of increasing global risks” (Proceedings of the International Scientific Conference on “Problems of Sustainable Development of the Economy in the Information Society”. Sumgayit, 2021), “The role of technology parks in the processes of public-private partnership” (Proceedings of the International Scientific Conference on “Strategic directions of economic partnership between Azerbaijan and Turkey”. Sumgayit State University and Yildiz Technical University. Sumgayit, 2022) and “The most important issues of the development of public-private partnership in the regions of Azerbaijan” (Proceedings of the XI International scientific-practical conference on “Modern problems of civilization and sustainable development in the information society”. Russia, Moscow, 2022).

The institution where the dissertation was accomplished. The dissertation work has been carried out at Azerbaijan State University of Economics.

The total volume of the dissertation. The total volume of the dissertation, including cover and table of contents (2275 characters), introduction (14861 characters), chapter I (75577 characters), chapter II (64581 characters), chapter III (57950 characters), conclusion (9440 characters) and reference list (30786 characters), is 255433 characters. The research paper consists of 222372 characters, excluding figures, tables, charts and the reference list.

STRUCTURE OF THE DISSERTATION

Introduction

CHAPTER I. Theoretical and methodological basis of public-private partnership in achieving sustainable development.

1.1. Theoretical aspects of public-private partnership in the context of sustainable development.

1.2. Methodological approaches to enhance public-private partnership mechanism.

1.3. Progressive forms and international experience to enhance public-private partnership.

CHAPTER II. Analysis and evaluation of the sphere of public-private partnership in Azerbaijan.

2.1. Analyzing the current state of public-private partnership in line with the country's sustainable development.

2.2. Evaluating the effectiveness of the public-private partnership mechanism by taking risks into account.

2.3. Assessment of key factors in the utilization of the potential of public-private partnerships.

CHAPTER III. Priorities and perspectives for enhancing public-private partnership mechanism in Azerbaijan.

3.1. Strategic aspects of strengthening the institutional and legal basis of relations between the public and the private sector in Azerbaijan.

3.2. Contemporary aspects of deepening cooperation between public and private sectors in a regional context

3.3. Priorities for enhancing public-private partnership in achieving the sustainable development of Azerbaijan.

Conclusion.

Reference list.

THE MAIN CLAUSES DEFENDED

1. In the context of sustainable development under global influences, there is a need for renewal and in-depth development of existing mechanisms and tools in public-private partnership.

The theoretical aspects of public-private partnership in the sustainable development require complex and systematic approaches to all areas of the economy. In 2000, on the initiative of the United Nations, a global platform for sustainable development was created, involving 135 countries and more than 7,000 companies. The aim of this project was the strategic need to deepen the sources of alternative energy sources. Furthermore, at the UN conference held in Rio de Janeiro on June 3 and 4, 1992, the global challenges and problems facing humanity were reviewed and the most important principles were identified¹. These principles are based on: protection of the environment, efficient use of available resources, improvement of the living conditions of the population, etc.

Figure 1 indicates the main elements of the theoretical aspects of public-private partnership in the context of sustainable development in modern conditions.

Over the last decade, complex and consistent measures have been taken in Azerbaijan in the field of expanding the structure of the national economy, in particular, the implementation of high technologies and the creation of a national innovation system. The most important aspects of the development of the national economy are analyzed here, and based on the concept of sustainable development, it would be correct to consider the 3 most important aspects: 1) ensuring sustainable economic development; 2) protecting and restoring the ecosystem, ensuring social justice in society as a whole. Of course, these conceptual approaches will ensure harmonious development of the state and society, effective use of the resource potential of the country's natural and economic resources².

¹ Ətraf Mühit və İnkişaf üzrə Rio Bəyannaməsi. 3-4 iyun 1992-ci il. BMT Konfransı //A/CONF.151/26/Rev.1 (Vol.1). – c.7. [Elektron resurs] / URL: <http://www.un.org>.

² Ələkbərov, U.K. Davamlı insan inkişafı və ekoloji sivilizasiyanın əsasları. – Bakı: – 2013, - c.134.

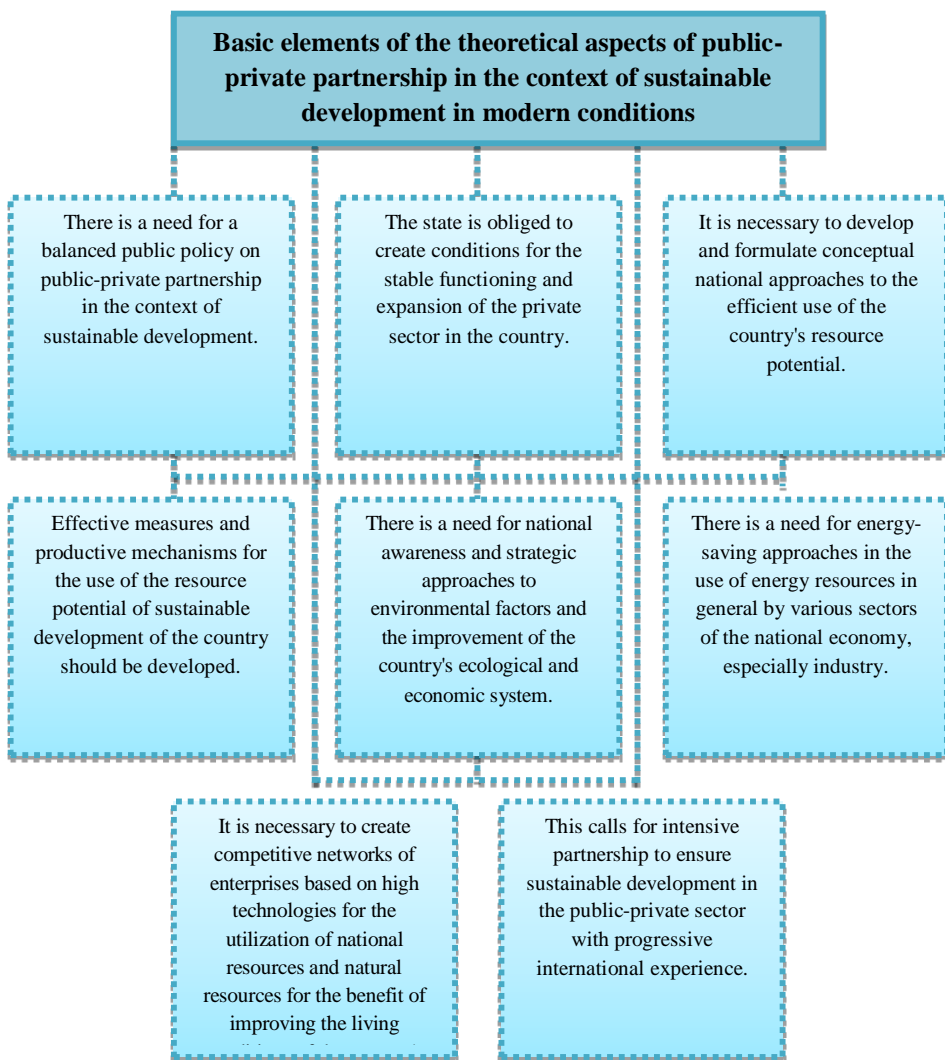


Figure 1. Basic elements of the theoretical aspects of public-private partnership in the context of sustainable development in modern conditions (compiled by the author)

In recent years, public-private partnership projects have become more important in Azerbaijan. They are mainly related to the development of transport infrastructure and real estate construction.

In the near future, until 2030, Azerbaijan will have to solve a large number of tasks for the implementation of National Priorities in the context of the revitalization of liberated territories from Armenian occupation.

2. In contemporary conditions, methodological approaches need to be studied and defined in depth, methodological tools need to be disseminated, and public-private partnership mechanism need to be strengthened.

Methodological approaches and improvement specifications, including the strengthening of public and private sector mechanisms, require the development of elements and components that are more successful and ensure the fight against global threats and influences, and the identification of adequate means for improving the existing mechanisms of the public and private sector. “The main requirement is the support and development of innovations. Public-private partnership plays an important role in solving the set tasks”³. In general, the most promising directions for the development of public-private partnership are: social aspect, housing and communal economy, sports, healthcare, etc. “Public-private partnership mechanism has a number of positive features, which makes it a strategically important tool for the region”⁴.

Figure 2 indicates the most important methodological features of public-private partnership.

³ Прудников, И.А. Государственно-частное партнерство как драйвер роста современной экономики / И.А.Прудников, А.М.Ротарь // Путеводитель предпринимателя. – 2021. Т.14. № 2, – с.123

⁴ Кочетков, В.В. Развитие государственно-частного партнерства в регионе / В.В. Кочетков, С. А. Кочеткова // Контентус. – 2021. № 1(102), – с.30.

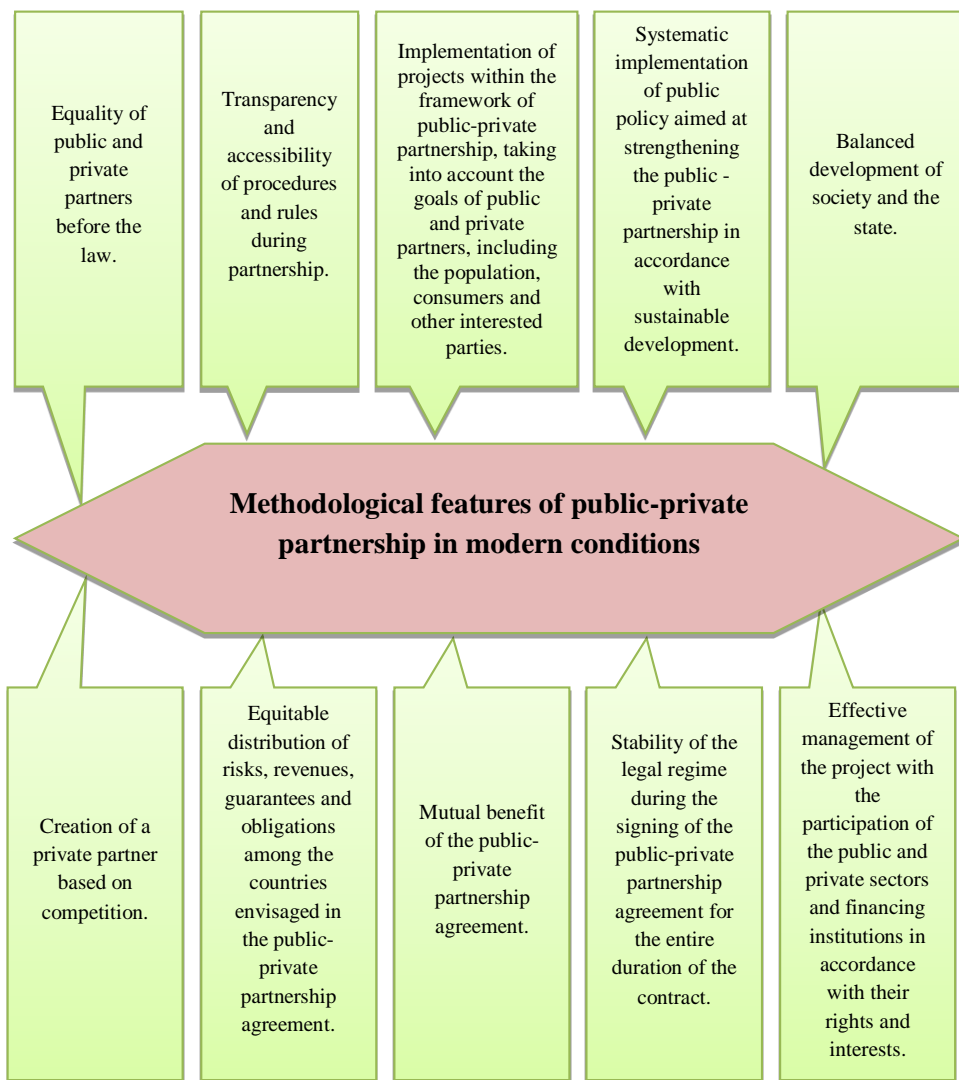


Figure 2. The most important methodological features of public-private partnership in modern conditions (compiled by the author based on research materials)

Methodologically, five directions for improving the mechanism of public-private partnership in the process of sustainable development can be noted: 1) The use of planning forecasts for efficient development of

infrastructure in the country; 2) Establishing the administrative, legal and methodological basis for public-private partnership; 3) Establishment of a public-private partnership management system at country, regional and municipal level; 4) Increasing the number and ensuring the overall effectiveness of public-private partnership projects by establishing financing mechanisms for these projects; 5) competition and development of the service market.

3. To improve the interaction between the public and private sectors, a comprehensive study, generalization and adequate decision-making of information on the application of progressive international experience is needed.

The public-private partnership mechanism has been in use in the world for a long time and is constantly being developed. However, the pace of implementation of this mechanism is at different stages in different countries of the world. In the education system, individual large-scale projects for the development of US regions (creation of new colleges and universities), the development of high-tech production structures, transport infrastructure and water supply systems are particularly impressive⁵. It should be noted that private sector organizations in the United States are more involved in the implementation of infrastructure projects, which has a positive impact on indicators of sustainable economic development. For instance, in the United States, private sector entities, having obtained the necessary financial resources, implement 56% of infrastructure projects in the field of road construction, 25% in the field of laying railway tracks, 11% in the field of water supply, and 8% in the sphere of building construction⁶.

Public-private partnership as practiced in Japan should be especially noted. A favorable environment has been created for partnership between government agencies and private sector organizations in various aspects. “Japan is one of the countries with sufficient experience in the use of forms and methods of public-private

⁵ Шаманина, Э.А. Сферы применения государственно-частного партнерства в США // Государственно-частное партнерство. – 2016. Т.3. № 2, – с.139.

⁶ Closing America’s Infrastructure Gap: The Role of Public-Private Partnerships: A Deloitte Research Study. – 2014.– с.36.

partnerships in various fields of production and social infrastructure, as well as state regulation in this area”⁷. The Japanese government has consistently funded major investments, innovations and priority projects in infrastructure and other social areas. In Turkey, positive experiences have been gathered in the area of public and private partnerships. Turkey is at the forefront of European countries in this area and major public-private partnership projects include the €3.1 billion Chanakkale bridge, the €1.2 billion Ankara-Nigde highway, the €711 million Bilkent University laboratory and others. The Turkish state has created favorable conditions for strengthening SOE issues and promoting priority projects in this area⁸.

Summarizing the main priorities of the international experience in public-private partnerships, we can conclude that construction, maintenance and operation of transport infrastructure, including highways, airports, railways; housing and communal services - drainage, waste collection, organization of communal services and repair of housing stock; environmental facilities - water treatment facilities, extraction and processing of minerals; construction and operation of real estate, including housing stock, public and social infrastructure facilities; organization of public services in the field of maintaining public order; communications, including the creation of telecommunications infrastructure and the provision of services to consumers; education, including the construction and repair of schools, the provision of necessary communications and participation in joint educational projects; health care - health protection, development and implementation of new technologies in this area, participation in activities in the field of pharmaceutical production.

4. In Azerbaijan, it is necessary to objectively analyze and evaluate the sphere of public-private partnership in the context of the basic requirements of sustainable development of the country.

⁷ Иванова, А.О. Развитие государственно-частного партнерства в Японии. Дисс. канд. экон. наук. / Москва, 2010. – с.69.

⁸Фадюшин, И.С. Международный опыт развития ГЧП. Международный научно-исследовательский журнал, №4 (82), - с.41.

It should be emphasized that one of the main strategic goals of Azerbaijan in the long-term perspective is to ensure the competitiveness and sustainable development of the national economy in the post-oil era. The Public-Private Partnership (PPP) Center was established in Azerbaijan as such a center. The main activities of this center are: 1) preparation of proposals for the development of legislation, normative-legal framework and institutional infrastructure in the context of public-private partnership; 2) development, implementation and coordination of programs and projects on public-private partnership; 3) expansion of participation of small and medium-sized enterprises in the preparation and implementation of programs and projects on public-private partnership; 4) educating interested parties about public-private partnership, as well as developing and implementing projects in accordance with the criteria of this cooperation⁹. The state determines the terms of partnership, creates favorable conditions for meeting the needs of the parties for innovation and quality digital services, and organizes various types of monitoring using digital technologies¹⁰.

We also compared the main macroeconomic indicators of micro, small and medium-sized businesses in Azerbaijan for 2016-2021. As a result, the value added created during the analysis period increased by 3.9 times, while the number of employees working in these organizations increased by 77 thousand people, and the number of operating business entities increased by 164.2 thousand (see table 1).

⁹ Dövlət-Sahibkar Tərəfdaşlığının İnkişafı Mərkəzi. Azərbaycan Respublikasının Kiçik və Orta Biznesin İnkişafı Agentliyi. c.112 - [Elektron resurs] / URL: <https://smb.gov.az/az/nav/dovlet-ozel-sektor-terefdasligi>.

¹⁰ Balayev, R.Ə. Rəqəmsal aqrar iqtisadiyyatın inkişafında dövlət - özəl bölmə tərəfdaşlığı // Kənd təsərrüfatının iqtisadiyyatı, – 2021. № 3 (37), – c.18.

Table 1

Comparison of the main macroeconomic indicators of micro, small and medium-sized businesses in Azerbaijan for 2016-2021

Indicators	2016	2017	2018	2019	2020	2021	Comparison for 2016-2021, +/-
Added value created, million manats	3587,2	3807,6	9836,6	11071,7	10941,0	13956,1	+10368,9
Number of employees, thousand people	281,0	290,1	283,4	332,2	348,7	357,8	+76,8
Average monthly nominal salary, manat	338,6	352,8	445,3	531,0	612,3	632,2	+293,6
Investments in fixed capital, million manats	2813	2950	3114	3422,2	2 674,1	3 387,7	+574,7
Existing business entities	191695	169603	186213	271304	316370	355906	+164211

Note: Compiled by the author based on the data of SOCAR - <https://www.stat.gov.az>.

Table 2 analyzes the dynamics of the number of registered statistical units in the Republic of Azerbaijan. According to the data, in 2015-2022 there was a significant increase in private sector organizations. Their number increased by about 84% to 138,300.

Table 2

Analysis of the dynamics of the number of registered statistical units in the Republic of Azerbaijan (as of January 1), 2015-2022

Indicators	2015	2016	2020	2021	2022	Increase/decrease of statistical units in 2015-2022, +/-	Increase/decrease of statistical units in 2015-2022, %
Total	94563	100325	146233	155435	167140	+72577	76,7 %
Public	10540	10646	10607	10729	10757	+217	2,1 %
Private	75187	80354	119887	127652	138266	+63079	83,9 %
The share of private statistical units in the total, %	79,5	80,1	82,0	82,1	82,7	+3,2 %	3,2 %

Note: Compiled by the author based on the data of SOCAR - <https://www.stat.gov.az>.

In Table 3, we analyzed the share of the non-public sector in Azerbaijan's GDP for 2015-2021 and found that its growth was 5.7% and 83.5% in 2021.

Table 3
Analysis of the share of the non-public sector in Azerbaijan's GDP, in %, 2005-2021.

Indicators	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Increase/dec rease in 2015-2022
share in GDP	77,8	81,7	82,5	81,5	82,5	81,9	81,2	83,7	83,8	84,7	85,0	80,8	83,5	+5,7
Industry	84,5	87,4	88,1	87,3	87,4	86,1	83,0	87,6	87,9	89,6	89,3	85,6	88,8	+4,3
Construct ion	90,4	72,0	75,3	76,0	84,5	84,3	84,5	86,8	84,6	80,2	82,9	84,6	87,5	-2,9
Agricultu re	97,8	99,7	99,3	99,4	99,4	99,8	99,8	99,9	99,9	99,9	99,9	99,9	99,9	+2,1
Trade and services	97,8	99,2	99,7	99,7	99,8	99,8	99,6	99,6	99,7	99,8	99,7	99,9	99,7	+1,9
Transport ation	37,5	75,3	78,1	77,7	77,1	78,5	81,7	82,8	82,4	83,1	83,6	80,1	84,8	+47,3
Commun ication	80,2	78,6	76,3	76,6	76,8	80,0	81,0	80,5	81,2	82,0	82,4	80,8	81,5	+1,3
Social and other services	31,8	47,0	49,4	49,1	51,5	55,2	57,8	58,0	56,1	56,4	58,2	51,0	52,5	+20,7

Note: Compiled by the author based on the data of SOCAR - <https://www.stat.gov.az>.

During this period, the share of the transportation sector increased from 37.5 percent to 84.8 percent, and the share of social and other services from 31.8 percent to 52.5 percent. However, we believe that resources are available to expand public-private partnership in these areas.

To assess the effectiveness of public-private partnership, we used a regression analysis between soft loans to private entrepreneurs and new jobs. As a result, the positive impact of such loans on new job creation was confirmed (see: table 4).

Table 4

Dynamics of concessional loans granted to entrepreneurs by the Entrepreneurship Development Fund (thousand manats) and the number of jobs created (units), 2010-2022.

Indicators	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Amount of soft loans	5609	6478	9100	12045	12564	12600	8106	6591	8934	5363	6703	6819	9562
Number of jobs created	115000	138000	218000	275000	295000	248500	189400	146000	160200	175000	255067	238004	243561

Note: Compiled by the author based on the materials of Entrepreneurship Development Fund - <http://edf.gov.az/az/content/22>.

Dependent Variable: X				
Method: Least Squares				
Date: 12/15/23 Time: 12:03				
Sample: 2010 2021				
Included observations: 12				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Y	0.032822	0.009975	3.290506	0.0000
C	1699.463	2114.759	0.803620	0.0000
R-squared	0.519864	Mean dependent var	8409.333	
Adjusted R-squared	0.471850	S.D. dependent var	2671.133	
S.E. of regression	1941.217	Akaike info criterion	18.13103	
Sum squared resid	37683221	Schwarz criterion	18.21185	
Log likelihood	-106.7862	Hannan-Quinn criter.	18.10111	
F-statistic	10.82743	Durbin-Watson stat	1.755940	
Prob(F-statistic)	0.008143			

The regression equation that was built between the amount of preferential loans and the number of jobs created is:

$$APL = 1699.463 + 0.032 * NJC$$

$$(2114.75) (0.0099)$$

Where, APL is the amount of preferential loans, NJC is the number of jobs created In our example, the relationship between the Y feature and the X factor is average and direct.

The average elasticity coefficient E shows by how many percent, on average, the result y will change from its average value when the factor x changes by 1% from its average value. The elasticity coefficient is found by the formula:

Knowing the input parameters, we can calculate the elasticity coefficient, which is determined by the formula $E = \Delta y / \Delta x \times x / y = b \times x / y \sim 0.65$ Thus, the elasticity coefficient is less than 1. Consequently,

when the number of jobs changes by 1%, the amount of preferential loans will change by less than 1%. In other words - the impact of the number of jobs (X) on the amount of preferential loans (Y) is insignificant. i.e. $R^2 \approx 0.5$. which means that in 51.99% of cases, changes in (X) lead to a change in (Y). In other words, the accuracy of the regression equation selection is average. The remaining 48.01% of changes in (Y) are explained by factors not taken into account in the model. The dependence of the amount of preferential loans (Y) on the number of created jobs (X) was studied. At the specification stage, paired linear regression was selected. The statistical significance of the equation was tested using the determination coefficient and Fisher's criterion. It was found that in the situation under study, 51.99% of the total variability in Y is explained by a change in X. An economic interpretation of the model parameters is possible - an increase in X by 1 unit leads to an increase in Y by an average of 1699.463 units. The linear correlation coefficient is 0.721, therefore, the relationship between the Y feature and the X factor is high and direct. Analysis of the elasticity coefficient shows that X has no significant effect on Y. The approximation error is less than 7%, which indicates the good quality of the model found. As a result, we found the maximum and minimum value of the influence of the amount of preferential loans on the number of jobs created

We will determine the confidence intervals of the regression coefficients, with 95% reliability we will determine by the formula:

$$(b - t_{crit} S.e. (b_2)) \leq \beta \leq b + t_{crit} Se (b_2)$$

$$0.032822 - (0.009975 \times 2.22) \leq \beta \leq 0.032822 + (0.009975 \times 2.22)$$

$$0.011 \leq \beta \leq 0.055$$

It follows that a change of 1 unit (APL) will affect from 0.011 to 0.055 units (NJC). Thus, the confidence interval gives us an interval representation of the possible change in the variable.

5. It is of strategic importance to objectively evaluate the most important areas of activity and to reveal the existing potential in this direction, and to ensure a mechanism of public-private partnership.

The development of a public-private partnership mechanism as an effective form of interaction between the state and the economy requires a comprehensive review of the following development areas: 1)

Improving the efficiency of infrastructure development forecasting and planning through attracting extra-budgetary financial resources. 2) Developing normative-legal base in the field of development of the mechanism of public-private partnership in the country. 3) Developing the management system of the public-private partnership mechanism at all levels to improve the interaction between the state and business. 4) Expanding and developing public-private financing mechanisms. 5) Increasing competition in the field of public-private partnership. The creation of a single specialized agency could be important for the development of public-private partnership.

6. In the current challenging global economic environment, there is a need to strengthen the institutional base and legal framework for public-private sector relations.

The issues of strengthening the institutional base for the development of public-private require a deep improvement of the existing state mechanisms, including the legal infrastructure for this purpose.

According to the accumulated experience on these issues, the following are recognized as the basic principles of public-private partnership in the foreign and domestic normative-legal framework: 1) equality of public and private partners before the law; 2) transparency and accessibility of procedures and rules in the partnership; 3) implementation of projects within the framework of public-private partnership, taking into account the objectives of public and private partners, as well as the population, consumers and other interested parties; 4) identification of a private partner on the basis of a competition and free entry into the competition without any discrimination of participants, etc.

Figure 3 shows the development of the institutional and legal framework in the current conditions, as well as the areas and directions for improving the public-private partnership, taking into account a number of important strategic factors.

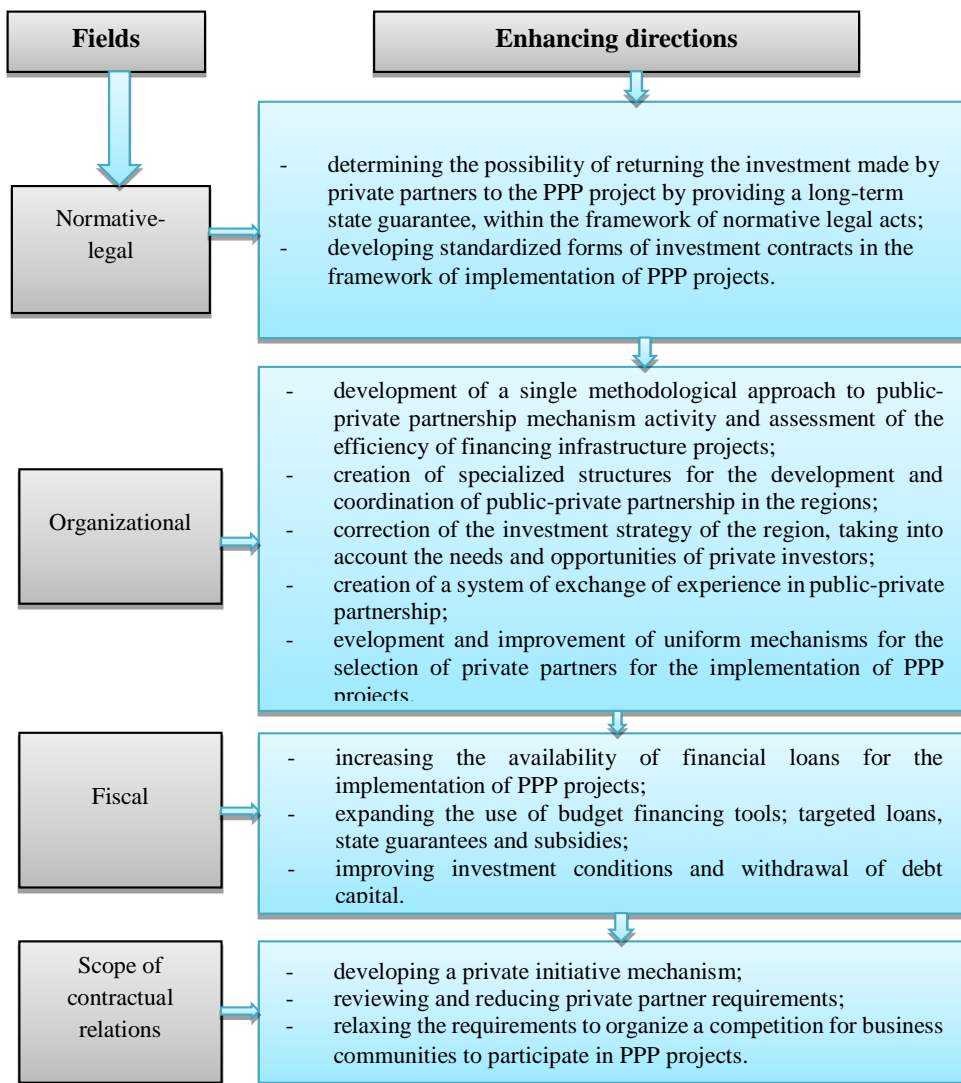


Figure 3. Directions for improving public-private partnership (compiled by the author)

According to the results in Figure 3, improvement of the normative-legal framework in public-private partnership is required.

Moreover, the state has experience in supporting private sector entities during the crisis period. For example, in 2020, Azerbaijan

implemented a number of preferential measures in the field of taxation within the framework of support of economic entities of entrepreneurship. Among the tax instruments to support business entities were simplified tax benefits, as well as exemption from VAT, income tax, land tax, property tax, etc. The tax incentives will be implemented. For example, from January 2020, tax exemptions worth 67 million dollars were defined in connection with the coronavirus pandemic covid-19, primarily for service sector entities.

It is possible to predict that public-private partnership in Azerbaijan will intensify in the near future, and this is related to the following factors: 1) In the post-pandemic period, there is a need for a more efficient and effective mechanism for expanding public-private partnership in the country to eliminate the negative consequences of the pandemic; 2) An intensive approach and alternative financial resources are required for the revitalization and restoration of the regions liberated from the occupation of the Armenian usurpers, and large-scale efforts to accelerate the development of the newly created economic regions - Karabakh and Eastern Zangaezur. This will be an incentive for the sustainable development of Azerbaijan and increase its competitiveness in the world. The adoption of the Law of the Republic of Azerbaijan of December 9, 2022 “On Public-Private Partnership” can significantly help in all this¹¹. The existence of such a full-fledged and progressive modern law allows us to predict that the intensity and efficiency of cooperation between public and private organizations in Azerbaijan will increase in the current conditions.

7. Understanding and defining the most important aspects and priorities for deepening public-private partnership in the regions of the country, considering the effective use of natural and economic resources.

The problems of intensification of public-private cooperation processes in the regions of the country differ in a number of features. First of all, it is necessary to take into account modern problems that disturb

¹¹ Dövlət-özəl tərəfdaşlığı haqqında Azərbaycan Respublikasının Qanunu. Bakı şəhəri, 9 dekabr 2022-ci il. № 691-VIQ.

the population and create discomfort in residential areas. This requires uninterrupted supply of electricity, natural gas, drinking water and heating energy.

Public-private partnership as a form of management increases the level of organized stability and competitiveness of the regional economy¹². The development of public-private partnership as an effective interaction between public structures and the private sector allows to increase efficiency in solving socially significant problems in the regions.

Using the public-private partnership mechanism, we have proposed: “A methodological mechanism for the efficient use of regional resources within the framework of a public-private partnership”, which is reflected in Figure 4.

¹² Фалалеев, А.Н., Кузьмин, Д.И. Механизм управления государственно-частным партнерством в регионе. Вестник Сибирского государственного аэрокосмического университета имени академика М.Ф. Решетнева, – 2012, – с.221.

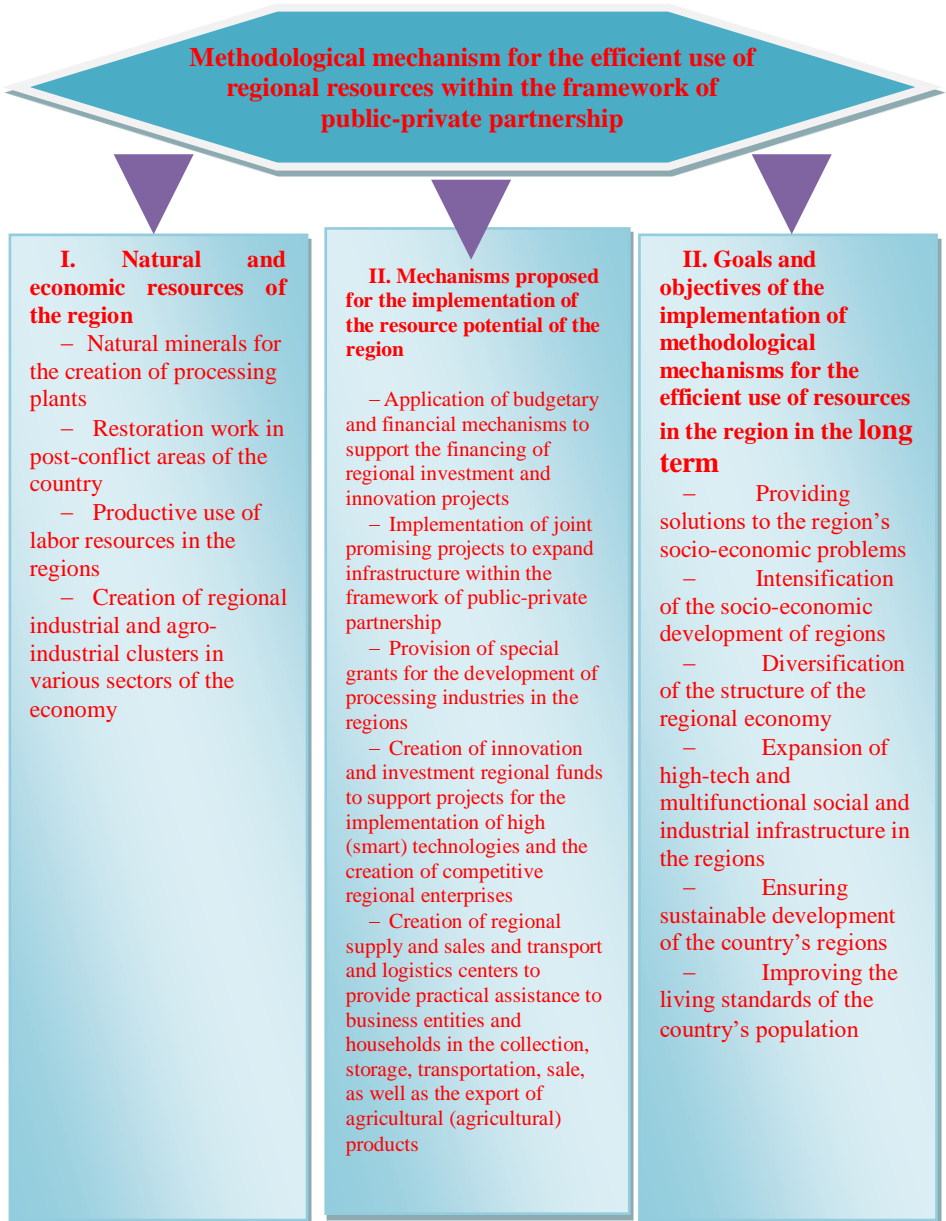


Figure 4. Methodological mechanism for the efficient use of regional resources within the framework of public-private partnership (source: compiled by the author)

8. There is a need to substantiate and define the most important aspects for enhancing the public-private partnership mechanism in ensuring the sustainable development of Azerbaijan.

The prospects for enhancing the public-private partnership mechanism of Azerbaijan require the implementation of consistent measures in line with the new challenges and demands of the modern world.

We would like to note that in recent years special attention has been paid to the development of principles and infrastructure of green economy and green energy. It is gratifying that in 2024 in November Azerbaijan will organize global events of the 29th session of the Conference of the Parties to the UN Framework Convention on Climate Change (COP29)¹³. We believe that within the framework of strengthening environmental security, minimizing the volume of waste into the atmosphere, reducing the negative consequences of climate change, there are huge reserves and priority directions of deepening public-private partnership are outlined. Subjects of the private sector of Azerbaijan can create enterprises for utilization of industrial waste, as well as invest in the development of green energy, etc.

Figure 5 indicates a block diagram of the main aspects for enhancing the public-private partnership mechanism in the post-pandemic period and in the context of the revitalization of liberated territories in Azerbaijan.

¹³ Azərbaycan Respublikasında 2024-cü ilin “Yaşıl dünya naminə həmrəylik ili” elan edilməsi haqqında Azərbaycan Respublikası Prezidentinin Sərəncamı, Bakı, 25 dekabr 2023.

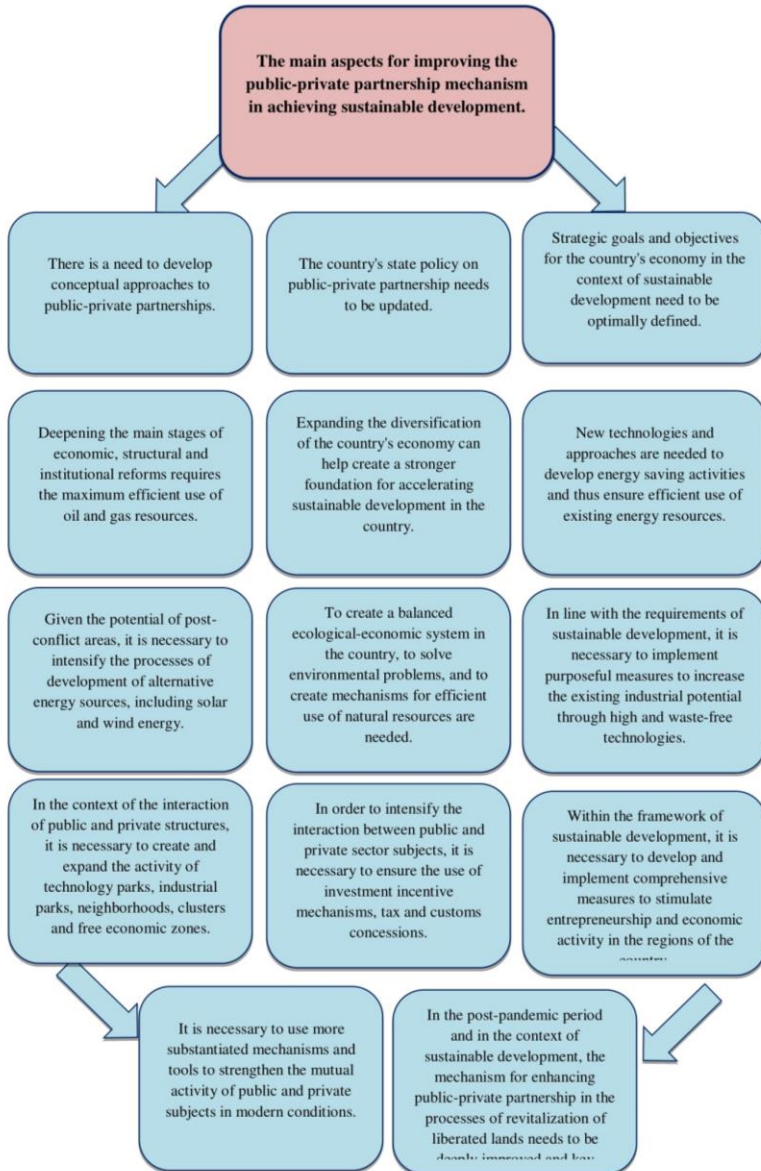


Figure 5. A block diagram of the main directions for improving the public-private partnership mechanism in the post-pandemic period and in the context of the revitalization of liberated territories in Azerbaijan (Compiled by the author).

In the near term, it is important to improve existing mechanisms and approaches to increasing the efficiency of the public and private sectors in the context of sustainable development, taking into account modern challenges and global impacts.

THE MAIN RESULTS AND PROPOSALS OF THE DISSERTATION

1. Based on theoretical and methodological approaches and modern priorities of interaction between public and private sectors, we believe that Azerbaijan needs to consistently consider the most important issues of development of society and the state, taking into account the intensification of processes of improving the living standards of the population, the implementation of effective projects for interaction between the state and business, optimal coordination of the activities of public and private entities on strategic issues and accumulated problems in the country in modern conditions.

2. We believe that Azerbaijan needs to consider the experience of Japan in the field of strengthening cooperation between the public and private sectors. Thus, Japan consistently implements large-scale investment and innovation projects that cover the infrastructure sector, including in the social direction. It is precisely in these areas that Azerbaijan needs to develop and implement similar projects and events. In Japan, the interaction of the public and private sectors is focused on improving public transport, the social energy system, communal infrastructure, the construction of new schools and hospitals, etc. All this, of course, contributes to improving the living standards of the country's population - the same goals and objectives are relevant for Azerbaijan. 3. It can be noted that the most important directions and strategic goals of the national economy have been formed and defined in Azerbaijan, which mainly consider strengthening the competitiveness of the national economy, reducing its dependence on the oil factor, taking into account the sustainable development of the country in the long term.

4. Targeted work is being carried out in Azerbaijan to diversify the national economy and create the basis for strengthening the sustainable development of the country in the near, medium and long term. The country has production capacities for the stable supply of energy

resources to the population and economic entities of the country. All this allows us to develop and implement promising investment and innovation projects to create an extensive network of social and industrial infrastructure.

5. A balanced regional policy is being pursued in Azerbaijan, which meets the requirements of new challenges to increase the sustainability of the socio-economic development of the country's regions. In addition, after the new zoning, the number of economic regions of the country increased from 12 to 14 - the Karabakh and East Zangezur economic regions were re-created. Therefore, we believe that new realities and opportunities have emerged for expanding the processes of cooperation between the public and private sectors in the implementation of new large-scale innovation and investment projects in the regions.

6. The main principles and promising areas for ensuring the efficiency and expansion of activities in the sphere of cooperation between the public and private sectors in the context of sustainable development in the near and long term require: 1) updating conceptual approaches in this area; 2) defining new priorities for strengthening cooperation, taking into account global challenges and transformations; 3) defining more specific areas of interaction between public and private sector entities; 4) creating a more progressive form and methods for strengthening the activities of the private sector in solving socio-economic problems; 5) developing and implementing new state mechanisms and tools to stimulate the activities of private sector entities in solving problems of ensuring a better living standard of the population, etc.

The main content of the dissertation has been published in the following scientific studies:

1. Enhancing public-private sector partnership in achieving sustainable development of Azerbaijan// Journal of "Geostrategy", Baku, 2020, No. 05-06, pp. 112-116. (original in russian)
2. Strategic issues of expansion of public-private partnership in Azerbaijan in post-pandemic period// Journal of "Geostrategy", 2021, No. 04, pp. 144-148. (original in russian)
3. Actual problems of improving the mechanisms of cooperation between the public and private sector in the context of their

- sustainable development// Journal of “News”, Institute of Economy of ANAS, Baku, 2020, No. 05, pp. 49-57. (original in russian)
4. Experience of countries of the world on improving the public-private interaction in modern conditions// Journal of “News”, Institute of Economy of ANAS, Baku, 2021, No. 06, pp. 127-134. (original in russian)
 5. The most important aspects of theoretical and methodological approaches with risk consideration in public-private partnership projects// Journal of “Geostrategy”, Baku, 2022, No. 04, pp. 114-118. (original in russian)
 6. Assessment and prospects for strengthening the mechanism of public-private partnership in Azerbaijan// Journal of “Financial Economics”, Russia, Moscow, 2022, No. 08, pp. 159-162. (original in russian)
 7. Important aspects of public-private partnership in the context of increasing global risks// Proceedings of the International Scientific Conference on “Problems of Sustainable Development of the Economy in the Information Society”. SSU, Sumgait, December 16-17, 2021, pp. 642-646. (original in russian)
 8. The role of technoparks in the processes of public-private sector cooperation // Proceedings of the International Scientific Conference on “Strategic Directions of Azerbaijan and Turkey's Economic Cooperation”. Sumgayit State University and Yildiz Technical University. Sumgait, 26-27.05.2022. pp. 240-242. (original in russian)
 9. The most important issues of development of cooperation between public and private sectors in the regions of Azerbaijan / Proceedings of XI International Scientific and Practical Conference on “Modern problems of civilization and sustainable development in the information society”. Russia, Moscow, 20.08.2022 . pp. 265-273. (original in russian)



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