Republic of Tajikistan | Republic of France
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MANAGEMENT OF THE DEVELOPMENT OF STATE-OWNED ENTERPRISES IN THE INNOVATIVE MODERNIZATION OF THE ECONOMY (BASED ON THE MATERIALS OF STATE-OWNED ENTERPRISES OF THE REPUBLIC OF TAJIKISTAN)

A DISSERTATION

Presented to the Faculty of the Graduate School
European International University

In Partial Fulfillment of the Requirements for the Degree of
Doctor of Business Administration
In Innovation Management

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Dushanbe | Paris
December 2022

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INTRODUCTION

The **relevance** of the research topic is due to the fact that at the present stage of socio-economic development of the Republic of Tajikistan (RT), state corporations are almost the only subjects of innovative modernization of the economy. The problem is that the configuration of Tajik state capitalism has not yet been fully formed, the country's largest enterprises are experiencing significant difficulties, which are caused by both the historical past and systemic socio-economic development problems, exacerbated by the aggravation of the geopolitical situation on the Tajik-Afghan border since July 2021.

In the context of the global crisis, the deterioration of the situation on world markets due to the coronavirus pandemic (Covid-19) and other negative global trends, Tajikistan's domestic economic policy is becoming increasingly important, covering not only commercial, but also state (public) sectors of the national economy. One of the key goals of domestic economic policy is the creation of an effective national innovation system (NIS) that contributes to improving the technological level and competitiveness of production, the entry of innovative products into domestic and foreign markets, the growth of import substitution, accelerating socio–economic development, achieving national strategic goals and the stability of the country as a whole.

Over the past decade, the Government of the Republic of Tajikistan has taken serious steps towards the development of the innovation sphere, in particular, legislative acts and strategic documents aimed at the development of NIS have come into force, including the Law of the Republic of Tajikistan "On Technology Park", the Law of the Republic of Tajikistan "On Innovation", the Program of Innovative Development of the Republic of Tajikistan for the period up to 2020", The Strategy of innovative development of the Republic of Tajikistan for the period up to 2020 , and other regulations. Since 2015, work has begun on the formation of innovative research centers and technology parks at the Academy of Sciences and institutions of higher professional education of the country.

Despite the fact that Tajikistan has begun to solve the large-scale task of innovative modernization of the economy, and state corporations today have great advantages over other economic entities, many of them do not have clearly calculated strategies for innovative development, the state weakly controls the expenditure of budgetary resources, does not regularly monitor the economic efficiency of their activities. In the current situation, taking into account the experience of developed and some developing countries, first, it is necessary to reduce the existing political, social and financial risks, to ensure stable profitability of strategically important state-owned enterprises, including with the involvement of private capital.

Preliminary analysis shows that there is a disconnect in approaches and methods of assessing the role of state corporations in the innovative modernization of the economy in relation to the Republic of Tajikistan. This is largely due to the lack of systematic theoretical and practical developments in relation to national state corporations and corporations with state participation. In addition, the process of formation of state corporations in the republic was delayed due to the imperfection of the regulatory framework, different levels of stability and financial stability of enterprises in this segment of the national economy.

Weak scientific and methodological, regulatory and regulatory support for the activities of the state corporation as a market entity necessitates its serious reorganization, bringing this key innovation and modernization institute to a new level of development. Increasing the role of state corporations in the modernization of the economy of Tajikistan should be associated with a deep adjustment of legislation, solving problems of "conflict of interests", raising the level of state management, combating clan and corruption-criminal schemes in the public sector, increasing the participation of state corporations in a competitive environment, developing forms of public-private partnership and other measures that will turn state corporations into a powerful and effective institute for innovative modernization of the economy, a support base for medium and small businesses.

The controversial nature of the issues related to education, efficiency and prospects for the development of state corporations in Tajikistan, the lack of elaboration of conceptual approaches, the special importance of solving the problem of innovative modernization of the economy of the republic, as well as the scientific and practical relevance of the existing problems, led to the choice of the topic of the dissertation research, the formulation of its goals and the definition of tasks.

The degree of development of the problem. The issues of formation and development of state corporations are a multidimensional and complex area in economics. The development of comparativism is reflected in the works of E. Berglof, D. Bailey, D. Begg, F. Modigliani, R. Portes and many other authors. The problems of corporate governance have been studied in the works of such scientists as A.N. Asaul, V.Y. Bakshinskas, A.Y. Bulatetskaya, E.P. Gubin, J. Solomon, Ya.I. Funk, Y.M. Chebotar, L. Edvinsson, etc.

Fundamental works, where the main approaches to the economic nature of innovation, the formation of the innovation system, the mechanism of state regulation of innovation processes are formulated, include the works of J. Schumpeter, B. Santo, E. Toffler, F. Fukuyama, B.A. Lundval, R. Nelson, L.I. Abalkin, I.T. Balabanov, S.Y. Glazyev, N.D. Kondratiev, B.N. Kuzyk, Y.V. Yakovets, etc.

Tajik scientists-economists H.A. Abdukodirov, U.M. Dzhumaev, G.D. Dzhurabaev, D.B. Kodirzoda, S.J. Komilov, Y.H. Majitov, N.R. Mukinova, T.D. Nizomova, I.S. Okilov, J.R. made a significant contribution to the study of the national innovation component of the economy of Tajikistan in various sectors of the economy.. Rakhmonov, M.N. Toshmatov, M.K. Fayzulloev, P.D. Khodjaev, B.K. Sharipov, etc.

At the same time, the problems of the role of the public sector in the economy have not been fully and objectively studied in economics, especially in post-Soviet countries, including the Republic of Tajikistan. The role of state

corporations in the innovative modernization of the republic's economy requires expansion and deepening, given the importance of this issue for Tajikistan.

The **purpose and objectives** of the dissertation research are related to the development of theoretical and methodological approaches to the analysis and evaluation of the activities of state corporations of Tajikistan, as well as the formation of the main directions of innovative modernization of the economy in modern conditions of the development of the economy of the republic.

The **purpose** of the study is to study the role of state-owned enterprises in Tajikistan and to develop the main directions of innovative modernization of state corporations.

Research objectives:

1) to reveal the economic nature and essence of state corporations as an institution of market economy;

2) analyze the conditions of regulation of the institution of state corporations in the Republic of Tajikistan;

3) to identify the role of state corporations in the modernization of the economy of Tajikistan;

4) identify the main directions of innovative modernization of the economy of the Republic of Tajikistan;

5) to select the most optimal methods of innovative modernization in state corporations;

6) to substantiate strategic aspects and prospects of innovative transformations in state corporations of the Republic of Tajikistan.

The **object** of the study is the state–corporate entities of the Republic of Tajikistan that solve the issues of innovative modernization.

The **subject** of the study is the organizational, economic, institutional and legal foundations of the functioning of state corporations and their activities in the direction of innovative modernization of the economy.

The **theoretical and methodological basis** of the dissertation consists of fundamental works, publications, legislative regulations, the results of scientific

work of domestic and foreign scientists in the direction of the development of innovative modernization of the economy on the basis of state corporations, the results of the analysis and theoretical materials.

To achieve this goal and solve the set research tasks, methods of analyzing statistical data and strategic documents of Tajikistan and the state corporate sector of the republic, methods of generalization, grouping, observation, benchmarking, tabular and graphical analysis were used.

The **scientific novelty of the study** consists in identifying the organizational, economic, institutional and legal foundations of the functioning of state corporations in the Republic of Tajikistan, assessing the effectiveness of their activities in the context of innovative modernization of the economy, as well as determining the main directions of innovative modernization of the country's economy on the basis of the Civil Code.

The most important results obtained personally by the author and possessing elements of scientific novelty include the following provisions:

- the institution of state corporations, in the legal sense of this concept, is absent in the republic. Tajikistan's legislation on state-owned enterprises needs to be improved. The uniqueness of the institutionalization of Tajikistan's state structures is manifested not only in the Soviet legacy and the objective difficulties of the transition to a market economy, but also in the internal contradictions between regional elites. The executive power in the republic has a pronounced autocratic management style, which has become forced rather than intentional, it was formed in the process of searching for an internal political compromise;

- assessing the role of state corporations in the modernization of the economy of Tajikistan, it can be stated that the republic has achieved some success with the help of international organizations and foreign investments of foreign corporations. But due to the lack of development of state institutions and institutions of the market economy, even fairly large national enterprises are experiencing great difficulties in adapting to the market environment. The course towards privatization and corporatization of inefficient state-owned enterprises is

generally correct, however, given the socio-economic situation in the country, mass privatization of state-owned enterprises seems impractical at present. Modernization and transition to an innovative way of economic development in Tajikistan is possible today only on the basis of existing state-owned enterprises;

- based on the analysis of the financial and economic condition of state-owned enterprises of Tajikistan, the Government of the Republic of Tajikistan is recommended to carry out financial rehabilitation of unprofitable enterprises, abandon inefficient management methods, carry out a comprehensive audit of tax benefits, revise the model of management of innovative development of the economy as a whole – shift the emphasis from large but inefficient state-owned enterprises to comprehensive support of the scientific sector and small forms of innovative entrepreneurship;

- among the main directions of innovative modernization of the economy of the Republic of Tajikistan are identified: improvement of the regulatory framework; clarification of strategic priorities; increasing the level of protection of intellectual property; improving the quality of innovation policy, investment policy, scientific and technical policy; tax policy; increasing the level of support for science and education, small innovative forms of entrepreneurship, which together will provide the actual level of innovation activity of enterprises.

In order to achieve the set strategic goals and priorities, Tajikistan will need to maintain and develop cooperation with international development institutions and regional organizations, including the EAEU; form small industrial productions capable of generating high technologies and modernizing the country's sectoral reproduction system; pay special attention to the human factor - stimulating innovation and entrepreneurship in state corporations;

- among the methods of innovative modernization in state corporations, it is recommended to use: various forms of PPP, subject to the development and approval of a clear algorithm for the selection of projects; improvement of business processes and organizational structure of state corporations in the direction of innovative development management; organization of the development and

implementation of basic and critical industrial technologies; search for opportunities to use and borrow technologies for the production of high-tech civilian products and dual-use products; formation and effective development of the innovation infrastructure of state corporations, including the system of intellectual property rights management; creation of new development institutions, venture funds, business accelerators and technology parks on the basis of state corporations; expansion and deepening of cooperation with leading universities and scientific organizations during R&D and the organization of innovative products; modernization and technological development of the GC itself through significant improvements in the main performance indicators of production systems;

- In the current geopolitical and socio-economic conditions, in order to carry out effective innovative modernization of industry, it is advisable for Tajikistan to use the model of a military-industrial cluster, which could include the state Unitary Enterprises Nuri Khovar and Fuluzoti Nodiri Tojikiston, which have undergone restructuring and financial rehabilitation, as state corporations, educational organizations and new innovative companies, including small, created for the implementation of high-tech projects. This model will allow enterprises entering the cluster to receive information, communicate and exchange input data in such a way as to add effects to the "collective" advantage, which otherwise could not be achieved alone. Clustering will facilitate collaboration to overcome common challenges and obstacles.

The validity and reliability of scientific statements, conclusions and recommendations is confirmed by the use of statistical information, theoretical and practical developments, their positive evaluation at scientific conferences and seminars, the introduction of research results into the practice of state corporations for the purpose of innovative modernization of the economy of Tajikistan.

The research area corresponds to the Passport of the Nomenclature of scientific specialties of the Higher Attestation Commission under the President of the Republic of Tajikistan in the specialty 08.00.05 – Economics and National

Economy Management (innovation management) by points: 2.1. Development of theoretical and methodological provisions of innovation activity; 2.10. Assessment of innovative activity of economic entities in order to ensure their sustainable economic development and cost growth; 2.12. Research of forms and methods of organizing and stimulating innovative activity, modern approaches to the formation of innovative strategies; 2.13. Development of strategies and conceptual provisions of promising innovation and investment policies of economic systems, taking into account the accumulated scientific world experience.

The theoretical significance of the research results lies in the fact that the scientific provisions and conceptual approaches substantiated by the author provide an opportunity for a deeper understanding of the processes of formation of state corporations in Tajikistan. The results of the dissertation research can be used: in the process of improving the regulatory framework of innovation activities on the basis of state corporations; in the development of methods, forms and conditions for the transition to an innovative model of the economy.

The practical significance of the results of the dissertation research lies in the possibility of using them to form a model for evaluating the effectiveness of state corporations and their restructuring in the context of innovative modernization of the economy, as well as determining the main directions of innovative modernization of the country's economy on the basis of the Civil Code.

Approbation and implementation of scientific results. The scientific results of the dissertation research were reported at international and national scientific conferences. The main provisions of the dissertation are reflected in 12 scientific publications, including – in peer–reviewed scientific publications recommended by the Higher Attestation Commission of the Russian Federation and the Higher Attestation Commission under the President of the Republic of Tajikistan 6 publications, and - in a scientific publication, international databases (Scopus) 1 publication.

Structure and content of the work. The purpose of the study predetermined the logic and structure of the work, consisting of an introduction, three chapters, a

conclusion, and a list of references. The volume of the dissertation is 174 pages, includes 13 figures and 8 tables.

CHAPTER 1. THEORETICAL AND METHODOLOGICAL APPROACHES TO THE STUDY OF STATE CORPORATIONS IN THE MARKET ECONOMY SYSTEM

1.1 The economic nature and essence of state corporations as an institution of market economy

The theme of the nature and essence of state corporations (SC) in a market economy is quite popular in the literature. However, the activities of the Civil Code cause discussions in the scientific community, since state corporations are special economic entities that require fundamentally new approaches in theory and practice, as well as special mechanisms for legal regulation. The problem is that most GCs produce goods and services in critical sectors for society or the state (medicine, education, culture, energy, housing and communal services, national security), having a dual economic nature: on the one hand, it is a pure public good , and on the other hand, it is a private public good, which indicates the need to combine the principles of both state and market regulation of this sphere.

The first question that arises when studying the economic essence of state corporations is: a state corporation actually a corporation in the sense that is traditionally invested in this concept?

The term "corporation" comes from the Latin word "corpus", meaning association, union. In Roman law, the rights of a legal person (corpus habere) were partially recognized by private unions.

Roman jurists created this construction for allied formations as special subjects of civil rights that do not coincide with natural persons.

The modern understanding of the category "corporation" provides:

- Consolidation of several companies to jointly solve complex business problems;

- a large company or, in some cases, a holding company that includes several subsidiaries;

- a political entity with a unified system of management and decision-making - at the city or state level.

The most important condition for the effective development of a corporation is the existence of rules (standards), which are recommended to be followed by its employees in the implementation of their interests. Usually they are characterized by a high degree of centralization. Features of the finances of different types of corporations have, in principle, the same property. They are managed by higher structures of the company, key decisions on their distribution are made by top managers.

Standards in a corporation are usually set at the level of local regulations. But this is not always the case. It is possible that they are informal, passed from one member of the corporation to another orally, but strictly observed. In some corporate structures, formal norms will be of greater importance, in others - those that are more correctly classified as informal. It depends on the national traditions in the state in which the company is registered, on the policy of the owners, top managers, on the specifics of the segment in which the organization develops.

It should be noted that for the effective building of relationships in business, as a rule, it is not so much certain formats of corporate norms that are important, but the mechanisms that ensure their observance.

Let's consider what main types of corporations are distinguished by researchers.

Modern experts classify the associations under consideration into three main types of corporations according to the criterion of their economic nature[1]:

- classic;

- etatist;

[1] Golikova Yu.A. Transnational corporations: definition of essence and characteristics of activity in modern conditions // Bulletin of NGU. Ser. Social-econ. science. - 2010. - V.10, issue 4. - S.32-39; Dynamics of corporate development / ed. Tatarkina A.I. - M.: Nauka, 2004. - 502 p.; Kuznetsov A. Transnational corporations of the BRICS countries // Mirovaya ekonomika i mezhdunarodnye otnosheniya. - 2012. - No. 3. - P.3-11; Nusinov V.M. Corporate formations in the modern economy // Microeconomics. - 2013. - No. 4. - P.33-36; Chernoy L. Evolution of the global corporate system: historical experience and modernity // Society and Economics. - 2006. - No. 3. - P. 117-137; Yakovlev V.P. Fundamentals of corporate information systems: textbook / VSHTE SPb GUPTD. - St. Petersburg, 2016. - 85 p.

- creative.

Let's analyze their specifics in more detail.

Classic corporations are companies that are created with the aim of achieving maximum business efficiency in the form of profitable production of goods or services, and involve a constant increase in turnover with a subsequent increase in the company's market share. The classic corporation is characterized by a pronounced difference between the institutions of ownership and management. There are owners who invest in the corporation, but there are also managers responsible for its development. The former, as a rule, do not interfere with the activities of the latter. However, hired managers in a classical corporation are usually accountable to the owners of the company.

In the 1970s and 1980s, global corporate business began to emphasize territorial expansion in order to gain as much international market share as possible. This affected the beginning processes of globalization, unification of standards, exchange of corporate experience with the participation of entrepreneurs from different countries.

In the 1990s, social changes took place in the structure of global (transnational) corporations, reflecting a revision by employees of companies of their own role in business. Thus, employees of many companies have ceased to consider themselves hired professionals, they began to feel like partners of their employer. Of course, these tendencies can be traced in different states with different intensities. Certain types of international corporations and their distinctive features can take on completely unique business characteristics that do not fit into any global concepts.

Etatist corporations arose as a response to capitalist tendencies, actively developing and spreading their influence in the world. Their founder and main ideologist is the state. It is assumed that the state determines the basic norms of the corporate culture of these associations, forms economic and social priorities in the development of the relevant structures.

Unlike classical capitalist corporations, statist associations are created to solve mainly urgent social and political problems. For example, ensuring the employment of citizens. In cases where the classical capitalist does not dare to expand production due to the high costs of building infrastructure, the state institution that establishes the statist corporation may well initiate the construction of a new factory in order to employ citizens living in the relevant territory.

In these associations, official norms regulating the corporate behavior of employees are extremely important. State-owned companies developed mainly in the USSR and other socialist countries. At the same time, in the respective states, the essence of the term “corporation”, the concept, economic nature and main types of economic associations were often not considered in the context of real social policy, since they were considered to be associated with the capitalist system.

Moreover, scientists still cannot decide on the scientific definition of "state"[2]. The ancient thinker Aristotle argued that the state is "a union of clans and villages for a perfect and original life"[3]. Cicero considered the state, as “the property of the people and the people are not any combination of people gathered together in some way, but a combination of people connected by agreement in matters of law and community of interests”[4]. In the European natural law doctrine, the state is the result of the association of citizens on a voluntary basis (T. Hobbes, J.-J. Rousseau, G. Grotius, J. Locke).

One of the modern legal dictionaries defines the state as the only possible, universal, universal political form of organization of a historically established society, which ensures the solution of both purely special tasks and the fulfillment of common affairs arising from the nature of society.[5].

[2] The concept of the state in four languages. C6. articles edited by O. Kharkhordin. - St. Petersburg.; Moscow: European University in St. Petersburg: Summer Garden, 2002. — 218 p..

[3] Theory of State and law: Anthology: In 2 volumes / Author. comp. V. V. Lazarev, S. V. Lipen. - M.: Lawyer. 2001. Vol. 1. – P. 154.

[4] Theory of State and law: Anthology: In 2 volumes / Author. comp. V. V. Lazarev, S. V. Lipen. - M.: Lawyer. 2001. Vol. 1. – P. 154.

[5] Legal Dictionary / Edited by A.N. Azriliyan. – M.: Institute of New Economics, 2007. – p. 106.

Researchers of the state as a phenomenon of human intellectual, material and other culture believe that it can be considered in three dimensions: a) as a state-organized community (a set of people living in a certain territory and united by political power); b) as an apparatus of state power; c) as a system of state bodies[6].

Thus, the concept of the state is multifaceted, and the interpretation of its essence depends on historical conditions; the state can be considered in various aspects (geographical, social, economic, cultural-historical, ideological, geopolitical, institutional, etc.), sovereignty, citizenship, rights and freedoms of citizens.

The overriding task of any government is to achieve the effectiveness of public administration, including the economic sphere. However, so far, even the discipline "Public administration" has not been fully formalized, especially when we are talking about developing countries (or countries with a transitional type of economic development).

Some researchers [7] are convinced that statist (state) corporations are in fact incapable of natural development. Here are their characteristic features:

- the main goal is not to achieve maximum production efficiency, but to implement the tasks set by the state as the founder;

- the ability to achieve success only in relatively narrow areas. For example, in the Soviet economy this was expressed in a high degree of monopolization: by the end of the 1980s, about 80% of product items were produced at one or two enterprises;

- successes are achieved, as a rule, in quantitative rather than qualitative terms, and artificially low costs become the main tool for the competitiveness of the group of companies;

[6] Problems of the general theory of law and the State: Textbook for universities / Under the general editorship of V. S. Nersesyants. (Author of the section "The State: essence, concept, structure, functions" — V. A. Chetvernin) — M., 2006. – pp. 515-517.

[7] Samardak A.S. Corporate information systems. - Vladivostok, 2003. - 262 p.

- the need for huge investments for its development and the inability to ensure high production efficiency. For example, in Japan, 86% of prices in agriculture are regulated by the state, 3/4 of farmers' incomes are state subsidies;

- immunity to technological progress. Etatist corporations do not become sources of innovation and do not properly evaluate the intellectual potential of their employees.

Another category of corporations is creative associations. They are among the youngest structures that appeared at the end of the 20th century. Their appearance and distribution is mainly associated with the development of communication infrastructure - primarily the Internet. People have a need for communication, for the exchange of information, for digital products that can evoke emotions. Consequently, there was a demand for enterprises preparing such products - games, websites, programs, multimedia content, and delivery. Creating such solutions requires a creative approach - when it is necessary to develop a product that is not similar to existing ones.

Along with this, a corporation is one of the types of legal entity. While corporate law varies from jurisdiction to jurisdiction, there are four hallmarks of a corporation. [8]:

- entity;
- limited liability;
- free sale of shares;
- centralized management by the board of directors.

Recall that the classic joint-stock company (JSC) became the main form of business associations in the United States and England approximately in the 20s. 19th century.[9] In modern world practice, according to organizational and legal formats, there are:

- General Partnership - contractual partnership;
- Anonymous Partnership - contractual partnership;

[8] Clark R.C. Corporate Law. - Little, Brown, 1986. - 837 pp.
[9] Funk Ya. I., Mikhalechenko V. A., Khvaley V. V. AO: history and theory. – Minsk, 1999. – 608 p.

- Limited Partnership, Company Limited by Guarantee – contractual partnership;

- Joint stock company – statutory partnership (company);

- Partnership Limited by Shares – statutory partnership (company);

- Limited Partnership – – statutory partnership;

- Industrial and Provident Society – – statutory partnership.

Corporations - monopoly associations of enterprises - include consortiums, trusts, cartels, syndicates, holdings, concerns, financial and industrial groups [10].

There are several models of corporate structures used in the world practice in the literature. [11]:

1. Private enterprise model.

This model is characterized by the fact that the director acts as the owner, while ordinary employees of the corporation, external power system structures can be defined as shareholders.

2. Model of collective ownership.

A characteristic feature of this model is the absence of a blocking stake; however, the share of the head, as a rule, is higher than the share of each of the employees and in proportions can approach the blocking stake.

3. Model with concentrated ownership.

Among the main advantages driving, the dynamics of this model are the emergence of opportunities for the development of the enterprise through new technologies and management skills. However, at the same time, the closeness from external investors remains.

4. Mixed view model.

A special case is the model with diffused possession. A feature of this model is that the middle management in most cases acts as the owner of small and medium-sized blocks of shares.

[10] Chebotar Yu.M. Corporate governance: monograph. – M.: Autonomous non-profit organization "Academy of Management and Business Administration", 2017. – P. 10.

[11] Nusinov V.M. Models of corporate entities in the management system // Problems of modern economy (Novosibirsk). - 2013. - No. 14. - pp. 155-158.

The listed forms and models assume the presence of a developed management system. Corporation management is understood as the tools used by managers of corporate structures and their divisions (subsidiaries), and corporate governance as a system of relationships in the triangle "shareholders - board of directors - management"[12], constant, successive provision of corporate interests and is expressed in corporate control relations, the totality of the impact on the process by which the activities of corporations are managed and controlled, the process of developing, adopting and implementing the decision made by the management bodies of a business entity[13].

Nevertheless, how is this expressed in and to what extent in the activities of state corporations?

Robert Dahl at work «The Science of Public Administration: Three Problems»[14] one of the first to analyze the three main problems of public administration:

1) What about “normative values” in the science of public administration?

2) How should human behavior be treated in the management process? Should it be managed based on the characteristics of the behavior of the controlled, or should the process be structured in such a way as to level the human factor?

3) Are there principles of public administration that operate independently of national and historical perspectives?

R. Dahl believes that “there can be no truly universal generalizations regarding public administration without a deep study of various national and social characteristics that affect public administration in order to determine which aspects, if any, are really independent of the national and social environment. »[15].

Accordingly, the second debatable question arises, which is which management model is most effective to use in the Civil Code.

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[12] Asaul A.N., Pavlov V.I., F. I. Beskier, Myshko O. A. Corporate management and corporate governance. - St. Petersburg: Humanistics. - 2006. – 328 p.

[13] Serebryakova A.A. The legal status of executive bodies of business companies: diss. ... cand. jurid. sciences':12.00.03. — Ulyanovsk, 2005. – 197 p.

[14] Dahl R. A. The Science of Public Administration: Three Problems // Public Administration Review. - 1947. - Vol. 7. - No. 1 – pp. 1-11.

[15] Dahl R. A. Указ. соч. P. 11.

In the English literature, there are four main points of view on corporate governance: the principal-agent (or finance) model, the myopic market model, the abuse of executive power model, and the stakeholder model.

Model "Principal-Agent" or "Financing"

This model is dominant in the theory of corporate governance. The model assumes that the sole purpose of corporations is to maximize the wealth of shareholders. Regulation enhances shareholder power and control.

As a cornerstone of agency theory, principal-agent relationships exist in any cooperative situation, and therefore at all levels of a corporation, in which the principal delegates work to an agent who does that work on behalf of the principal. Based on the assumption of selfish human behavior, agency theory argues that managers as agents can pursue their own interests at the expense of shareholders, hence the so-called "agency problem".

The agency model in corporate governance

Agency theory suggests that all social relations in economic interaction can be reduced to a set of contracts (defining duties, rewards, and the principal's rights to control corporate activities) between principals and agents, where the role of contracts serves as a vehicle for voluntary action. Thus, a corporation can best be described as "a connection of contracts" with the behavior of a company that models the behavior of the market, that is, "the result of a complex equilibrium process."

The main goal of the theory of agency relations is to determine the most efficient or optimal contract that regulates the relationship between the principal and the agent. The question relates to whether behavior-oriented management (eg wages, hierarchical management) is more effective than performance-oriented contract management (e.g. commissions, stock options). For agency theorists, market-oriented management best disciplines the behavior of managers. Financial theorists, however, argue that since the behavior of managers can be constrained by the pressures of capital markets, factor markets and corporate control markets can best solve the problem of management inefficiency. Proponents of this model

insist that current corporate governance mechanisms should be allowed to operate freely and that any interference with market governance mechanisms is irrational and distorts them.[16].

Myopic market model

This model shares with principal-agent theory the position that the goal of corporations is to maximize shareholder wealth. However, it argues that maximizing shareholder wealth is not synonymous with maximizing share price because the market systematically undervalues long-term capital investments. It also argues that the Anglo-American style of corporate governance suffers from an over-concern with short-term return on investment, short-term corporate profits, short-term management efficiency, short-term stock market prices, and short-term costs.[17]. Moreover, the theory argues that the threat of a hostile takeover has the effect of distorting and distracting from true value creation.

The myopic market model suggests that corporate governance reform should provide an environment in which shareholders and managers are encouraged to share long-term performance horizons.

Model of abuse of executive power

This model assumes that companies suffer from widespread abuses of executive power. Existing corporate governance mechanisms leave excessive power in the hands of management, which can abuse it to their advantage at the expense of shareholders and society as a whole. Proponents of this view argue that existing institutional restrictions on managerial behavior, such as shareholder involvement in major decisions, disclosure, non-executive directors, an audit process, or the threat of a takeover, are inadequate to prevent the abuse of corporate power because shareholders, who are protected by markets for liquid assets, are simply interested in most abuses of corporate power.

Stakeholder Model

[16] Hart O. Firms, Contracts and Financial Structure. Oxford University Press, New York, 1995.

[17] Solomon J. and Solomon A. Corporate Governance and Accountability, John Wiley & Sons Ltd., 2004. - 318 pp.

This model in corporate governance is seen as a major challenge to the principal-agent model. The central position of the model is that the purpose of the corporation should be defined more broadly than just maximizing the wealth of shareholders. The corporation must be aware of the welfare of other groups, such as employees, suppliers, customers, and managers, who have long-term ties to the firm and therefore have some "share" in its long-term success. The broader objective function of the corporation is not only economic justice, but also social accountability and efficiency.

Thus, the mechanisms of market governance supported by the principal-agent model and hierarchical forms of governance, compared with the other three models, are seen as competing alternatives to rational choice. Various sides of the debate argue that only one optimal and universal management structure is effective in disciplining management effectiveness, which can be repeatedly tested and objectively chosen. The criterion for choosing the optimal management structure for all points of view corresponds to the principle of economic efficiency, since institutional changes are rooted precisely in efficiency. There is a rational process to ensure that more efficient economic forms and governance structures prevail over less efficient ones. Economic rationality or efficiency is seen as the general reason why the perspectives of shareholders and stakeholders aspire to the purity, certainty and universality of governance that forms the ultimate demonstration of rationality at its best. In agency theory, rationality is embodied in the optimization of contracts. The myopic market model proposes to limit irrational short-term prospects, forcing participants to take a more measured (rational) long-term view. The abuse of executive power model seeks a similar path to rationality, insisting on limiting the irrational (in the eyes of the entire corporation) powers of directors, and independent researchers are looking for the best path. Stakeholder theory strives for collective rationality, in which the demands of one group cannot disproportionately outweigh the demands of others.

One of the optimal paradigms of corporate governance in foreign theory and practice is the concept of intellectual capital management, in which intellectual

capital (IC) is understood as a factor in economic development, including certain intellectual activities, due to a well-functioning knowledge management system for each employee and management of the organization, in which development strategy is determined not by an individual, but by a set of employees[18]; "information and knowledge applied to create value"[19]; the totality of knowledge and experience of the employees of the organization, allowing to provide specific advantages for the organization in the market[20]; the basic component of intellectual capital is knowledge, intellectual resources that are the result of mental activity and constitute a strategic business asset of any company that uses it to gain competitive advantages and create value[21].

Most researchers assume that intellectual capital consists of three main elements:

- Human capital, which includes the experience, know-how, abilities, skills and knowledge of the organization's employees. Human capital is seen as both the intellectual power of employees, which is useful for the organization, or as opportunities that solutions provide for customers. Human capital is a source of innovation due to the individual abilities, knowledge, skills, experience and ability to solve the problems of the employees of the organization;

- Structural capital (or organizational capital), which includes systems, networks, policies, culture, distribution channels and other "organizational capabilities" designed to meet market demands, as well as intellectual property. Structural capital is information technology, communication systems, concepts and models of business operations, databases and documents, as well as trademarks, patents and copyrights and other “packaged” knowledge that enjoy legal protection;

[18] Galbraith D. New Industrial Society. - Moscow: AST, 2014. - 602 p.

[19] Edvinsson L. Corporate Longitude: What you need to know to navigate the knowledge economy. - London: BookHouse Publishing, 2002.

[20] Stewart T.A. Intellectual Capital. The New Wealth of Organizations. New York: Currency Doubleday, 1997.

[21] Bulatetskaya A.Yu. Management of corporate intellectual capital in the innovative economy: dis... doct. Economics: 08.00.05. - St. Petersburg, 2020. – p. 25.

- Relational (customer) capital, which includes the connections that people outside the organization have with him, their loyalty, market share, backorder rate and similar issues. This also includes brand awareness and goodwill. For this reason, the term "relationship capital" is often used. Customer equity becomes valuable when it lowers marketing costs or increases sales.

Analysis of foreign literature on the topic of intellectual capital management[22] indicates that two completely different approaches are used in world practice. One is based on the premise that by increasing the knowledge inherent in an organization, one can increase its ability to generate profits in the long run. This belief leads to the notion of intellectual capital, which is almost entirely focused on human capital - in particular, employees who create, educate, communicate and share knowledge. According to this approach, the management of IC itself is based on a set of disciplines based on the academic study of education, philosophy, religion and sociology. The second approach to intellectual capital management comes from people who view intellectual capital as an economic asset that can be handled using economic and financial methods. Their premise is that the intellectual capital of an organization is a valuable asset that needs to be maintained over time and from which profit can be made. The intellectual capital managers in this structure are concerned with economic and financial value, systems approaches, and business strategy.

The problem is how to combine these two lines of thought.

Organizations that manage their intellectual capital effectively are strategically focused on managing the following aspects of it:

- Management and measurement of human capital;

- Systems of intellectual capital assets and assessment of competitive technologies;

[22] Roos G. & Roos J. Measuring your company's intellectual performance // Long Range Planning. – 1997. - No 30(3). - pp. 413-426; Sullivan P.H. (ed.) Profiting from Intellectual Capital: extracting value from innovation. - New York: John Wiley & So, 1998; Sullivan P.H. Value-driven Intellectual Capital: how to convert intangible corporate assets into market value. New York: John Wiley, 2000; Sveiby K-E. Intellectual Capital and knowledge management, 2001; [Электронный ресурс]; URL: http://www.sveiby.com/articles/IntellectualCapital.html (дата обращения: 10.06.2021).

- Intellectual property system.

It is important to understand the difference between human capital and intellectual assets: while human capital cannot be owned by an organization, intellectual assets (methodologies, processes, and databases) can be owned by the organization and its shareholders. Then the main task of intellectual capital is to transform implicit human capital into explicit intellectual assets. Isolated stocks of knowledge that reside in the minds of employees and are never coded into the knowledge of the organization can never positively affect the performance of the organization. People need to be supported in an organizational learning process in which they can share their human capital.

In this regard, we can agree with A.Yu. Bulatetskaya that the functions of IC in the context of management theory, due to its multidimensionality, are not limited to economic content.

Thus, from the standpoint of corporate management of intellectual capital, this is the ability of an organization to derive economic benefits and social effects from its knowledge related to employees, innovations, a set of intangible assets, external counterparties and internal business processes.

Due to the nature of knowledge and the many ways in which individuals and groups use knowledge, the use of knowledge within any organization will always be a complex issue.

The benefits of IC governance relate to the ability to move beyond metrics and measurements to focus on the process of strategy in practice based on smart assets[23]. Traditional measurement tools and frameworks are unable to capture the flow of intangible assets and determine their impact on value creation parameters over time, which is especially true for public corporations, which are extremely conservative and less receptive to the introduction of innovative management practices.

[23] Edvinsson L. IC 21: reflections from 21 years of IC practice and theory // Journal of Intellectual Capital. - 2013. - Vol. 14. - No. 1. - pp. 163-172.

Summarizing the above, we can state that the need for state corporations began to form, first, in European society since the 19th century. Social problems such as unemployment and economic inequality required government intervention in the economy. In the 20th century, many developing countries chose the public sector for economic and social development. This explains many of the functions of state corporations, such as participation in industrial production, transport, social services, communications, etc. companies. Moreover, the state continued to perform its traditional functions: security, justice, and so on. Since the 1950s, successive governments have used public corporations as instruments of state intervention in the process of social and economic development. Their main goal is to stimulate and accelerate national socio-economic development in the face of a shortage of capital and structural defects in the organization of private business.

Thus, the economic essence of state corporations is determined by various factors of the external and internal environment, including those associated with the danger of providing vital sectors of the national economy to the private sector, often under the direct and remote control of foreign companies and large transnational corporations.

Recognizing the presence of a number of shortcomings in state corporations, let us disagree with the emphasis solely on the negative characteristics of the state corporations. First, state corporations appear in conditions when private business does not show its ability and initiative in investing in strategically important sectors of the national economy. Secondly, the institution of state corporations allows public authorities to significantly influence market processes, including through the organization of cooperation between public and private structures. Thirdly, GCs are quite often created during a crisis to support the economy and workers.[24].

At present, each state, depending on the features of the geopolitical position, available resources, other factors and conditions, creates its own unique sectoral

[24] Mailyan S.S. On some aspects of the economic essence of state corporations // Bulletin of Economic Security. 2019. - No. 4. - pp.314-317.

structure of the economy, the improvement of which is a complex process. When creating state corporations, the state always pursues certain goals and takes significant risks. However, if successful, it deserves more trust, both from foreign partners and investors, and from its citizens. In addition, the successful activities of state corporations will give a strong impetus to the development of the national economy, since today it is trying to create such structures, as a rule, in science-intensive industries and in the areas of using high modern technologies in order to increase the competitiveness of national products in foreign markets.

Consequently, state-owned enterprises, especially in developing countries, should become more active in key sectors of the economy, be in search of optimal corporate governance tools in an unstable external environment and the need for innovative modernization. One of these tools is the methodology for assessing the effectiveness of the activities of the Civil Code.

1.2 Methodological approaches to assessing the effectiveness and role of state corporations in the modernization of the economy

The issue of methodology for evaluating the effectiveness of corporations in general and state corporations, in particular, is of great interest to researchers. Despite the wide variety of research papers devoted to this issue, in relation to state corporations, this issue has not been studied in depth. If the efficiency of a classical commercial corporation is estimated in the world practice mainly by the value of its shares, then, when evaluating the efficiency of a state corporation, the use of this approach is limited. Not coincidentally, according to the ISO-9001 standard, "efficiency" is the degree to which planned activities are carried out and planned results are achieved, and not an increase in the value of a corporation, its revenue or profit.

Different countries use different methodologies for assessing the performance of state corporations, however, the traditional assessment, as a rule,

consists in the analysis of such quantitative indicators as: revenue, net profit, cost, return on assets, return on sales, etc. The same methodological approach is often applied to public corporations. For example, Table 1.1 presents a comparative analysis of the efficiency of engineering companies in the nuclear industry in individual countries: the engineering division of the Russian State Corporation Rosatom, the French company ORANO, the Chinese state engineering company China General Nuclear Power Corporation, the Korean electric power company Korea Electric Power Corporation and the Spanish company Iberdrola.

Table 1.1 - Comparative analysis of performance indicators of the largest engineering companies in the nuclear industry

	Engineering division of SC Rosatom	China General Nuclear Power Corporation	Korea Electric Power Corporation	ORANO	Iberdrola
Revenue, million €	2 730	6 313	9 714	3 123	35 076
Net profit (loss), € million	291	1 699	-1 616	-542	3 014
Cost of sales, € million	2 790	2 610	15 571	3 047	19 640
Net assets, million €	852	2 458	2 173	723	113 038
Return on assets, %	34,1	69	-74,4	-74,9	2,67
Return on sales by net profit, %	10,6	27	-16,6	-17,3	8,6

Source: Yurlov F.F., Ershova M.I. Analysis of foreign and domestic experience in improving the efficiency of engineering companies in the nuclear industry // In the collection: Economic security of Russia: problems and prospects. Materials of the VIII International scientific-practical conference of scientists, specialists, university professors, graduate students, students. 2020. S. 105-109.

The table shows that while Spain's Iberdrola has the highest revenue (€35,076 million), China's China General Nuclear Power Corporation has the highest return on assets and net profit sales among the companies represented: 69% and 27% respectively.

However, the problem is that a quantitative assessment of the effectiveness of the Civil Code is not always possible, especially when it comes to strategic enterprises of the military-industrial complex (DIC), due to the special regime of their activities. In particular, the characteristics of defense industry enterprises

predetermine the list of conditions and factors in the dynamics of their effectiveness, making the choice and interpretation of indicators for assessing their effectiveness a research problem. Unlike any “civilian” enterprise, the organizational and economic structure, strategic goals and objectives of the activities of the GC OPK express the interests of the state, on the one hand, which are in conflict with the laws of the market, and on the other hand, dictating the desire to have an objective economic assessment of the results of their production and economic activity[25].

In the context of strategic management, a number of researchers call for a focus on the strategic effectiveness of public corporations. Thus, in the CIS countries, a new system of state strategic management and planning is being formed, which owes its appearance in the 70s. Last century, the concept of the so-called "New Public Management" (New Public Management, NPM), which soon became the dominant paradigm in the public sector of most economically developed countries, starting with the UK. Essentially, NPM is a set of assumptions and value statements about how public sector organizations should be designed, organized and managed.[26]. The key point in this paradigm is the perception of market and private business practices by public organizations seeking to increase their efficiency and realize the goal of maximizing value.[27]. One such methodology adopted by government organizations at all levels of government has been the concept of strategic management, along with the tools associated with this concept (eg strategic planning, scenario planning, and mission and vision statements).

Commenting on the very idea of NPM, it should be noted that the rash transfer of the principles of management and planning in a "pure" form from the private sector to the public sector could be dangerous, as the 30-year experience of

[25] In Dubrovsky. Zh., Ivanova E. M., Chuprakova N. V. Problems of assessing the effectiveness of the activities of agricultural enterprises // Journal of New Economics. - 2019. - Vol. 20. - No. 5. - pp. 92-107. DOI: 10.29141/2658-5081-2019-20-5-6

[26] Diefenbach T. New Public Management in Public Sector Organizations: The Dark Sides of Managerialistic “Enlightenment” // Public Administration. - 2009. - № 87 (4). - pp. 892–909.

[27] Goldfinch S. & Wallis J. Two Myths of Convergence in Public Management Reform // Public Administration. - 2010. - № 88 (4). - pp. 1099–1115.

almost all post-Soviet countries demonstrates to us. In this sense, the appearance of the term "privatized" state is not accidental. On the other hand, it is difficult to doubt that at present the strategic relationship between the state and corporations has become closer than ever (an example of this is the concept of public-private partnership, PPP).

Representatives of international institutions define a PPP as "a long-term contract between a private party and a public institution for the provision of a public asset or service, in which the private party bears significant risk and responsibility for management, and the reward is related to performance"[28].

In the scientific literature, public-private partnership is commonly understood as an institutional and organizational alliance between the state and business in order to implement socially significant projects and programs in a wide range of industries and R&D, up to the service sector.[29].

PPP is also considered as a legally defined form of interaction between the state and private business, aimed at the cost-effective achievement of the goals of the parties, legally fixed by an agreement based on the principle of equal cooperative behavior in making strategic and current decisions, which implies the investment by the parties of their assets[30]. The conceptual platform for creating a PPP is effective decision making as an important factor in ensuring competitiveness.

In world practice, among the indicators evaluating the performance of a corporation, a set of operational efficiency indicators is quite often used. To refer to these indicators, the term KPI (Key Performance Indicators) or KPI (Key Performance Indicators) is used. KPIs reflect the idea that some aspects of an organization's performance are more important than others. KPIs are a set of measures that address the aspects of an organization's performance that are most

[28] PPP Reference Guide 3.0, 2017; [Электронный ресурс]; URL: https://ppp.worldbank.org/public-private-partnership/library/ppp-reference-guide-3-0

[29] Varnavsky V. G. Partnership of the state and the private sector: forms, projects, risks. - M.: Nauka, 2005. – 315 p.

[30] Mamchenko O.P., Dolzhenko I.A. The economic essence and the role of public-private partnership in the implementation of regional economic policy // Izvestiya Altai State University. - 2010. - № 2 (66). - Pp. 245-249.

important to its current and future success. KPIs thus focus either on critical aspects of an organization's performance that require improvement, or on aspects that must remain within a certain level to ensure continued success. It is not uncommon for KPIs used by organizations to be very general in nature, as they do not address specific issues related to measuring a single goal, and are more like performance standards or targets.[31].

An analysis of the extensive literature on the topic of KPIs shows that the types of key performance indicators can be different. They can be process-based (eg, compliance with guidelines), activity-based (eg, financial resources spent, number of employees), or performance-based (eg, goals achieved, service success). KPIs are especially useful when they are linked to policy issues or results.

KPIs can be divided into several categories, such as the following:

- Quantitative KPIs: quantity of a product or service;

- Qualitative KPIs: structured perception of feedback;

- Key cost performance indicators: unit costs to achieve a certain volume of goods (services);

- Economic efficiency: the unit cost of achieving a certain amount of goods (services) at a given quality level;

- Timeliness/Responsiveness KPIs: time taken to deliver a service, or number of transactions or products within a time cycle;

- Working Group Performance KPIs: the output of a unit or group of personnel.

For example, the Balanced Scorecard (BSC) proposed by R. Kaplan and D. Norton has become a generally recognized KPI tool in world science and practice. BSC allows you to comprehensively evaluate and compare production capabilities with the available material, labor, intellectual, innovative resources; BSCs provide

[31] Chen S., Wang H., & Yang K. Establishment and application of performance measure indicators for universities // The TQM Journal. – 2009. - No 21(3). – pp. 220–235; Shankar R., Gupta R., & Dong J. Multi-criteria evaluation of real-time key performance indicators of supply chain with consideration of big data architecture // Computers and Industrial Engineering. – 2019. - No 128. – pp. 1076–1087; Sari R. P. Integration of Key Performance Indicator into the Corporate Strategic Planning: Case Study at PT. // Agriculture and Agricultural Science Procedia. – 2015. – No 3. – pp. 121–126. https://doi.org/10.1016/j.aaspro.2015.01.024

the financial component of the plans and the consistency of interrelated indicators. In the context of the transition to digital transformation, analysts refer to four components of the BSC: Strategy, Technology, People, Processes The BSC provides a mechanism, a language for disseminating the strategy; using evaluation criteria that inform employees about the future factors of present and future success. However, this methodology has limitations due to the lack of transparency of some state corporations.

Modern scientists identify the following requirements for the formulation of KPIs[32]:

- focus on strategic goals;

- Reliability: the information used to calculate the KPI must be objective and complete;

- required level of calculation complexity: KPI calculations should be understandable to employees;

- timeliness: the KPI value should be available at the right time in accordance with the selected period for determining the KPI value;

- achievability of the planned KPI value;

- availability for use in the balanced scorecard (BSC);

- controllability: it is necessary to ensure the possibility of checking the calculated result;

- interconnectedness and work for a common result.

Among the indicators evaluating the effectiveness of corporations, the Key Success Factors (KSF) are also used, which usually include: a successful strategy; properties of goods (services, products) that determine the choice by consumers of a particular brand or manufacturer; resources and capabilities that provide the company with a victory in the competition; professional experience, performance, actions to achieve a sustainable competitive advantage; in project integration process management, etc.

[32] Safina D.M. Management of key performance indicators: a textbook. – Kazan: Kazan. un-t, 2018. – 123 p.

For example, within the framework of the project approach, which is becoming increasingly popular in the practice of corporate management, the following KFU are proposed that affect the success of the project[33]:

1) project integration;

2) scope of the project;

3) project communication;

4) staff fluctuations;

5) project schedule;

6) project budget;

7) project resources;

8) reporting and monitoring of the project;

9) sustainability of the project;

10) project context.

In research[34] the eight critical success factors in project management are:

1. The project manager should strive to enlist the support of team members, clients, senior management and all interested parties. Executive sponsorship for a project is key because top management determines the organization and project's strategy and performs the goal setting function of the organization.

2. The project manager must ensure that the objectives and results of the project are specific, measurable, achievable, and relevant and time bound (SMART methodology).

3. There must be an agreed process for quickly identifying and resolving conflicts.

4. Proper project management must be established.

5. Best practices should be applied at every stage of the project.

[33] Seweryn S. Critical success factors in project management. To fail or not to fail, that is the question!, 2005; [Электронный ресурс]; URL: https://www.pmi.org/learning/library/critical-success-factors-project-management-7568

[34] How To Identify Critical Success Factors in Project Management, 2020; [Электронный ресурс]; URL: https://www.nutcache.com/blog/how-to-identify-critical-success-factors-in-project-management/ (дата обращения 05.07.2021).

6. An appropriate risk management policy must be established from the outset.

7. Proper project planning - Without a plan, we plan to fail.

8. An effective project manager must be an effective communicator. Communication is the only way tasks are assigned and tracked.

A separate area for evaluating the effectiveness of public corporations can be considered an assessment of their public procurement activities. Some authors propose to provide for the following evaluation criteria in the contract system: a criterion for assessing the state and development of fair competition in the market of goods (works, services) for state needs; a criterion for assessing the quality of legal support for procurement activities and compliance with its norms and provisions by customers and participants in the placement of state orders; criterion for evaluating the effectiveness and efficiency of the use of budgetary funds for public procurement.

Other authors[35] believe that the general methodology for assessing the effectiveness of placing a state order is based on considering the expenditure of budget funds in relation to a specific purchase. This method is good because it makes it possible to identify not only the degree of savings in this particular case, but also to determine the results of the work of the entire system of public contracts concluded at auction.

The following are proposed as key criteria that allow assessing the economic efficiency of procurement activities directly at defense industry enterprises, for example: compliance with procurement laws; implementation of procurement plans; the share of competitive purchases in the total volume of purchases; compliance with the requirements for the quality of purchased goods; discipline of execution of contracts and some other[36].

[35] Kukharev V. V. Placement of a state order and evaluation of its effectiveness // Socio-economic phenomena and processes. - 2013. - № 5 (051). - Pp. 121-128.

[36] Denisov A.D., Zuev M.V. Evaluation of the effectiveness of procurement activities of the enterprise of the military-industrial complex // Development of territories. - 2019. - № 4 (18). - Pp. 55-58.

The problem is that in relation to state corporations, despite significant financial flows, procurement procedures with the maximum efficiency of procurement procedures have not yet been built. Meanwhile, the public procurement process in most countries of the world is still associated with a large number of corruption risks at all stages of the public procurement cycle, most of which have long been known and analyzed by the OECD countries (Table 1.2).

Table 1.2 – The most common corruption risks at various stages of the public procurement process, according to the OECD

	Stage	**Corruption risks**
Risks at the stage of preparation for trading	Needs assessment	Inadequate needs assessment. Third-party influence on the decision-making process by officials. Informal agreement on contract issues.
	Planning and budgeting	Inefficient procurement planning. Procurement inconsistency with the overall investment decision-making process. Unrealistic budget planning or lack of budget.
	Development of specifications/requirements	Fitting technical specifications to a specific company. Biased determination and late establishment of selection criteria. Requesting samples of goods and services unnecessarily, which may affect the procurement information in the project specification.
Risks at the bidding stage	Selection of the procurement procedure	Lack of convincing reasons for using non-competitive procedures. Abuse of non-competitive procedures on the basis of exceptions provided for by law: fragmentation of contracts, abuse of extreme urgency, improper changes.
	Request for submission of a tender application / proposal	The absence of an open notification about the possibility of submitting an application. Lack of information about the criteria for reviewing applications and determining the winner. Non-disclosure of procurement information and its absence in open sources.
	Submission of applications	Absence of competition or cases of collusion of participants (imitation of competition by submitting deliberately losing bids, deliberate withdrawal of bids, alternate submission of bids with the most favorable conditions, market division).
	Consideration of applications	Conflict of interest and corruption when considering, for example: Acquaintance with bidders outside the framework of current purchases. Personal interest, including gifts or the promise of employment / combination. Inefficient implementation of the principle of double control.

	Stage	Corruption risks
	Determining the winner	Inaccurate indication of costs or prices in suppliers' price offers, leading to an increase in the contract price (bills for inflated amounts, artificial inflating of profits). Conflict of interest and corruption in contract approval (inefficient separation of financial, contractual and project powers). Unavailability of documentation documenting the procedure.
Risks after the conclusion of the contract	Execution / control of contract execution	Abuses on the part of the supplier in the performance of the contract, in particular concerning quality, price and timing: A significant change in the terms of the contract, providing for an increase in terms and (or) an increase in prices. Replacement of goods or improper quality of work / services that does not meet the contractual specification. Theft of new property before it is delivered to the end user or put on balance. Lack of control by government officials and (or) collusion between contractors and officials exercising control. Non-transparency of the procedure for selecting subcontractors and partners or lack of accountability on their part
	Orders and payment	Unsatisfactory division of financial powers and (or) lack of control by public officials, which results in: Unreliability of accounting, improper allocation of expenses or transfer of expenses from other contracts. Delay in payment for invoices issued. Falsification or duplication of invoices for goods and services that have not been delivered, or for making advance payment.
Source: OECD Principles for Integrity in Public Procurement, OECD Publishing, Paris, 2009; URL: http://dx.doi.org/10.1787/9789264056527-en (date of application: 08.07.2021).		

Thus, it should be recognized that methodological approaches to assessing the effectiveness of state corporations are diverse, but no generally accepted assessment methodology has been formed in any country to date.

Based on the analysis of literary sources, the following conclusions can be made regarding the methodological foundations of efficiency assessment in state corporations:

1. The methodological basis of the modern paradigm of efficiency assessment in public sector companies can be considered the achievements of foreign scientific schools – an array of concepts and theories developed for the corporate sector of countries with market economies.

2. An important distinguishing feature of public sector companies is the fact that they have no competitors in the domestic market, there is no task of maximizing sales or profits. Accordingly, using only quantitative performance indicators is unacceptable. Instead of fighting with competitors, state managers should implement the strategic goals of the state and explain to the public for what purposes, how, and to what extent they intend to spend the financial resources of the state budget. The motivation of state managers should be different from the motivation of managers of commercial corporations, since state managers are called to "serve society".

3. The peculiarity of the modern period is that the methodological foundations for evaluating the effectiveness of state corporations are being revised, taking into account the irrelevance in the new conditions of a number of concepts presented in Western doctrine (almost all concepts were formulated decades ago, and since then nothing fundamentally new has been introduced into them), as well as the factor of digitalization of the economy and state sectors as part of the transition to a new technological order.

4. Currently, there is a shortage of scientific research on evaluating the effectiveness of state corporations in relation to countries with a transitional type of economy, including the Republic of Tajikistan. Not all models can be applicable and effective in post-Soviet countries, because they have not been properly critically understood by national scientific communities and government managers.

There are problematic issues in assessing the role of state corporations in the modernization of the economy.

1.3 Mechanisms and features of regulation of state corporations: foreign experience

Currently, according to UNCTAD, more than 60% of foreign trade, 4/5 of all patents, licenses, technologies and know-how is controlled by leading TNCs. Global corporations operate in almost all existing sectors of the economy, and the

largest of them are strengthening their positions in the markets of different countries. The global goal of TNCs is the development of a system isolated from the rest, in which the systems of states and international institutions become practically unable to influence the activities of these TNCs[37].

State corporations in different countries have different organizational and legal forms, mechanisms and features of regulation, as well as the level of efficiency. One of the problems of analyzing them as state corporations is that many are not fully state-owned, the degree of state participation in corporations varies significantly: from 5 to 100%. More than 50% of TNCs with state participation belong to developing countries; however, there are quite a lot of them in developed countries[38].

Analyzing foreign experience, one can see that American government corporations (government corporations), for example, are partially or completely owned by the federal government and, in fact, are part of the administrative-territorial division of the United States[39]. Their number is relatively small - about two dozen (for example, the National Railroad Passenger Corporation (NRPC), operating under the Amtrak brand; US Post, etc.).

So, the National Railroad Passenger Corporation, better known as Amtrak[40], - is the national passenger rail service of the United States, providing inter-city rail service, as well as commuter, mail and express freight services. Amtrak is almost wholly owned by the US Department of Transportation. The corporation was established on May 1, 1971. The Railroad Passenger Act originally incorporated it as a private corporation incorporated in the District of Columbia. The majority of the company's shares were held by the Ministry of Transportation and it was managed by a board of directors consisting of the Minister of Transportation, the

[37] Chshieva Z.G. Evseeva A.A. The place of Russian TNCs on the world market // Scientific Review. Economic sciences. – 2021. – No. 1 – pp. 15-19.

[38] Kretsu O. Kretsu O. The role of TNCs with state participation in improving the country's competitiveness in the global economy: dis... Candidate of Economic Sciences: 08.00.14. - M., 2020. – p. 63.

[39] Komilov S.D., Toshpulotov A.A. World experience of development of state corporations // Bulletin of Eurasian Science. - 2020. - No. 1; [Electronic resource]; URL: https://esj.today/PDF/76ECVN120.pdf (accessed: 05.07.2021).

[40] Official Amtrak website; [Electronic resource]; URL: https://www.amtrak.com/home (accessed: 05.07.2021).

head of the NRPC and 11 other members. In its first year of existence, the corporation was known as Railpax. After the company began operations, the name was changed to Amtrak. The U.S. Railroad Passenger Act allowed railroad companies to turn over their loss-making passenger operations to the NPRC in exchange for tax write-offs or Amtrak stock.

The website of the railroad corporation provides comprehensive information about the activities of Amtrak, including financial and audit reports. In particular, the report «Management Discussion and Analysis of Financial Condition and Results of Operations and Consolidated Financial Statements with Report of Independent Auditors - Fiscal Year 2020»[41] state-supported rail services accounted for 47.6% of passenger traffic and generated $281.7 million in revenue, including $161 million funded by part of the CARES Act grant, it says. Continued operation of state-supported routes is subject to annual operating agreements and state statutes.

If we consider the practice of state corporations in European countries, then they account for a significant share of production and employment in many EU countries. Almost 30% of all existing TNCs with state participation operate in European countries. The largest of them are in Germany, Italy, France and Norway. According to UNCTAD, in 2019, 16 TNCs with state participation were included in the list of the 100 largest TNCs in the world, of which 10 are European. For example, German TNCs are characterized by investing in order to optimize costs and costs, gain technological and managerial experience, and to access valuable highly qualified personnel from other countries[42]. TNC with state participation Volkswagen Group (Germany) specializes in the automotive industry; Eni SpA (Italy) - in oil refining; Orange SA (France) - in telecommunications; Equinor ASA (Norway) - in oil refining.

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[41] Management Discussion and Analysis of Financial Condition and Results of Operations and Consolidated Financial Statements with Report of Independent Auditors - Fiscal Year 2020; URL: https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/financial/Amtrak-Management-Discussion-Analysis-Audited-Financial-Statements-FY20.pdf

[42] Konina N. Evolution of the largest German TNCs // Modern Europe. - 2018. - No.2. - pp.49-59; Kretsu O. Decree. op.

An important feature of EU SOEs is that they often combine commercial and non-commercial purposes. In industries where there is only one supplier (natural monopoly) or competition is imperfect, governments often choose to directly control service providers. GCs are also created to fulfill national strategic goals involving risky or long-term investments when private investors are not available.

Under EU law and practice, European public equity companies may include the following categories[43]:

- companies wholly owned by state bodies;

- companies in which public authorities have a majority share;

- companies in which government bodies retain a minority stake, but have special statutory powers;

- companies in which public authorities have a minority share and no special powers. These companies are not usually considered SOEs, but they can be important in getting a better picture of the government's share of the economy.

In recent years, European corporations with state participation have become especially active in the network sectors, playing an important role in the life of EU citizens and businesses, as well as in innovation. In particular, the Volkswagen Group develops autonomous cars (without drivers) and electric cars, forms the necessary urban infrastructure for such cars, using artificial intelligence, a large number of sensors, surveillance cameras, applications for users. Since 2019, the Volkswagen Group has been training 100 software developers a year to digitalize the company.

When focusing on a sample of eight new EU Member States (Bulgaria, Czech Republic, Croatia, Hungary, Poland, Romania, Slovenia and Slovakia), it can be seen that they have opted for varying degrees of residual state participation in the economy when moving from a centrally planned model. This group of countries thus provides an interesting model for studying the effects of ownership

[43] State-Owned Enterprises in the EU: Lessons Learnt and Ways Forward in a Post-Crisis Context, 2016; URL: https://ec.europa.eu/info/sites/default/files/file_import/ip031_en_2.pdf

on productivity. In this case, the financial performance of the companies was assessed taking into account the return on equity. There is empirical evidence that in the period 2004-2013. in the new member states, return on equity in private companies was in most cases significantly higher than in GCs. At the same time, during the crisis years, the return on equity decreased, especially for private firms, while for state-owned enterprises, the indicator became more stable. However, in most of the countries included, the average return on capital for SOEs was negative during the crisis[44].

Among the post-Soviet countries, the experience of Russian state corporations and joint-stock companies (JSC) with state participation is noteworthy, the number of which, according to the List approved by the decision of the Government Commission on High Technologies and Innovations dated August 3, 2010, Protocol No. 4[45], is 47 subjects. As of 2020, the status of state corporations in Russia had: "Deposit Insurance Agency" (GK "DIA"), "Bank for Development and Foreign Economic Affairs (Vnesheconombank)" (GK "VEB.RF"), "Fund for Assistance to the Reform of Housing and Public Utilities Fund (SC Housing and Public Utilities Fund), State Corporation for Assistance in the Development, Production and Export of High-Tech Industrial Products Rostec (SC Rostec), State Atomic Energy Corporation Rosatom (SC Rosatom), State Corporation for space activities "Roskosmos" (SC "Roskosmos"). According to official information, almost all SCs and JSCs are developing innovative development programs.

The largest state-owned corporations in Russia with innovative programs include: Gazprom, NK Rosneft, RusHydro, Aeroflot, Alrosa and others. GCs and JSCs receive large budget subsidies in Russia, but their efficiency and transparency remain low. Of the 20 largest state-owned companies that received subsidies in 2018-2019. (the total amount was 63.16 billion rubles), the top 5 included the

[44] State-Owned Enterprises in the EU: Lessons Learnt and Ways Forward in a Post-Crisis Context, 2016; [Электронный ресурс]; URL: https://ec.europa.eu/info/sites/default/files/file_import/ip031_en_2.pdf

[45] List of state-owned companies; [Electronic resource]; URL: https://mai.ru/events/irf/ip/list_companies.php (accessed: 06.07.2021).

United Aircraft Corporation (23.9 billion rubles), RusHydro (13 billion rubles), Rostelecom (12.5 billion rubles.), Aeroflot (7.1 billion rubles), Alrosa (5 billion rubles). Also on the list of those who received subsidies were Gazprom Neft, Tatneft, Inter RAO and Gazprom. At the same time, for example, the United Aircraft Corporation receives a large share of subsidies, but spends them on paying off debts, and not on development. RusHydro is building 110 kV transmission lines in Chukotka from a new floating nuclear power plant in Pevek at the expense of budgetary funds. Electricity in these parts is needed by mining and gold mining enterprises. However, they do not see the point in spending money on RusHydro services - it is unprofitable. Aeroflot uses subsidies to compensate for lost profits from flights to Kaliningrad and the Far East. At the same time, the remuneration of the airline's management in 2019 amounted to 2.1 billion rubles, and efficiency decreased[46].

The sectoral structure of Russian companies with state participation currently includes: banks, housing and communal services, mechanical engineering; oil and oil and gas industry, industrial infrastructure construction, precious metals and diamonds industry, insurance, transport, telecommunications and communications, coal industry, chemical and petrochemical industry, non-ferrous and ferrous metallurgy, electric power industry and other industries.

In the case of Russia, the problems of the state are that most state-owned companies are inefficient and non-transparent[47], the state cannot influence the decision-making in the Civil Code, cannot push them towards competitive development, and cannot ensure that state-owned companies sacrifice part of their profits for the development of the entire economy. According to Russian analysts,

[46] Top Russian state-owned companies sponsored by the state: who gets the most?, 2020; [Electronic resource]; URL: https://yandex.ru/turbo/bel.ru/s/news/economy/26-03-2020/top-goskompaniy-rossii-kotorye-sponsiruet-gosudarstvo-kto-poluchaet-bolshe-vseh (accessed: 06.07.2021).

[47] Shatalova A.I. Insufficient transparency of Russian state corporations // Scientific aspect. - 2019. - Vol. 6. - No. 2. - pp. 684-687.

“decisions on investments are made by specific officials with their own interests, often very different from those of the state”[48].

Decree of the President of the Russian Federation of December 21, 2017 No. 618 “On the Main Directions of the State Policy for the Development of Competition” sets the goal of reducing the share of economic entities established or controlled by the state or municipalities in the total number of economic entities operating in commodity markets. In addition, this goal is understandable and economically justified. According to the estimates of the Federal Antimonopoly Service (FAS), from 2005 to 2014 there was a twofold increase in the share of the state in GDP - from 35% to 70%. In a 2019 report, the International Monetary Fund estimated the share of state participation in the Russian economy at 33% in 2016. However, the capitalization of most state-owned corporations is constantly declining. Thus, the market value of Gazprom in 2018 amounted to only 93% of the value of the corporation compared to 2009, RusHydro - 70%, FGC UES - 58%, MOESK - 66%, TGC-1 - 90%. Some Russian state-owned companies have significantly lost capitalization after growth in 2014, in particular, VTB Bank (in 2018, capitalization amounted to only 85% of the value in 2014), Bashneft (97%), Rostelecom (71%), Rosgosstrakh (59%), SlavneftMegionneftegaz (50%) and others[49].

The model of innovative modernization of the economy of a country such as Qatar deserves attention. Despite many similarities with the models of their "Arabian counterparts", this model has its own distinctive features that allowed this state to become a leader.

The main tool for implementing the economic strategy of the State of Qatar is the national state-owned company Qatar Petroleum (QP), formerly known as Qatar General Petroleum Corporation. The company was established by Decree No. 10 of the Emir of Qatar in 1974. The company assumed responsibility for the

[48] The goal justifies the means?, 2020; [Electronic resource]; URL: https://newizv.ru/article/tilda/26-03-2020/milliardy-dlya-goskompaniy-skolko-byudzhetnyh-deneg-uhodit-na-podderzhku-kitov-biznesa (date of application: 06.07.2021).

[49] The public sector in the Russian economy // Bulletin on the development of competition, March 2019, No. 25.

development of the entire oil and gas industry of the country. QP is a virtual monopolist and controls all components of the oil sector in Qatar. The main activities of Qatar Petroleum, its subsidiaries and joint ventures include such areas and industries as exploration, drilling and production developments, transportation and storage, sales of crude oil and liquefied natural gas, processing technologies, production of petrochemical products and fertilizers. The company has rights to all Qatari oil reserves in the country, but often employs foreign companies based on production compensation contracts, in which it usually owns a majority share. Qatar Petroleum operates the country's entire pipeline network and a single refinery through its National Oil Distribution Company (NODCO) subsidiary.

According to the QP Anniversary Report for the period 1974-2014.[50], the internal structure of QP (Fig. 1.2) consists of several key departments (Departments). Thus, the Department of Finance is engaged in financial planning, adjustment and control over the implementation of the company's financial plans. The Human Resources Department is responsible for managing QP's most valuable asset - its employees. The Department is convinced that human capital is one of the key competitive advantages of QP. The Department is committed to creating a motivating work environment that attracts, develops and retains human capital. In 2014 alone, about 900 new employees were attracted to QP.

[50] Data from the Ministry of Development Planning and Statistics of Qatar. [Electronic resource]; [Electronic resource]; URL: http://www.mdps.gov.qa/en/pages/default.aspx (accessed 10.07.2021).

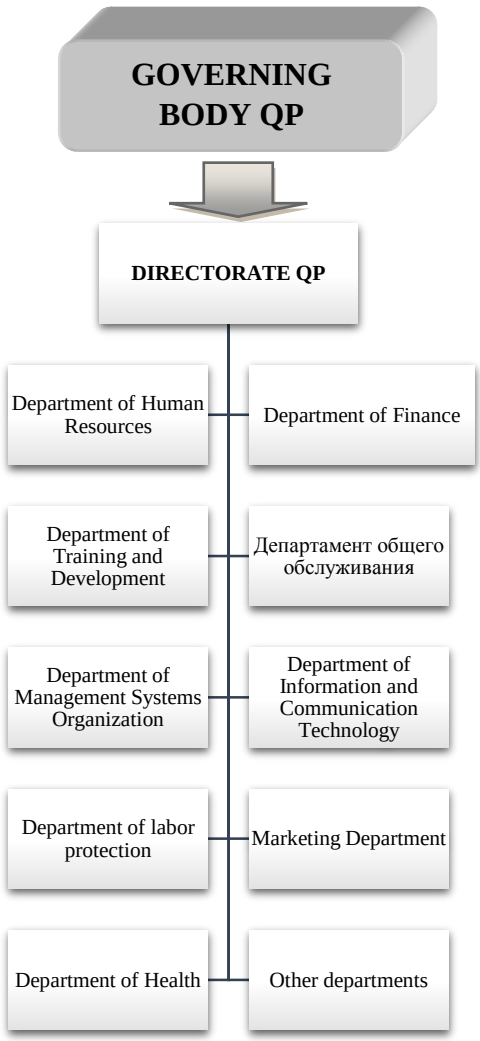


Figure 1.2 - Enlarged organizational structure of the company "Qatar Petroleum"

Source: Constructed by the author according to: Annual report 2014. 1974-2014 - Qatar Petroleum URL: https://www.qp.com.qa/en/MediaCentre/Documents/2014%20Annual%20Report%20-%20English.pdf

In 2005, the Qatar Financial Center ("QFC") was established. QFC is designed to attract international financial institutions and multinational companies. The QFC consists of the QFC Authority ("QFCA") and the QFC Regulatory. Authority ("QFCRA"), which are independent of each other. QFCA is responsible for commercial strategy and for developing relationships with the global financial community, financial institutions and other key entities both inside and outside

Qatar. QFCRA controls any financial firms and financial institutions that do business with QFC[51].

Despite the late start, Qatar, faster than its other neighbors in the region, gained momentum in the development of diversifying sectors of the economy - construction, industry, finance (investment in foreign assets), banks, tourism, and transport. In terms of the pace of the construction industry, Qatar is on a par with the United Arab Emirates, and the metallurgical (aluminum) and petrochemical industries (production of fertilizers, polyethylene and urea) are taking the leading positions in the region and the world.

Qatar Airways, the national airline, has the world's third largest cargo air fleet, and the Hamad Port, a deep water port, could potentially handle up to 35% of regional trade. 2019 saw the launch of the first section of the Doha Metro, one of the most advanced rail systems in the world, operated by Qatar Rail. The project was conceived specifically for the World Cup in 2022. Its cost is $12 billion, and the length of the tracks is more than 350 km (93 stations)[52].

Qatar was one of the first in the region to realize the importance of the scientific and innovative component of economic development in the modern world. The Government of Qatar pays great attention to the development of the educational sector, strenuously creating a modern infrastructure and inviting the largest foreign universities with world names for cooperation. Since 2006, the country's technology companies have been united by the state Qatar Science & Technology Park (QSTP), which operates in the field of ICT, energy, environment and health sciences. This is a cluster of educational institutions, research centers and public organizations, which is designed to bring the technologies developed here to the world level.

[51] Analytical report on the development of information and communication technologies in the State of Qatar, 2020; [Electronic resource]; URL: http://www.rosinfocominvest.ru/upload/iblock/d1e/d1ebab600a104d84cd3b3f276bd4de4c.pdf (accessed 10.07.2021).

[52] The path to a new economy: how Qatar managed to create a comfortable environment for business development; [Electronic resource]; URL: https://qatar.rbc.ru/article/2/put-k-novoy-ekonomike (accessed 10.07.2021).

The strategic vision of the leadership of Qatar regarding the future of its economy is conceptually presented in its main National strategic program "Vision of Qatar - 2030" ("Qatar National Vision 2030", QNV), approved by the country's leadership in 2008. A shared vision of national development is based on four pillars - human development, social development, economic development and environmental development[53], where innovation plays an important role.

Even greater success was achieved in the context of innovative modernization of the economy and increasing the efficiency of state corporations of the People's Republic of China (PRC). Suffice it to say that in the first 11 months of 2020, China's provincial and central government corporations generated 55.61 trillion yuan (about $8.51 trillion) in revenue, up 0.8% year-on-year from 2019. However, due to the coronavirus pandemic, their net income after taxes, which amounted to about 2.21 trillion. yuan, decreased over the 11-month period by 7.1% year on year[54].

State-owned enterprises in the PRC are represented by powerful business groups, the formation of which began in the 1980s, and is closely connected with administrative reforms, during which the number of central government bodies was reduced and enterprises were created, which were transferred to the functions previously performed by ministries, departments, administrations, etc.[55]

According to various expert estimates, there are currently from 100 to more than 200 state corporations operating in China in various sectors of the economy and the social sphere, although there is a tendency to reduce the state's participation in the activities of the Civil Code[56]. According to researchers, a nationally oriented strategy for the targeted use of state assets based on the

[53] CIA World Factbook 2016: Qatar. URL: https://www.cia.gov/library/publications/the-world-factbook/geos/qa.html

[54] Reform of state-owned companies in China and the Chinese model of socialism, 20.01.2021; [Electronic resource]; URL: https://www.fondsk.ru/news/2021/01/20/reforma-gosudarstvennyh-kompanij-v-knr-i-kitajskaja-model-socializma-52725.html (accessed 10.07.2021).

[55] Muromtseva Z.A. Public sector reform of the PRC: improving the system of modern state-owned enterprises // In the collection: 40 years of economic reforms in China. 2020. pp. 76-89.

[56] Yuanyuan Fu. Improving the activities of the State Property Control and Management Committee of China // Modern management: problems and prospects. Collection of articles on the results of the XVI International scientific and practical conference. St. Petersburg, 2021. pp. 102-106.

formation of a “modern system of enterprises” for the needs of modernization and innovative development makes it possible, using the tactics of “offensive and retreat” during reforms, to prevent uncontrolled plunder of state property[57].

In 2021, the GC reforms focused on three areas - the transition of GCs to corporatization and mixed ownership; strengthening the market-oriented approach in economic activity; disposal of non-core assets. These measures are expected to lead to the creation of a group of world-class state-owned companies in the PRC. Of particular importance for the Chinese economy are the infrastructure projects of the Group of Companies abroad, which are important in terms of access to world markets.

Thus, a brief review of the mechanisms and features of the regulation of state corporations abroad allows us to draw the following conclusions.

1. The property of state corporations is formed at the expense of government contributions, and the activities of the Civil Code are always regulated by special regulations.

2. State corporations in most countries of the world receive budget subsidies, which often place an additional burden on the state budget and do not bring economic effects.

3. The Civil Code is allowed entrepreneurial activity, but only for the purposes for which it was created.

4. State authorities, as a rule, do not interfere in the current activities of state corporations. The greatest economic efficiency in the context of innovative modernization of the economy is demonstrated by state corporations in those countries where the state was able to ensure tight administrative control over top managers and transnational financial flows of state corporations.

5. The activities of the GC are characterized by either low transparency, or low efficiency, or both.

[57] Muromtseva Z.A., Shaozhan. State enterprises of the People's Republic of China: reforms and development. - M.: IDV RAS, 2017. - 192 p.

6. The activities of the Civil Code are characterized by many financial violations and corruption risks.

Chapter 1 Conclusions

The study of the economic nature and essence of state corporations as an institution of a market economy suggests that they are due to various factors of the external and internal environment in different historical periods. In modern conditions, these factors are often determined by circumstances associated with the danger of providing vital sectors of the national economy to the private sector. State corporations function in almost all sectors of the economy and pursue certain goals. State corporations can be both commercial and non-commercial.

The main positive functions of state corporations include the following: 1) state corporations appear in conditions where private business does not show its ability and initiative in investing in strategically important sectors of the national economy; 2) the institution of state corporations allows public authorities to significantly influence market processes, including through the organization of cooperation between public and private structures; 3) PCs are quite often created during a crisis to support the economy and workers.

The study of methodological approaches to assessing the effectiveness and role of state corporations in the modernization of the economy showed that these approaches are diverse, but a generally accepted assessment methodology has not yet been formed in any country. A feature of the modern period is that the methodological foundations for assessing the effectiveness of state corporations in many countries are being revised, taking into account the irrelevance in the new conditions of a number of concepts presented in the Western doctrine (almost all concepts were formulated decades ago, and since then nothing fundamentally new has been introduced into them was not), as well as the factor of digitalization of the economy and the public sector as part of the transition to a new technological order.

Currently, there is a lack of scientific research on assessing the effectiveness of state corporations in relation to countries with a transitional type of economy.

Far from all models can be applicable and effective in the post-Soviet countries, since they have not been properly critically comprehended by national scientific communities and government managers.

An analysis of the mechanisms and features of regulation of state corporations abroad revealed the following: the property of state corporations is formed at the expense of government contributions, and the activities of state corporations are always regulated by special regulations; state corporations in most countries of the world receive budget subsidies, which often place an additional burden on the state budget; The Civil Code is allowed entrepreneurial activity, but only for the purposes for which it was created; public authorities, as a rule, do not interfere in the current activities of state corporations; the greatest economic efficiency in the context of innovative modernization of the economy is demonstrated by state corporations in those countries where the state was able to ensure tight administrative control over top managers and transnational financial flows of state corporations; the activities of the SC are characterized by either low transparency, or low efficiency, or both taken together; the activities of the Civil Code are characterized by many financial violations and corruption risks.

CHAPTER 2. ANALYSIS AND ASSESSMENT OF THE FUNCTIONING OF STATE CORPORATIONS IN THE ECONOMIC SYSTEM OF THE REPUBLIC OF TAJIKISTAN

2.1. Analysis of the conditions for regulating the institution of state corporations in the Republic of Tajikistan

In the context of the crisis of globalization, which until recently had a great impact on the social and economic processes taking place in the post-Soviet countries, including the Republic of Tajikistan (RT), the deterioration of the situation on world markets due to the coronavirus pandemic (Covid-19) and other negative global trends, the internal economic policy of the state is becoming more and more significant, covering both the commercial and the state (public) sectors of the national economy.

The level of regulation of the institute of state corporations (SC) will begin with the definition of the historical, economic, financial, innovative and institutional conditions that have developed in Tajikistan to date.

Historical conditions

One of the main problems of Tajikistan, as a country in transition, is the lack of a tradition of market institutions. In the case of Tajikistan and other former Soviet republics, this can be traced back to a common “socialist” past. In the context of the transition economy, the initial historical conditions of the country, the legacy of the transition period, political restrictions, and the distribution of power are of great importance.

Since gaining independence in 1991, the republic's economy has developed in a difficult manner, experiencing various external and internal shocks, including the hardships of the civil war. Civil war in Tajikistan in the period 1992-1997 became the largest internal armed conflict in all of Central Asia in the post-Soviet period. The country's economy was almost completely destroyed, Tajikistan became one of the poorest countries in the world. However, over the past two decades, Tajikistan has made steady progress in reducing poverty and developing

its economy. Poverty fell from 83% of the total population to 27.4% between 2000 and 2018[58], while the economy grew at an average rate of 7% per year.

Economic and financial conditions

When analyzing economic conditions, one should first pay attention to the quality of macroeconomic management, the level of the shadow economy and the level of GDP.

Many post-Soviet republics are characterized by a weak role of state institutions, a large share of the informal (shadow) economy (excluding the criminal component). According to an IMF study published in 2018, the average estimate of the share of the shadow economy in Tajikistan in the period 1991-2015 was was 42.99%. 158 countries were surveyed. For comparison: the share of the shadow economy in Russia averaged 38.42% over the specified period, in Kazakhstan - 38.88%, Kyrgyzstan - 47.92%[59].

The economy of Tajikistan demonstrates strong GDP growth (Fig. 2.3), significantly outperforming the countries of the Central Asian region (CAR) in this indicator. Nevertheless, in 2020, the republic's GDP, according to the forecast of the Asian Development Bank (ADB)[60], will decrease by 0.5% (Fig. 2.4).

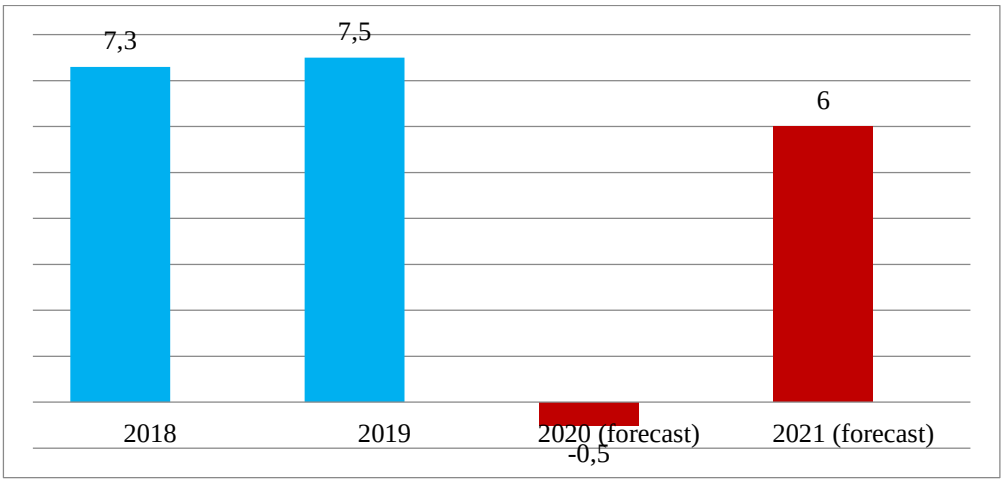


Figure 2.3 - Dynamics of GDP of the Republic of Tajikistan, %

[58] Tajikistan 2020: actualization of risks and threats, development scenarios: scientific and analytical report / scientific. edited by R. Khairutdinov. – Kazan: Kazan University Press, 2020. – 80 p.

[59] Medina L., Friedrich Schneider F. Shadow Economies Around the World: What Did We Learn Over the Last 20 Years? January 24, 2018; [Электронный ресурс]; URL: https://www.imf.org/en/Publications/WP/Issues/2018/01/25/Shadow-Economies-Around-the-World-What-Did-We-Learn-Over-the-Last-20-Years-45583 (дата обращения: 10.12.2020).

[60] Economic indicators for Tajikistan. GDP growth; URL: https://www.adb.org/

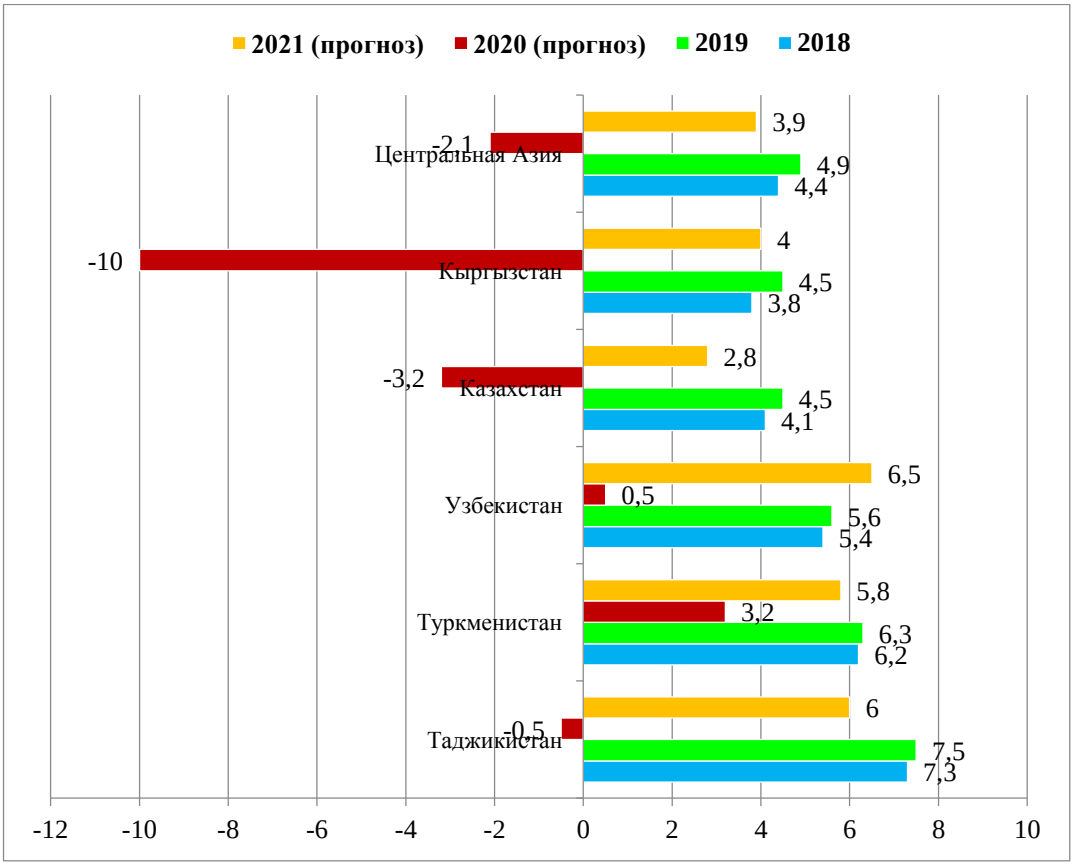


Figure 2.4 - Dynamics of GDP of the CAR countries, %

In 2019, with an indicator of 7.5%, the republic was in the top 3 among the CIS countries in terms of GDP growth along with Armenia (7.6%) and Turkmenistan (6.3%). The GDP of Tajikistan in 2019 amounted to more than $8.12 billion (147th place in the world out of 174 countries), and about $1,121 was received per capita (145th place out of 169 countries). The World Bank, in its World Economic Outlook report, predicts a fall in Tajikistan's GDP to -2% in 2020 and its growth by 3.7% in 2021[61].

Currently, there is a high degree of dependence of the economy on the remittances of Tajik labor migrants. For example, in 2018, the country ranked third in the world in this indicator (31%) after Tonga - 35.2% and Kyrgyzstan - 33.6% (Fig. 2.5).

[61] Global Economic Prospects // World Bank, June 2020; [Электронный ресурс]; URL: https://www.worldbank.org/en/publication/global-economic-prospects#firstLink11641 (дата обращения: 20.09.2020).

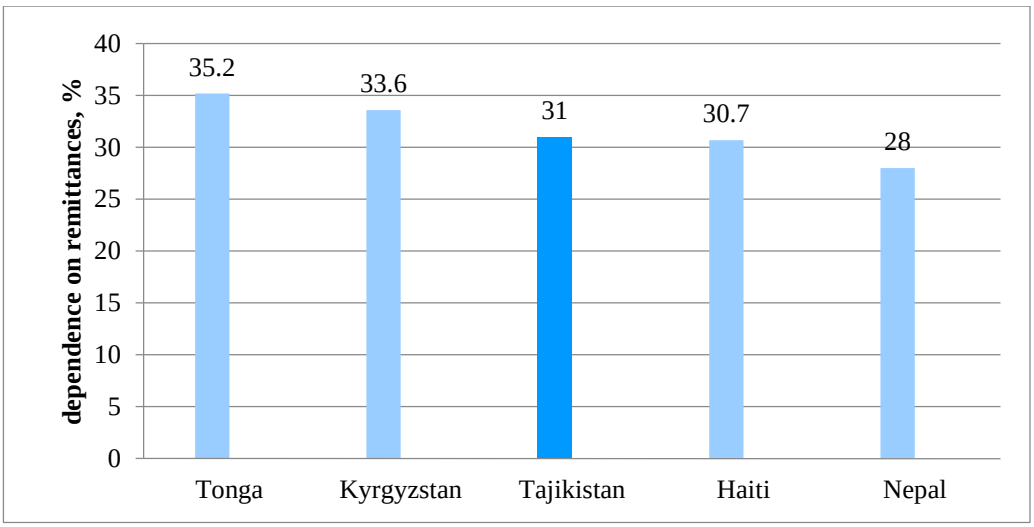


Figure 2.5 – The level of dependence of some countries on remittances from migrant workers, %

Source: Tajikistan 2020: actualization of risks and threats, development scenarios: scientific and analytical report / scientific editor R. Khairutdinov. – Kazan: Publishing House of Kazan University, 2020. – p. 5.

According to various estimates, more than 1 million people work in Russia alone, where the bulk of Tajik labor migrants are located. About 70% of Tajik families live off remittances from labor migrants[62].

World Bank experts believe that in 2020, due to the pandemic, the volume of remittances from labor migrants will decrease by 20% globally, and from Russia to Tajikistan, such a drop will be about 28%[63].

Job creation has lagged behind Tajikistan's population growth, leaving the economy vulnerable to external shocks, and the role of the private sector in the economy remains limited, accounting for only 13% of formal employment and 15% of total investment. Rural non-monetary poverty rates remain high as only 36% of the population in rural areas have access to safe drinking water. Tajikistan scored 0.53 on the Human Capital Index in 2019, below the average for the CAR region, but above the average for its income group[64].

[62] It's time to tighten your belts: what will happen to the economy of Tajikistan without migrants' money // Sputnik, 30.04.2020; [Electronic resource]; URL: https://tj.sputniknews.ru/economy/20200430/1031155088/tajikistan-ekonomika-net-perevody-migranty.html (accessed: 09/20/2020).

[63] World Bank Predicts Sharpest Decline of Remittances in Recent History // World Bank, April 22, 2020; [Электронный ресурс]; URL: https://www.worldbank.org/en/news/press-release/2020/04/22/world-bank-predicts-sharpest-decline-ofremittances-in-recent-history (дата обращения: 20.09.2020).

[64] The World Bank in Tajikistan; [Электронный ресурс]; URL: https://www.worldbank.org/en/country/tajikistan/overview (дата обращения: 20.09.2020).

Due to high inflation and a decrease in remittances from labor migrants, prices for imported goods and food are expected to rise in the republic in 2020, which will be a significant blow to the population, given that the republic imports about 60% of food[65]. Inflation is expected to be high in all CAR countries in 2020, and in Tajikistan it could reach 9.5%, which is higher than the CAR average of 8.3% (Figure 2.6).

It should be noted that the forecasts of international organizations diverge from the official forecasts of the authorities of the republic. The Ministry of Finance of Tajikistan is convinced that the growth of the republic's GDP in 2020 will be 7.8%, and inflation will not exceed 6.8% (Fig. 2.7). Let us clarify that the official forecast was made by the government of the Republic of Tajikistan in November 2019, without taking into account the factor of the coronavirus pandemic.

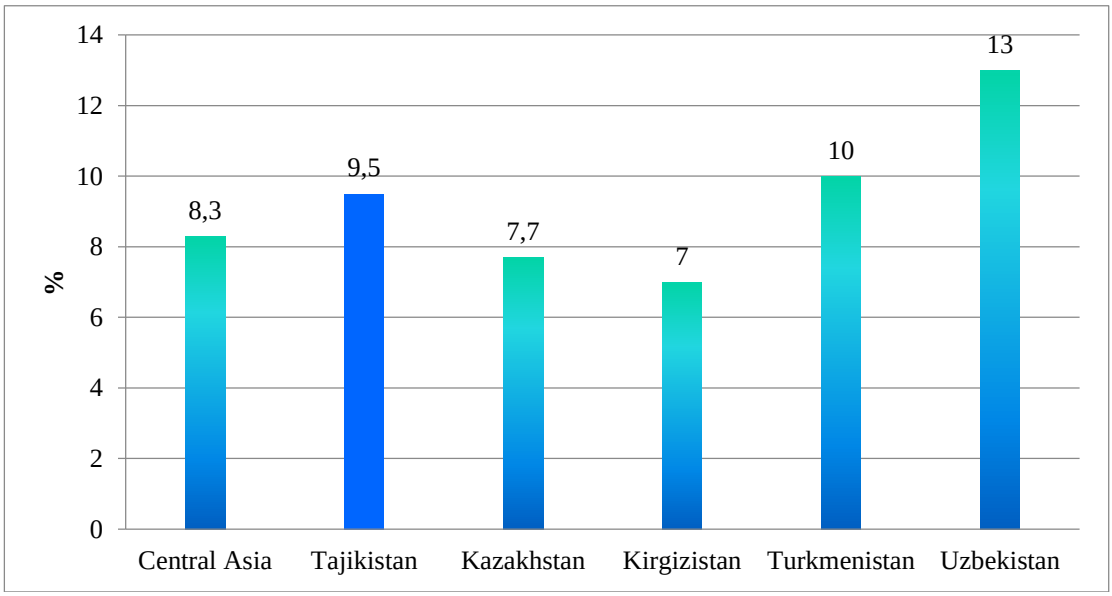


Figure 2.6 - Forecast of the inflation rate in the CAR countries in 2020, %

[65] Tajikistan 2020: actualization of risks and threats, development scenarios: scientific and analytical report / scientific ed. R. Khairutdinov. – Kazan: Kazan University Press, 2020. – 80 p.

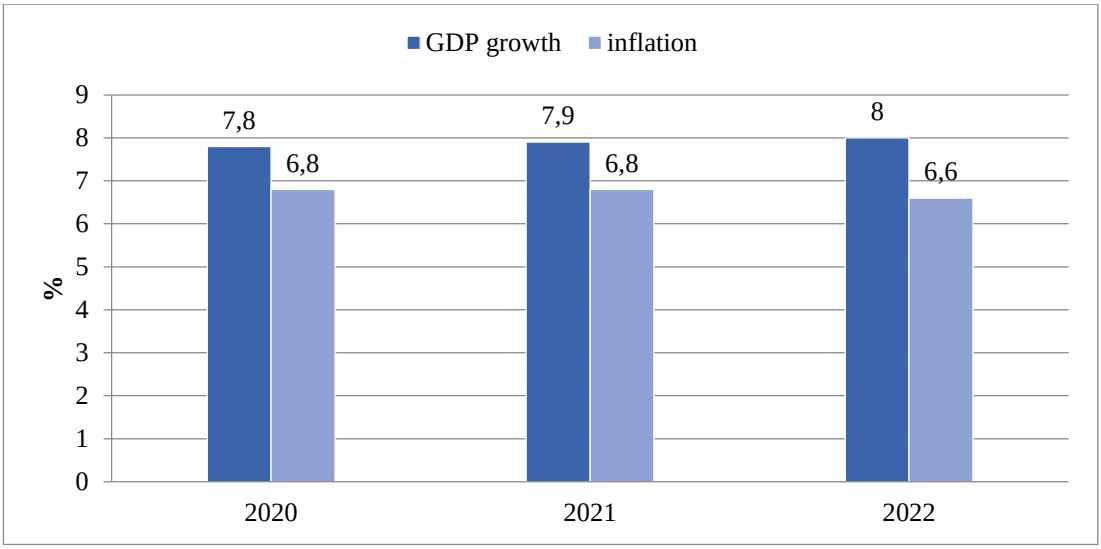


Figure 2.7 - Forecast of GDP and inflation in Tajikistan from the Ministry of Finance of the Republic of Tajikistan, 2020-2022, %

The coronavirus pandemic in 2020 has made significant changes to the plans of the Government of the Republic of Tajikistan. It will not be possible to fulfill the plan for the revenue side of the state budget, which is 2.349 billion somoni ($227.8 million). It is planned to reduce state budget expenditures in various areas by 1.822 billion somoni ($176.7 million)[66].

Tajikistan's high vulnerability to climate change and natural disasters presents an additional challenge to successful economic management. For example, between 1992 and 2016, natural and climate-related disasters resulted in approximately $1.8 billion in GDP losses, affecting nearly 7 million people.

Tajikistan is an agro-industrial country (Table 2.3), as of 2019, the share of agriculture in the structure of GDP was 19.8%, and industry - 17.4%, which actualizes the development of the industrial sector based on innovative technological achievements, including including in the field of information technology (IT), attracting foreign direct investment (FDI) to the country for this purpose.

Table 2.3 - The structure of economic sectors in the GDP of Tajikistan, 2015-2018

	2005	**2010**	**2017**	**2018**

[66] Tajikistan is forced to cut budget expenditures due to the pandemic, June 30, 2020; [Electronic resource]; URL: https://regnum.ru/news/economy/2997529.html (accessed: 22.09.2020).

	net product in million somoni	***share, %***	**net product in million somoni**	**share, %**	**net product in million somoni**	**share, %**	**net product in million somoni**	***share, %***
Industry	1637,5	*22,72*	3642,8	14,7	12839,9	*19,9*	15031,5	*21,2*
Agricultural industry	1527,2	*21,19*	4839,3	19,6	13069,4	*20,3*	14049,8	*19,8*
Construction	334,7	*4,64*	2528,2	10,2	7680,4	*11,9*	9411,7	*13,2*
Trading	1166,9	*16,19*	4952,9	20,0	8051,3	*12,5*	9058,7	*12,7*
Transport and communications	533,3	*7,40*	2758	11,2	6403,8	*9,9*	5644,4	*7,9*
Material and technical supply	24,3	*0,34*	47,1	0,2				
Blanks	0	*0,00*		0,0				
Other branches of material production	24,4	*0,34*	13,8	0,1				
Market and non-market services	1127,1	*15,64*	3143,4	12,7	10052,4	*15,6*	10844	*15,3*

Source: compiled by the author based on data Tajstat - https://stat.tj/ru/.

According to Tajstat, between 2014 and 2019, the number of industrial enterprises in the country remained at the same level of 2,164 units. At the same time, the volume of industrial production in the regions of the country differs significantly, the largest share in the total volume belongs to the Sughd region (47.3%).

If we analyze the features of export-import operations, then aluminum, electricity, cotton, fruits, vegetable oil, and textiles are exported from the republic. The main export partners of Tajikistan are: Turkey (27.8%), Russia (15.6%), China (14.7%), Switzerland (9.8%), Iran (6.5%), Algeria (6 .5%), Italy (5.8%).

The main commodity groups acquired by Tajikistan abroad (by import): oil products, aluminum oxide, machinery and equipment, food products. Among the main partners of Tajikistan: Russia (31.2%), China (13.9%), Kazakhstan (12.8%), Uzbekistan (5.2%), Iran (5.1%)[67].

Investment and innovation conditions

The achievements of the republic in the economy include a significant reduction in external public debt in relation to GDP: if in 2000 this figure reached 111.4%, then in 2014 it decreased to the lowest value in the entire history of

[67] Tajikistan - Economic Indicators; URL: https://www.economy.com/tajikistan/indicators

observations - 27.3%. In 2019, the public debt of Tajikistan amounted to 47.9% of GDP, which is relatively small compared to other countries (Fig. 2.8). However, as follows from the "Program of State External Borrowings of the Republic of Tajikistan for 2020-2022"[68], the republic plans to receive about $1 billion, which may lead to a sharp increase in external debt.

The Tajik government has consistently expressed interest in attracting investment from the United States. This task is designated as a priority in the National Development Strategy of the Republic of Tajikistan for the period up to 2030 (NDS-2030)[69].

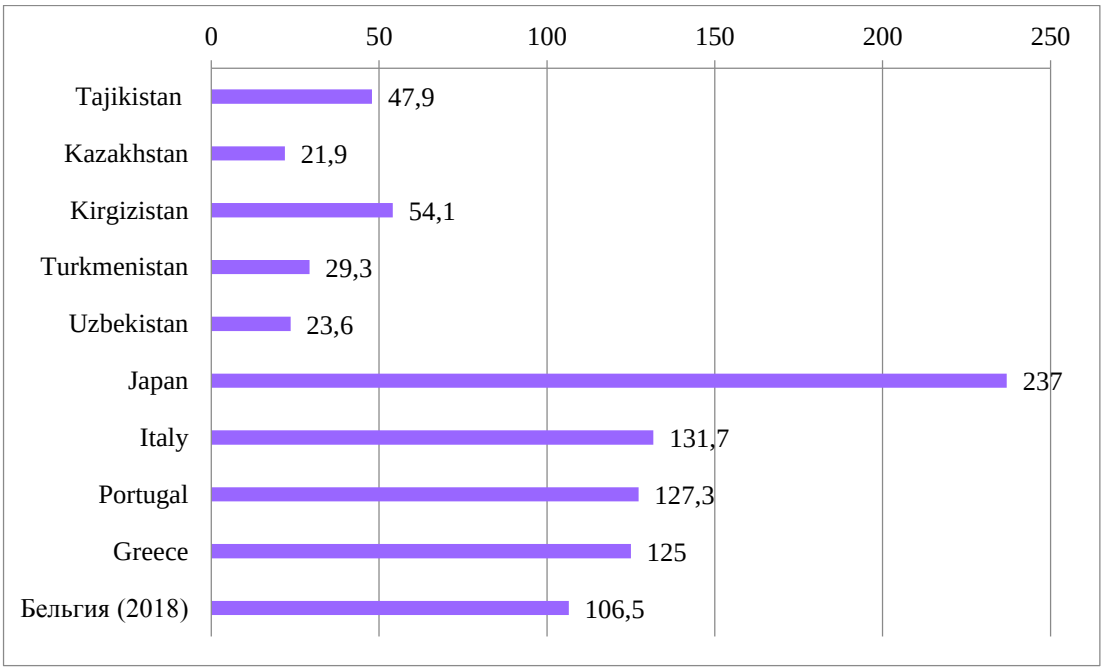


Figure 2.8 - Public debt of Tajikistan and some other countries, 2018-2019, %

Source: Data on public debt to GDP of Tajikistan and other countries; [Electronic resource]; URL: https://take-profit.org/statistics/government-debt-to-gdp/tajikistan / (accessed: 09/21/2020).

[68] Resolution of the Government of the Republic of Tajikistan dated November 1, 2019, No. 530 "On the draft Program of State external borrowings of the Republic of Tajikistan for 2020 and the forecast of indicators for 2021-2022"; [Electronic resource]; URL: http://www.adlia.tj/show_doc.fwx?rgn=135075 (date of application: 10.12.2020).

[69] National Development Strategy of the Republic of Tajikistan for the period up to 2030 (NS-2030); [Electronic resource]; URL: https://mintrans.tj/sites/default/files/2017/september/nacionalnaya_strategiya_razvitiya_rt_na_period_do_2030_goda.pdf (accessed: 22.09.2020).

The year 2021 is designated in the NDS-2030 as a stage of accelerated development based on investments, it should become a key year in the complete completion of the construction of the Rogun HPP and ensuring the energy security of the republic. However, according to experts[70], without carrying out large-scale economic reforms, strengthening the legal framework and guaranteeing the protection of business, achieving the goals set by the NDS-2030 is a "doubtful prospect".

According to US State Department analysts, Tajikistan is a difficult country to do business in: bureaucratic and financial obstacles, corruption, a largely dysfunctional banking sector, an opaque tax system, and countless business audits seriously hamper investors. Lack of private investment forces the Tax Committee to arbitrarily enact or rethink tax rules to meet ever-increasing revenue targets[71].

On the part of American analysts, there are concerns about Tajikistan's entry into the Eurasian Economic Union (EAEU), in addition, they are concerned about the risks for potential investors. However, the United States believes that Tajikistan has made some progress in improving the investment climate. The World Bank named Tajikistan as one of the leading reformers in the Doing Business 2020 report. In 2020, the authorities of the republic took steps towards stricter compliance with the requirements for the protection of intellectual property rights; Tajikistan was marked by significant progress towards transparency in the extractive sector. If the Government of the Republic of Tajikistan continues on the path of economic reforms, opportunities in energy, agribusiness, food processing, tourism, textiles and mining may prove promising[72].

Tajikistan traditionally attracts investment and external borrowing from neighboring countries in the region, including China, Russia and, to a lesser extent, Iran. In 2019, foreign direct investment (FDI) from China increased by 6% to

[70] Tajikistan 2020: actualization of risks and threats, development scenarios: scientific and analytical report / scientific ed. R. Khairutdinov. – Kazan: Kazan University Press, 2020. – p. 17.

[71] 2020 Investment Climate Statements: Tajikistan; URL: https://www.state.gov/reports/2020-investment-climate-statements/tajikistan/

[72] 2020 Investment Climate Statements: Tajikistan.

$62.3 million; in 2019, the total debt of Tajikistan to China exceeded $1.5 billion, which is more than half of the country's external debt[73].

Russia ($33.1 million) is the second largest source of FDI in 2019, followed by the UK ($13.9 million) and Turkey ($13.5 million). Qatar has invested $384.5 million in a luxury residential complex and the largest mosque in the region, and is exploring opportunities to invest in the republic's infrastructure and banking sector.

In order to support Tajikistan's efforts to fight poverty and improve the quality of life of the population, since 1993 the World Bank Group (WB) has provided the republic with financing in the amount of $1.4 billion, 23% of the funds have been directed to the public sector. The Country Partnership Strategy aims to support Tajikistan's transition to a new growth model based on investment and exports. The World Bank portfolio in the country includes 16 projects with a net commitment of $560 million. The largest share of the portfolio is in energy (44%), water supply (16%) and urban and rural development (12%)[74].

According to World Bank estimates, in 2020, foreign investment in Tajikistan fell by 47% year-on-year to $192.7 million, but in the first half of 2021 showed a rapid recovery in growth rates, increasing by 43.7% to about $118 million.

Innovative development conditions in Tajikistan are worse than investment ones. According to the World Bank, since 2012 there has been a steady downward trend in research and development spending as a percentage of GDP. Therefore, if in 2012 the share of these expenditures was about 0.13% of GDP, then in 2019 it decreased to 0.095% (Chart 2.9). In physical terms, government spending on science, according to the official statistics of the Republic of Tajikistan, increased to 76,401 thousand somoni by 2019 (Fig. 2.10).

[73] Tajikistan 2020: Actualization of risks and threats, development scenarios: scientific and analytical report, p. 9.

[74] About the World Bank Group Program in the Republic of Tajikistan; [Electronic resource]; URL: https://www.vsemirnyjbank.org/ru/country/tajikistan/overview#2 (accessed: 09.07.2021).

The number of organizations performing R&D increased from 2013 to 2019 by 22 units (from 60 to 82), and, as of 2019, the majority of such organizations were located in the Sughd region (66).

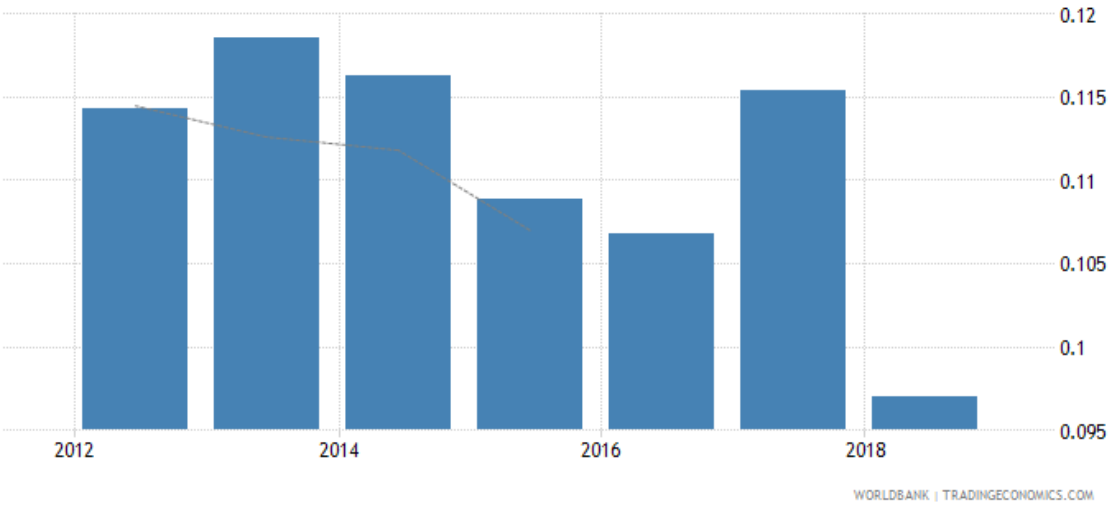


Figure 2.9 – R&D expenditures in Tajikistan, 2012-2019, % of GDP

Sourse: Tajikistan - Research And Development Expenditure (% Of GDP); URL: https://tradingeconomics.com/tajikistan/research-and-development-expenditure-percent-of-gdp-wb-data.html

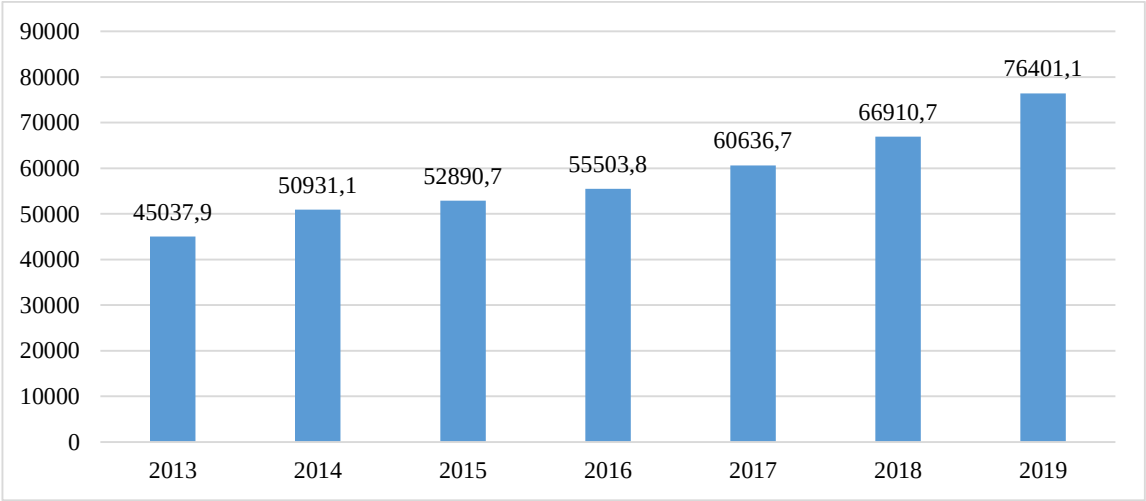


Figure 2.10 – Dynamics of government spending on science in Tajikistan, 2013-2019, thousand somoni

Source: Statistics of Science and Innovation; [Electronic resource]; URL: http://innovation.tj/documents/menu/ru/Statik.pdf (accessed: 12/19/2021).

The number of scientific workers increased from 3,389 people. (2013) to 4,505 (2019), of which 362 had a doctoral degree, and 839 people had a candidate's degree. However, the number of PhD students in Tajikistan has

dropped significantly from 1,705 (2013) to 758 (2019). Only 9 people were admitted to graduate school in 2019[75].

In addition to the adoption of a pool of legislative acts and programs since 2011, in 2018, at the initiative of the Government of the Republic of Tajikistan, the national innovation Internet portal (Innovation.tj) was launched. The portal was created to provide universal accessibility and satisfy the needs of recipients of information in the field of innovation and intellectual property. However, the new portal does not have an English version (only Russian and Tajik), many of the documents uploaded to the portal are in Tajik.

Under the current conditions, the republic is in dire need of investment resources and the development of scientific potential, as it is necessary to overcome not only the consequences of the pandemic, but also to continue reforming the economy in terms of modernization and innovative development. In addition, much will depend on the development and quality of market and state institutions.

Institutional conditions

As of 2020, Tajikistan ranked 106 out of 190 countries in the Report «Doing Business»[76] (20 steps compared to 126 steps in 2019). But the tax burden remains high in the republic, which is associated with the introduction of distorting tax collection methods to meet the planned income targets. In turn, the activities of small and medium-sized enterprises are constrained by regulatory shortcomings and racketeering. Access to credit resources remains a separate problem for businesses due to high interest rates. Therefore, we can agree with experts that the common factors that have a negative impact on the economy of the republic include: an unsuccessful choice of economic strategy, repressive fiscal policy, high taxes, high dependence on foreign investment and technology.

[75] Statistics of science and innovation; [Electronic resource]; URL: http://innovation.tj/documents/menu/ru/Statik.pdf (accessed: 12/19/2021).

[76] Doing Business 2020; URL: https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402.pdf

In the context of the transition to market relations, there are also problems in the business environment and investment climate: excessive administration and administrative barriers for business and investment, lack of a stock market, insufficient development of infrastructure organizations, lack of self-financing mechanisms for entrepreneurs, low level of business education, insufficient level of advanced experience, knowledge and skills of business planning, management and marketing among entrepreneurs.

As noted in the "Program of medium-term development of the Republic of Tajikistan for 2016-2020." (SDP-2020), the key issues of the public sector include: the need to strengthen the capacity of the civil service at the local level; the problem of staffing the activities of the public service; weak development and insufficient efficiency of administrative processes and anti-corruption mechanisms, including strategic and territorial planning, project management, public-private partnership; weak orientation of the budget towards capacity development in the public administration system, instability of the revenue base of the state budget; imperfection of mechanisms for ensuring the openness of the activities of state bodies, self-government bodies of towns and villages.

It should be noted that among the achievements of the republic during the years of Independence is the formation of the National Bank of the Republic of Tajikistan (NB RT). Over the 28 years of its existence, the National Bank of the Republic of Tajikistan has adopted three laws on the main bank, the analysis of which shows a significant increase in the role of banking supervision and regulation of the banking sector. The powers and functions of the regulator, as well as its tools for influencing violators, have been gradually expanded and currently comply with basic international requirements.

As part of the performance of the functions of banking regulation and supervision, the National Bank of the Republic of Tajikistan is guided by the requirements of the laws of Tajikistan: dated 28.06.2011 No. 722 "On the National Bank of Tajikistan", dated 19.05. 2009 No. 524 "On banking", dated 16.04. 2012 No. 816 "On Microfinance Organizations", dated February 24, 2017 No. 1404 "On

Countering the Legalization (Laundering) of Proceeds from Crime, Financing of Terrorism and Financing the Proliferation of Weapons of Mass Destruction", dated 02.08. 2011 No. 758 "On insurance of savings of individuals", Basic principles for effective banking supervision and recommendations of the Basel Committee, "Basics of the macroprudential policy of the National Bank of Tajikistan", other regulatory acts of the National Bank of the Republic of Tajikistan.

The developing institutional environment and the existing regulatory framework allow banks to provide various types of services to economic entities and the population, but their list is still limited due to the underdevelopment of the banking sector.

The top three largest banks in the country are: Agroinvestbank OJSC, Orienbank OJSC and SSB RT Amonatbank (State Savings Bank Amonatbank traces its history back to 1885).

In 2015, the republic began the process of rehabilitating the banking services market from financially unstable credit institutions with a weak capital base. In particular, for newly created banks, in accordance with the updated Instruction No. 176 dated January 4, 2018 No. 1 "On the procedure for regulating the activities of credit organizations", new requirements for the capital of banks were established.

Despite certain achievements in the field of banking regulation, there are significant disproportions in the development of the country's financial market, insufficient development of the insurance market and the securities market. The disadvantages of the banking sector include a high share of loans issued to state-owned enterprises, for the period from 2005 to 2018, it more than doubled. Direct lending at concessional rates for priority projects, lending to related borrowers and/or loss-making businesses continues to undermine efforts to strengthen banks' financial health.

State corporations of Tajikistan now are the most important instrument of economic, financial, innovation and investment policy; they have already become an established form in ensuring national interests in the economy. According to the State Property Committee of the Republic of Tajikistan, there are currently 789

state-owned enterprises operating in the republic, including enterprises with state participation. However, it is difficult to assess their effectiveness due to the non-transparency of the public sector, the lack of regular open monitoring and the lack of an appropriate methodology for assessing the Civil Code.

On the one hand, world experience shows that the state, as a rule, is not able to give an objective assessment of the effectiveness of the activities of the Civil Code, since these structures are recipients of budgetary funds and at the same time agents of the state, to which it, the state, entrusts the solution of non-trivial socio-economic tasks, which, for one reason or another, the private sector of the economy cannot cope with. But on the other hand, any state should be interested in improving the efficiency of the activities of structures accountable to it and the effectiveness of public administration in general, which actualizes the definition of relevant indicators for assessing the effectiveness of the Civil Code.

The problem is that the fact that this area is not transparent and remains "closed" to society can be attributed to the peculiarities of the development of civil society in Tajikistan. In particular, the Law "On the State Budget for 2020" published on the website of the Ministry of Finance of the Republic of Tajikistan, as in previous years, provides a limited amount of information, "secret" is, for example, paragraph 15 of Art. 13 ("The ratio of tax and non-tax revenues to the republican and local budgets"); departmental, program and "other" revenues and budget expenditures are not classified; the document contains a large number of enterprises receiving tax benefits.

Tajikistan has been participating in the study of the Open Budget Index (OBI) since 2012. OBI assesses the online accessibility, timeliness, and completeness of eight key budget documents using 109 equally weighted indicators and ranks each country on a scale from 0 to 100. While Tajikistan scored 30 in 2017, the 2019 survey found that the country lost 13 points in the international OBI rating, having received only 17 points (2012 level), this is the worst indicator among the CIS countries. The assessment of public participation in the budget process is even lower - 7 points out of 100 (Fig. 2.11).

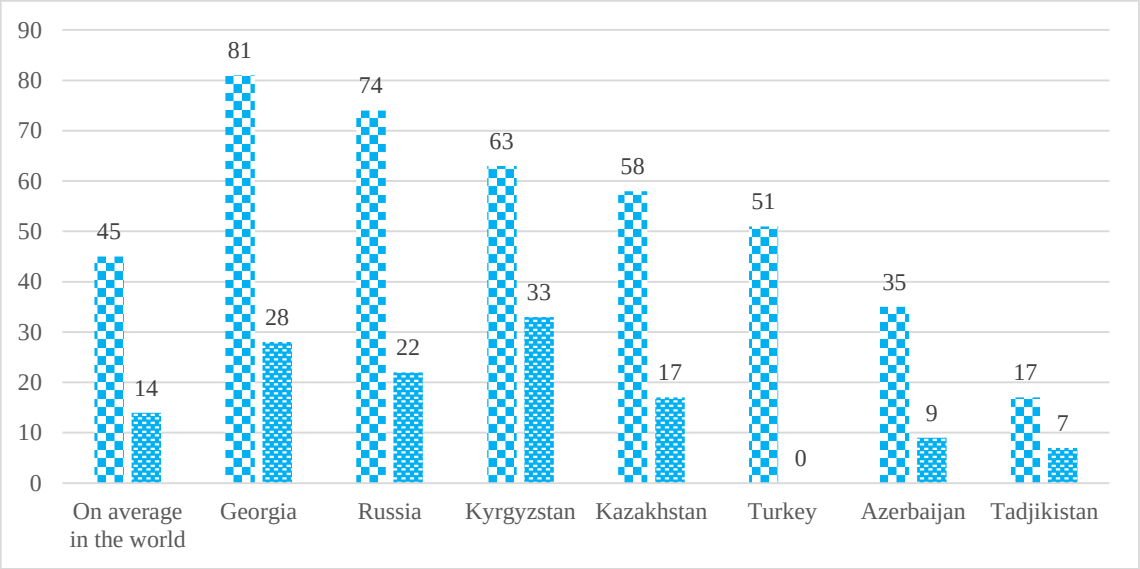


Figure 2.11 – Assessment of transparency of the state budget and public participation in the budget process in Tajikistan compared to some countries, in points

Source: built by the author according to the Open Budget Survey 2019: Tajikistan; [Electronic resource]; URL: https://www.internationalbudget.org/open-budget-survey/country-results/2019/tajikistan (accessed: 09.12.2020).

Along with this, attention should be paid to the lack of open access to analytical materials and reporting on the activities of the public sector in general and the Civil Code in particular. The State Committee for Investments and State Property Management of the Republic of Tajikistan) does not post these data, does not engage in analytical work, only legal information as of 2018 is posted on the website of the department.

The Government of the Republic of Tajikistan does not have clear mechanisms to improve the quality of the use of available resources; many state-controlled resources (lands not in agricultural circulation, protected natural and cultural values, etc.) do not receive proper economic assessment as potential or real factors of production, which could bring revenues to the budget. State spending on a non-market basis sometimes remains in the shadows[77].

Due to the lack of information on state property, it is not possible to conduct an objective assessment of the effectiveness of the activities of the Civil Code of

[77] Ashurov U. Z. The role of the state in the public sector of the economy of the Republic of Tajikistan // Young scientist. — 2014. — № 16 (75). — Pp. 220-222.

Tajikistan. Separate information on the financial condition of the Civil Code is periodically posted by the World Bank. Thus, according to WB experts, state-owned enterprises in the republic are not distinguished by their operational efficiency and pursuance of a responsible financial policy. The total debt of large and medium-sized enterprises of the country at the beginning of the second half of 2019 amounted to more than 60 billion 856.1 million somoni (about $6.3 billion)[78]. The energy holding "Barki Tojik" had the largest debts (about $2.5 billion).

WB experts believe that the large public sector, dominated by state-owned enterprises, remains the main source of pressure on the budget, for example, the losses of state-owned enterprises in 2017 amounted to 4.6% of GDP. GCs account for almost half of the tax debt to the budget, and loans and subloans attracted by GCs expose the Government to significant quasi-fiscal risk. Some of the largest GCs receive subsidies and short-term loans from the budget; enjoy preferential tax treatment and other benefits. In recent years, the Government of the Republic of Tajikistan has incurred extra-budgetary costs because of non-repayment of sub-loans by the SCs provided under the on-lending mechanism. State-owned companies that regularly receive funds from the Ministry of Finance under the on-lending mechanism include Barki Tojik (significantly ahead of other SCs in terms of total subloans issued) and Tajiktransgaz OJSC, despite the fact that the financial situation of both enterprises is critical. A similar practice is used in relation to other state-owned enterprises. As a result, the total amount of explicit budgetary obligations of the State Corporation in 2017 amounted to 9.2% of GDP[79].

[78] Strengthening of fiscal risks in Tajikistan. Report on the economy. Autumn issue, 2019; [Electronic resource]; URL: http://pubdocs.worldbank.org/en/778131575020956619/Tajikistan-economic-update-fall2019-ru.pdf (accessed 10.12.2020).

[79] The World Bank Partnership Framework Strategy with Tajikistan for 2019-2023 (Report No. 135875-TJ), 2019; [Electronic resource]; URL: http://documents1.worldbank.org/curated/en/136791564051584707/pdf/Tajikistan-Country-Partnership-Framework-for-the-Period-of-FY19-FY23.pdf (accessed: 09.12.2020).

2.2. Assessment of the process of institutionalization of the functioning of state corporations in Tajikistan

When we consider this or that type of organization as an institution, we mean that there is something special in these organizations that distinguishes them from others. The uniqueness of the state organization lies in the combination of three distinctive features. Firstly, such an organization must meet certain criteria (rules, legal norms, requirements) and set socially significant goals for itself. Secondly, the activities of the state organization are public, open to society, transparent (with some exceptions regarding defense and security organizations). A state organization is a kind of “trademark” of the state, a brand. Thirdly, a state organization should a priori be controlled by other specially authorized institutions (president, parliament, counting committee, public chamber), since it is an agent of the state.

The problem is that no organization is born as an institution; it becomes one in the process of its evolution. In addition, the government organization is no exception. Every "public institution" - as it is defined - begins as a "newborn" organization. Over the years, it acquires institutional characteristics. The question is, how does this happen, and how to make a state organization “correct”, “quality”, accountable, effective?

Governments usually create public organizations (institutions, enterprises, corporations) to solve important problems or urgent social problems. Sometimes these organizations are created from scratch, other "new" organizations are "added copies" of existing organizations (new school, hospital) or as a result of a merger (a prime example is the US Department of Homeland Security[80].

After the formal foundation of a new state organization (for example, with the adoption of a special law), a formal plan for its development must be put into

[80] Kessler R. The FBI: Inside the world’s most powerful law enforcement agency. NewYork: Pocket Books, 1994.

practice. However, a young organization must overcome what is commonly called the "responsibility of novelty"[81]. New organizations must develop and implement solutions to complex problems that sometimes change too quickly and unforeseen. Experience must be developed or gained; the choices made must be translated into structured practices in order for a truly sustainable organization to emerge. In doing so, emerging structures and practices should be endorsed by the organization's political and other stakeholders. Thus, the challenge for the new organization is twofold: it must create effective ways of working while retaining (or gaining) the support of its stakeholders.

Public management effectiveness scholars have developed a body of theoretical and empirical work detailing the “fragmentary forces” that prevent young organizations from coping with current problems (L.D. Terry (2005); J.Q. Wilson (1989)). Government leaders soon find that their environments are often unstable, leaving them to face shifting priorities, underfunding, and irrational control. They also find that employees often pursue personal goals rather than organizational goals, control systems malfunction, citizens do not always cooperate, and performance is critically dependent on other factors or participants.[82].

Most new public institutions, under favorable environmental conditions, successfully overcome obstacles. They somehow set a record of consistently high performance, developing methods of work that meet frequently changing official goals. In the course of their evolution, they came to be regarded by stakeholders as a valuable feature of the social system. This enduring achievement in the face of "fragmentary forces" earned them the title of state or "public institution"[83].

At the same time, it is important to understand that institutionalization is not a linear process in which phases of the normal cycle follow one another in an ideally typical sense. This is a dynamic process. The period of institutionalization

[81] Sproull L., Weiner S., & Wolf D. Organizing an anarchy: Belief, bureaucracy, andpolitics in the National Institute of Education. Chicago: University of Chicago Press, 1978.

[82] LaPorte T. R. A state of the field: Increasing relative ignorance // Journal of PublicAdministration Research and Theory. - 1994. - № 4(1). - P.5-15.

[83] Selznick P. Указ. соч.

takes a certain time, sometimes quite a long time, and institutionalization can be interrupted by a phase of deinstitutionalization. Temporary deinstitutionalization may occur if established norms do not pass the test of practice. Violent episodes of institutional deconstruction, in turn, can lead to relatively peaceful phases of institutionalization.

Empirical research also shows that institutionalization is not an accident, but the result of effective leadership (J. R Kimberley, P. Selznick, J.Q. Wilson (1980)). When we talk about leadership, we do not mean some charismatic "entrepreneur" who picks up an organization from scratch and single-handedly transforms it into an institution. “Leadership” in this sense refers to the application of certain strategies and practices that guide a young organization through a cycle of norms.

Although the role of the state has changed and evolved significantly over recent history, it is now quite clear that good governance is the key to achieving sustainable socio-economic development of both the state itself and the whole society. As never before, states face the demands of the global economy, new technologies, calls for greater civic participation and democracy.

Along with this, governments and organizations around the world are trying to meet internal and external requirements, as well as requirements for improvements and reforms in public administration. The difficulty is that these demands come from a variety of sources, including multilateral development institutions, donor governments, parliaments, the private sector, non-governmental organizations (NGOs), citizens, citizen groups and civil society, the media, and so on.

Today there is an extensive literature on the quality of state institutions in their relationship to political regimes. However, far from all the conclusions can be fully agreed upon when it comes to assessing the effectiveness of state organizations in developing countries, including the Republic of Tajikistan. Doubts begin already when trying to structure the public sector and the evaluation indicators. For example, in some countries the health care system, for example, is

almost completely private (USA, Israel), in others, it is fully or partially administered by the state (Australia, Cuba, Sweden, Switzerland, South Korea).

F. Fukuyama (2004) identified several dimensions of the public sector, including the functions, capabilities, and legitimacy of the government. He proposed a list of government functions, including defense, law and order, property rights, protection of the poor, macroeconomic management, public health, education, financial regulation, pension redistribution, environmental protection, unemployment insurance, asset redistribution, and market development.

Another approach, outlined by H. Back and A. Hadenius (2008), considers statehood as the ability of state entities to maintain sovereignty.

A different focus is observed in C.S. Hendrix (2010), this author defines state capacity in terms of military power, bureaucratic or administrative capacity, and the quality and consistency of political institutions.

An institutional approach taking into account the possibilities of the state can be found in the work of J. Fortin (1989–2006), who measures these possibilities by five indicators - corruption, contract money, infrastructure, protection of property rights and tax revenues to the budget.

Another understanding of the ability of the state is presented by N. Charron and V. Lapuente (2011), they equate them with the quality of public management.

W. Thompson (2014) considers state capacity as "state power", i.e. it is measured by indicators reflecting the state's fiscal capacity (income tax revenue as a share of GDP), government coercion (scale of coercion), legitimacy ("voting and accountability", "government efficiency", "rule of law" and "fighting corruption, monopoly armed forces ("political stability").

C. Tilly (2007) provides a theoretical typology of "rough types of regimes" along two axes (state capacity and democracy): high performance/non-democratic (e.g. Kazakhstan); low-powered/undemocratic (e.g. Somalia); high-performing/democratic (e.g. Norway) and low-performing/democratic (e.g. Jamaica).

Some researchers generally believe that it is impossible to achieve the ideal of "good governance" as a common goal and evaluation criterion when comparing the institutional development of different countries. Since the early 2000s signs of skepticism began to appear in academia and policy circles about the universality and practical feasibility of the institutional quality of "good governance" in relation to most developing and "catching up" countries. In addition, world practice by that time had already proved that it was state organizations and institutions, owning significant administrative, natural and financial resources, that often remained outside the field of public control, and the funds received from the state budget for their development were used inappropriately, inefficiently or become subject to corruption. Sometimes not only developing, but also quite economically developed countries with democratic regimes are characterized by high corruption.

The inefficiency of public sector organizations even led in the 1980s to to the emergence of the so-called "new public administration" in the United Kingdom (under Margaret Thatcher) and other countries, mainly with Anglo-Saxon traditions. The main purpose of this innovation is to implicitly introduce the principles of functioning of a private firm into public administrations. The new leadership was aimed at rethinking the institutional structure, modernizing the state and improving the management of state-owned enterprises. His appearance was inspired by the need to reduce public spending and inefficiency, to overcome the lack of managerial skills in public organizations.

Therefore, a brief review of the theoretical and practical aspects of the process of institutionalization of state organizations indicates the presence of serious problems.

Let us further consider what the experience of the institutionalization of state structures in Tajikistan shows.

Tajikistan is a republic with three branches of power, dominated by executive power. The current Constitution of the Republic of Tajikistan was adopted in 1994, it was amended in 1999 and 2003 and 2016. Political stability in the republic improved only after the end of the civil war in 1997. But in order to

gain control over some regions of the country, the central government compromised and made alliances between regional factions and clans, which still retain very significant political influence. The rivalry between the politicians of the northern and southern regions of the country is expressed.

After a series of reforms, the Government of Tajikistan includes 13 ministries and 2 state committees (the State Committee for National Security of the Republic of Tajikistan and the State Committee for Investments and State Property Management of the Republic of Tajikistan), the prime minister heads the government. The government ensures the direction of the economic, social and cultural spheres and the enforcement of laws. Members of the government are appointed and dismissed by the President and approved by the Supreme Assembly of Tajikistan.

The legislation of the Republic of Tajikistan on state-owned enterprises is mainly guided by the experience of Russia in this area of legal regulation. State-owned enterprises received a special legal and organizational status in Tajikistan in 2004 with the adoption of the Law of the Republic of Tajikistan No. 10 "On State Enterprises" (hereinafter - "Law No. 10"). It follows from Articles 1 and 3 of Law No. 10 that the following forms of state enterprises are recognized in the Republic of Tajikistan:

- state unitary enterprise;
- state-owned enterprises with the right of operational management;
- Republican-owned enterprises - republican state-owned enterprises;
- enterprises owned by local government authorities - public utilities.

But the legislation of Tajikistan does not contain the legal structure of "state corporation". If, for example, the Russian legislator provides many opportunities for creating an individual organizational and legal form for each new corporation and going beyond the scope of legislation without any restrictions, then in Tajikistan the legislator has so far created only the basics for regulating state enterprises. The management of state enterprises in the Republic of Tajikistan is also in its infancy.

In world practice, there are four models of corporate governance: Anglo-American, continental, Japanese and family.

In the American scientific literature, there are two main approaches to the definition of corporations. According to the first, broad approach, the concept of "corporation" refers to the widest range of legal entities. Here, corporations can be public (public), semi-public (quasi-public), entrepreneurial (private, business) and non-commercial associations (non-profit). According to the second approach, a corporation is a joint-stock company and its various modifications. This does not include other types of institutions[84].

The main body in the Anglo-American model of corporate governance is the Board of Directors, and the supreme management body is the general meeting of shareholders.

In the continental (German) legal model, in contrast to the Anglo-American, the state owns a significant stake in the corporation. This model has a two-tier structure: supervisory board and board[85].

It is difficult to say now which model of public administration Tajikistan will prefer, since the processes of legal regulation of state enterprises and the institutionalization of state institutions in the republic have not been completed. However, there is an opportunity to assess the process of institutionalization and its features.

State property management is carried out by the Government of the Republic of Tajikistan in the following forms:

- rent;
- concession;
- conservation;
- transfer of property from balance to balance;
- write-off of property;

[84] Gaplikova D. S. The concept of "corporation" in foreign and Russian theory and practice // Young scientist. — 2016. — № 15 (119). — Pp. 286-288.

[85] Drobysheva L.N., Solomatina E.V. Corporate governance models: world experience and Russian practice // Theory and practice of social development. - 2011. - No. 3. - pp. 267-272.

 restructuring and privatization;

 sale of shares and property;

 public-private partnership (for Tajikistan, this is a relatively new form of interaction between the state and business; there is no legislation in this area);

 Creation and liquidation of state enterprises (carried out on the basis of the norms of the Law on State Enterprises and other legislative acts).

The founder of a state-owned enterprise in Tajikistan may be the state body that made the decision to establish the enterprise, or a state management body authorized by the government. The main constituent document of a state enterprise in the Republic of Tajikistan is the Charter, which contains information about the type of enterprise; its name; location; the subject and goals of the activity; powers of the head; mode of operation; the procedure for the formation of the property of the enterprise and the distribution of income; conditions for reorganization and liquidation of the enterprise; the size of the statutory fund and the procedure for its formation; other provisions that do not contradict the law (Article 7 of Law No. 10).

In accordance with Art. 11 of Law No. 10, state management of the enterprise is carried out by the Government of the Republic of Tajikistan or an authorized body. The bodies of the state enterprise are: a higher body - the founder; governing body - the supervisory board of the state enterprise; the executive body is the head of the state enterprise.

For Tajikistan, the process of transforming state unitary enterprises into joint-stock companies is relevant today. This right is granted by Art. 11 of the Law of the Republic of Tajikistan "On Joint Stock Companies"[86]. However, reality shows that transformation does not always mean an increase in the efficiency of doing business[87].

[86] The Law of the Republic of Tajikistan "On Joint-Stock Companies" dated 22.02.2007 No. 279 (ed. dated 14.11.2016) // Legislation of the CIS countries; [Electronic resource]; URL: https://base.spinform.ru/show_doc.fwx?rgn=18388 (accessed 24.09.2020).

[87] Murtazakulov D.S., Jabbarov S.M. Development of organizational and legal forms of management in the Republic of Tajikistan // Bulletin of the Samara Humanitarian Academy. Series: Law. - 2012. -No. 1. – pp. 111-117.

The process of institutionalization of state organizations in Tajikistan has not yet been completed. Many issues of public administration are not regulated in the legislation.

2.3. The role of state corporations in the modernization of the Tajik economy

The role of state corporations in the modernization of the economy of Tajikistan is increasing every year, the number of state enterprises is increasing, their financing is improving, the principles of project management are beginning to be introduced, restructuring and modernization projects are being implemented, including international projects.

Currently, the Government of the Republic of Tajikistan manages state unitary enterprises (SUEs) and open joint stock companies (OJSCs). The government websites of Tajikistan do not post a register of state-owned enterprises in the public domain, however, an analysis of scientific publications and the media suggests that the largest enterprises in the republic that own state property on the right of economic management are the Tajik Railway, Air Navigation, and Tajik Post , "Amonatbank", "Barki Tojik" and others.

The Government of the Republic of Tajikistan has a share in the authorized capital of 140 companies: in 136 joint-stock companies and 4 limited liability companies (LLC). Large Tajik enterprises whose shares are owned by the Government of the Republic of Tajikistan are Tajik Aluminum Company OJSC (100%), Rogun OJSC (95%), Tajiktelecom OJSC (95%), subdivisions of Barki Tojik OJSC (100%), Dushanbe International Airport OJSC (100%), Tajiktransgaz OJSC (100%), Tajik Air OJSC (100%) and others.

However, the practical results of the implementation of state innovation programs and projects in Tajikistan are not obvious. The government's stake on state-owned industrial enterprises as "locomotives" of innovative growth does not always justify itself. Neither the private nor the public sectors of industry have yet

shown sufficient interest in introducing innovations. Large innovative projects are implemented in the republic only at the initiative of the government. As a rule, global multinational corporations (for example, Chinese ones) participate in the financing of these projects, receiving much greater benefits than local state-owned enterprises.

However, the contribution of national corporations to the country's GDP is the most significant. In the pre-pandemic period, industry ranked second among other industries in terms of its contribution to real GDP growth (Table 2.4).

Table 2.4 – Contribution of industry to real GDP growth of the Republic of Tajikistan, %

	2017	**2018**	**2019**	**jan.- sep.. 2020**
Real GDP growth	7,1	7,3	7,5	4,2
Industry	3,6	2,2	2,6	2,1
Agricultural industry	1,6	0,9	1,5	2,1
Construction	0,5	0,8	-0,7	-0,6
Services	1,4	3,3	4,1	0,5

Source: Tajikistan. Report on the economy. Autumn 2020; [Electronic resource]; URL: https://documents1.worldbank.org/curated/en/285721608614181243/pdf/Tajikistan-Economic-Slowdown-Amid-the-Pandemic.pdf (accessed: 12/18/2021).

If we consider the activities of some state corporations in more detail, it should be noted that the key component of the country's infrastructure is transport (railway and road).

Railway transport is a complex diversified economy, which includes railways, enterprises, administrative, economic, cultural, community and medical institutions, organizations of science and education. The main operator of railway transport in Tajikistan is the State Unitary Enterprise "Tajik Railways" (SUE "TRD"). In terms of the length of railways, Tajikistan ranks 103rd in the world ranking. The length of the company's lines is 936.9 km, the length of the main lines is 650.9 km, the length of the station lines is 218 km, the access lines are 67.2 km, and the operating length is 597.7 km. The website also states that the inventory fleet of the Tajik Railways consists of 2,068 freight cars, 424 passenger cars, and 54 diesel locomotives.

For comparison, the total length of railways in the world is 1,134,429 km. In terms of the length of railways, the United States ranks first in the world (226,427 km), China is in second place (93,250 km), and Russia is third (87,157 km); Kazakhstan occupies the 19th position (13,700 km), Uzbekistan - 42nd (4,304), Turkmenistan - 61st (2,980)[88].

It is noteworthy that railway transport in the Republic of Tajikistan is not regulated by a special law. Until April 2020, the Law of the Republic of Tajikistan on Transport dated November 29, 2000 No. 22 was in force, but it became invalid in accordance with Article 137 of the Road Transport Code of the Republic of Tajikistan dated April 2, 2020 No. 1689[89].

The strategic plans of SUE "TJ" provide for further modernization and expansion of the railway network, modernization and renewal of rolling stock, improving the quality of services, increasing the efficiency and competitiveness of railway transport.

Today, the potential of the railway industry of the republic, the foundations of which were laid in the 60-80s of the twentieth century, is limited and does not correspond to the goals and objectives of the country's development, therefore, the development of new transit transport corridors is of particular importance for Tajikistan. However, given that 93% of the territory of the republic is occupied by mountains, the Government of the Republic of Tajikistan considers only road transport to be the main mode of transport. This is specifically stated in the State Program for the Development of Transport of the Republic of Tajikistan until 2025.[90]: "Road transport has an important strategic position among other types of

[88] CIA World Factbook. Railways compares the total route length of the railway network and of its component parts. [Электронный ресурс]; URL: https://www.cia.gov/library/publications/the-world-factbook/rankorder/2121rank.html (24.09.2020).

[89] Code of Motor Transport of the Republic of Tatarstan No. 1689 dated April 2, 2020 // Legislation of the CIS countries; [Electronic resource]; URL: https://base.spinform.ru/show_doc.fwx?rgn=123648#A5QT0WVC31 (accessed: 09/29/2020).

[90] The State target program for the development of the transport complex of the Republic of Tajikistan until 2025 (approved on April 1, 2011); [Electronic resource]; URL: https://mintrans.tj/sites/default/files/2017/gosudarstvennaya_celevaya_programma_razvitiya.pdf (accessed: 09/29/2020).

transport, especially in terms of ensuring constant internal transport and coverage of all regions of the country."

Meanwhile, as Shokhboz Asadov notes: “Tajikistan is a crossroads for commercial transportation. Its strategic location serves as a bridge for the transit of goods and services between China, Central Asia and the countries of South Asia and the Middle East. Landlocked, dependent on cross-border access, Tajikistan shares borders with China, Kyrgyzstan, Uzbekistan and Afghanistan.”[91].

Accordingly, the intensive development of the railway transit infrastructure of Tajikistan should be carried out with these countries. Improved transit infrastructure will help address many of the problems in Tajikistan and other Central Asian countries that face similar challenges, including limited domestic markets, lack of access to ports, remoteness from major markets, and significant economic friction between trading partners.

An important direction in the modernization of industry in the republic is the aluminum industry, here the key position is occupied by the State Unitary Enterprise OJSC "Tajik Aluminum Company" (JSC "TALCO"). The enterprise is one of the world's largest aluminum producers and is developing dynamically. The management builds its activities on the basis of the principles of modern management and the international financial reporting system; in fact, the company has become the personification of economic reforms in the Republic of Tajikistan.

The design capacity of TALCO is 517 thousand tons of aluminum per year with the production of 360 thousand tons of baked anodes. This is the only enterprise in the republic that has received a certificate and operates according to the QMS system, ISO 9001:2008. In 2013, TALCO received an integrated management system certificate, which includes the international standards ISO-14000 and OHSAS-18000[92]. In 2018-2019 TALCO has begun to transfer the

[91] Asadov Sh. Tajikistan’s Transit Corridors and their Potential for Developing Regional Trade, The Institute of Public Policy and Administration, WORKING PAPER NO.6, 2012; [Электронный ресурс]; URL: https://www.ucentralasia.org/Content/Downloads/UCA-IPPA-WP-6-Tajikistan-Transit-Coridor.pdf (дата обращения: 29.09.2020).

[92] JSC "TALCO". Investment projects; [Electronic resource]; URL: https://www.talco.com.tj/ru/investors/investicionnye-proekty

international integrated management systems operating at the enterprise to new versions of international standards: ISO 9001:2015, ISO 14001:2015 and OHSAS 45001.

One of the first innovative decisions of OJSC TALCO was the target investment project: “Transfer of TALCO to the use of local raw materials” (Talkoresurs) and the opening of a Chemical Plant, with an estimated cost of $111 million; the second targeted innovation project is "Construction of an alumina complex from aluminum-containing ores in the Republic of Tajikistan" on the basis of the "Turpi", "Devonasu" and "Tutek" deposits. The result of the implementation of these projects was the creation of a new "Tajik Chemical and Metallurgical Corporation"[93].

The implementation of the first project significantly reduced the cost of aluminum and provided an opportunity to receive additional profit from aluminum production, as well as to develop the chemical industry in Tajikistan. According to the ownership structure: 100% of the authorized capital of the Chemical Plant is the property of "Talco Management Ltd" - the only "Founder" of Zavodi Sokhtashavandai Kryolite LLC.

This was followed by the development of a pilot project "Creation of a new energy and metallurgical company" based on the PPP mechanism. This innovative project included the introduction of high technologies for aluminum production, the construction of a power plant and power generation.

Since 2017, TALCO OJSC began to develop cooperation with a large Chinese corporation - China Road and Bridge Corporation (CRBC) - on the construction of an Industrial Technopark in the Yavan region - a complex of interconnected industries focused on the development of the industrial sector of the Republic of Tajikistan, worth $ 100 million.

At the same time, the profit and loss indicators of JSC TALCO, according to the financial statements, indicate instability and negative dynamics of financial

[93] Targeted investment projects ONLY; URL: https://www.talco.com.tj/sites/default/files/_investors/prezentacii/tselevyye_investitsionnyye_proyekty.pdf

results: lower revenues, high production costs, loss-making of operating activities (Table 2.5).

Table 2.5 - The main indicators of profit and loss of JSC TALCO, 2015-2018, $ thousand.

Indicators	**2015**	**2016**	**2017**	**2018**
Revenue (revenue)	72,161	62,038	49,137	47,549
Cost price	(177,561)	(139,971)	(133,567)	(95,058)
Profit (loss)	(105,400)	(77,933)	(84,430)	(47,508)
Operating loss	(119,938)	(90,220)	(93,383)	(58,620)
Total comprehensive income / (loss) for the year	**(60,800)**	**(73,847)**	**12,335**	**76,956**

Source: compiled by the author according to the financial statements of JSC TALCO for the period 2015-2018.

From the author's point of view, one of the reasons for the inefficiency of TALCO's activities is the use of a tolling scheme. Tolling (from the English toll "duty") is the processing of foreign raw materials with the subsequent export of finished products. Under this scheme, foreign contractors supply raw materials (alumina) to the country and export finished products, while TALCO only provides processing services and receives a fixed income for this. Under this scheme, neither imported raw materials for aluminum smelters, nor products of its processing are subject to customs duties and VAT. The main benefits are received by the company's foreign counterparties, and not by TALCO. The huge potential of the plant is used extremely inefficiently, the budget loses millions of dollars every year, subsidizing the unprofitable activities of TALCO and not receiving taxes.

Another strategically important state corporation in Tajikistan is the Open Joint Stock Holding Company Barki Tojik. The Republic is striving for the energy independence of the country and increasing its export hydropower potential, therefore, the Government of the Republic of Tajikistan traditionally attaches special importance to the sustainable development of Barki Tojik and the industry as a whole[94].

[94] Avezov A.H. Formation and development of the national energy system of Tajikistan: dis. ... doct. economic sciences: 08.00.05. - Dushanbe, 1999. - - 315 p.; Boboev F.D. Economic mechanisms of sustainable energy development of the Republic of Tajikistan: diss. ... Candidate of Economic Sciences: 08.00.05. - Dushanbe, 2019. - - 192 p.; Bardova M.N. Formation of a strategy for the development of the energy complex of the Republic of Tajikistan and its role in the energy integration of the Central Asian region: dis. ... Candidate of Economic

The Ministry of Energy and Water Resources of Tajikistan is responsible for energy policy issues, which is guided by legislative acts and other regulatory legal documents in determining and implementing the following tasks assigned to the Ministry:

- the most efficient use of natural fuel and energy resources, as well as energy potential for the benefit of economic growth and the quality of life of the population;

- repair and reconstruction of existing facilities;

- construction of new facilities, substations, power lines and hydroelectric power stations;

- wide use of renewable energy sources;

- implementation of measures for energy saving and energy efficiency, modernization of the electricity metering system and transition to the use of energy efficient technologies and equipment;

- reduction of technological and commercial losses;

- reduction of greenhouse gas emissions;

- improving payment discipline, benefits and incentives for the energy sector and consumers;

- integrated development of coal mining in accordance with the needs of the country and export goals;

- modernization of non-traditional technologies for the use of coal;

- pursuing a policy aimed at increasing natural gas production, and others.

One of the main legislative acts in the field of modernization of the energy industry is the Law of the Republic of Tajikistan "On Energy Saving and Energy Efficiency" dated September 19, 2013 No. 1018, which regulates public relations in the field of energy saving and energy efficiency. The energy industry is also regulated by other laws and by-laws.

Sciences: 08.00.05. - Dushanbe, 2011. - 167 p.; Samadov Sh.D. Mechanism of formation and development of market relations in the electric power industry of the Republic of Tajikistan: dis. ... kan. ekonomich. nauk: 08.00.05. - Dushanbe, 1999. – 163 p., etc.

Tajikistan has a huge hydropower potential, as it owns 4% of the world's hydropower resources and 53% of Central Asia's resources. According to available estimates, Tajikistan ranks 8th in the world in terms of the potential of hydropower resources and is the leader in terms of specific reserves. The total volume of hydropower resources is estimated at 527 TWh, including technically possible capacity - 202 TWh, economically viable for construction - 172 TWh. The total capacity of the installed HPPs is 4,070 MW, and the average annual output is about 17 TWh. However, these resources have yet to be harnessed rationally and effectively[95].

According to researchers, despite the significant potential of the energy industry in Tajikistan, it is characterized by a number of systemic problems, including: the inability to fully meet the demand for electricity and heat in the domestic market, a decrease in the efficiency of using the installed capacity of power plants, a low level of payment discipline, deficit of own investment funds and significant external debt concentrated in the electric power industry.

Although the fact that in 1990 Tajikistan produced 3,426 kWh of electricity per capita speaks about the problems in the energy industry, and according to this indicator, the republic had a fairly high rating among the developed countries of the world, ranking 27th, then in 2017 1.885 thousand kWh began to fall on 1 inhabitant, which is by 1541.01 kW. h or 55.02% less than it was in 1990.

About 94% of the generating capacity in the republic comes from hydroelectric power plants, but, according to some estimates, only 5% of their potential is used. The country faces an energy deficit of 3.0 to 3.5 GWh, resulting in regular power outages from October to April.

At the same time, due to the lack of the possibility of exporting surplus electrical energy in the spring-summer period, hydroelectric power plants do not operate at full capacity, discharging water for nothing.

[95] Akhrorova A., Mukimova N., Razykov R. The energy security of the Republic of Tajikistan // Energy Production and Management in the 21st Century. – 2014. - Vol. 1.

The main purpose of the considered vertically integrated company "Barki Tojik" is the production, transportation, transmission, distribution and sale of electricity and heat mainly in the local market.

There is a Supervisory Board in OAHK “Barki Tojik”, which

composed of ministers chaired by the prime minister. The Chairman and Vice-Chairmen of Barki Tojik are responsible for specific activities (eg generation, distribution, transmission, marketing, finance, etc.).

The total installed capacity in the Barki Tojik network is 5,346 MW, including the second unit of the Sangtuda HPP-2 with a capacity of 110 MW. Along with the Sangtudinskaya HPP-2, the Barki Tojik OJSC includes the following hydroelectric power plants in operation or under construction:

Baipazinskaya HPP - The power of the station is 600 MW;

Dushanbe CHPP - 2 - installed capacity - 600 MW;

Kairakkum HPP - installed capacity - 126 MW;

Nurek HPP - installed capacity - 3,000 MW;

Rogun HPP - installed capacity - 3,600 MW;

Sarband HPP - installed capacity - 240 MW;

Sharshara HPP - installed capacity - 29.95 MW;

Central HPP - installed capacity - 15.1 MW;

Varzob HPP-2 - installed capacity - 14.5 MW;

Varzob HPP-1 - installed capacity - 9.5 MW;

Varzob HPP-3 - installed capacity - 3.52 MW.

The potential of hydropower resources in Tajikistan, a significant part of which has not yet been developed, determines the strategic directions for the development of the energy sector, the most important of which are the construction of large and small hydroelectric power plants, the implementation of energy efficiency programs, and the entry of the domestic electric power industry into the foreign market. Optimization of the structure of energy consumption in the domestic market and commissioning of new capacities will make it possible in the

future to increase the export potential of the country's electric power industry to 7.5–8 TWh in summer and 2–2.5 TWh in winter[96].

An increase in electricity exports, which ensures a stable inflow of foreign currency into the country and contributes to the strengthening of the geopolitical significance of the energy sector of Tajikistan, can perform stabilizing and integrating functions throughout the Central Asian region. From the point of view of national interests, the export of electricity and energy-intensive products, in the production of which the Republic of Tajikistan has a pronounced benefit, will be effective if it provides the maximum income in foreign currency at the lowest cost associated with their production and supply to the external market.

A significant milestone in the development of the energy industry and OJHK "Barki Tojik" was the launch in 2016 of a large-scale international energy project in Central Asia "CASA-1000", which united four countries at once: Tajikistan, Kyrgyzstan, Afghanistan and Pakistan. CASA-1000 has created contractual and institutional arrangements and transmission infrastructure to facilitate the export of the 1,300 MW of surplus power already available from Tajikistan and Kyrgyzstan.

The total cost of the CASA-1000 project is $1.170 billion. The project received support from the World Bank Group, the EBRD, the European Investment Bank, the US Agency for International Development (USAID), the US State Department and other international donor organizations.

By enabling regional electricity trade and paving the way for other investment in trade/transit infrastructure in the region, CASA-1000 will enhance energy security and regional stability. In particular, "CASA-1000":

- serves as an important step towards realizing the potential of energy trade between Central and South Asia;

- will provide a stable source of income for Tajikistan and Kyrgyzstan, which can be used to alleviate the acute energy shortage in winter;

- reduce power shortages in Pakistan and Afghanistan during the peak summer season when demand is highest;

[96] Akhrorova A., Mukimova N., Razykov R. Указ. соч.

- has "open access" to facilitate the supply of electricity from other countries in the region, expanding opportunities for trade beyond the initial summer period[97].

The CASA-1000 project is expected to be completed in 2023.

However, one of the current problems of OJHC "Barki Tojik" is the constant growth of external debt. The development of hydropower resources is associated with attracting significant investment from various sources, including both private and public funds. Financial resources are directed both to the construction of new energy facilities and the reconstruction of existing power plants, substations and power lines.

The state corporation OAO Tajiktransgaz also plays its role in the modernization of the Tajik economy. The enterprise was founded in 1959, in 2009, by the Decree of the Government of the Republic of Tajikistan, SUE "Tajikgas" was transformed into OJSC "Tajiktransgaz", 100% of the company's shares are at the disposal of the State Property Committee of the Republic of Tajikistan.

JSC "Tajiktransgaz" includes 18 enterprises, six of which have been transformed into open joint-stock companies. In the future, it is planned to transform all subordinate enterprises into joint-stock companies of an open type.

In the oil and gas sector, Tajikistan is actively cooperating with Russia and Uzbekistan. So the Russian PJSC Gazprom has been a strategic partner and the largest investor in the economy of the Republic of Tajikistan for almost 20 years. One of Gazprom's main tasks is to ensure the energy security of the republic, whose economy is experiencing a shortage of energy resources. Cooperation is carried out within the framework of the Agreement on strategic cooperation in the gas industry until 2028, signed by the Government of the Republic of Tajikistan and Gazprom. The operator for the implementation of projects on the territory of the republic is the Gazprom EP International company with the participation of state-owned enterprises OAO Naftugaz and OAO Sughdnaftugaz.

[97] Q&A: Central Asia-South Asia Electricity Transmission and Trade Project (CASA-1000), May 10, 2016; URL: https://www.worldbank.org/en/news/speech/2016/05/10/central-asia-south-asia-electricity-transmission-and-trade-project-casa-1000

Thus, the conducted study of the role of state-owned enterprises in the innovative development of the economy showed that the republic, with the help of international organizations and foreign investments of foreign corporations, has achieved some success. Nevertheless, due to the weakness of the socio-economic situation, the lack of development of state institutions and institutions of the market economy, control over the expenditure of budgetary resources, even fairly large state-owned enterprises are experiencing financial difficulties.

Chapter 2 Conclusions

The analysis of the conditions of regulation of the institution of state corporations in the Republic of Tajikistan showed that since independence, the country has overcome many problems, made significant steps to restore the economy after the deep crisis of the 90s of the twentieth century. In general, the socio-economic situation in the country remains difficult, both in terms of economic policy, budget revenues, and the investment climate, which is a deterrent to modernization and transition to an innovative way of economic development. Tajikistan's public sector is undergoing reform, and market institutions are not properly formed, which hinders the implementation of deep structural reforms in the economy.

Taking into account the prevailing conditions at the moment, the framework of the Tajik economy is largely made up of state-owned enterprises, which currently act as the most important instrument of economic, financial, innovation and investment policy, they have become a new form in ensuring national interests in the economy.

At the same time, the main problems of the development of state corporations in Tajikistan include: low transparency of the Civil Code; unavailability of financial statements; poor quality of public administration; unprofitability of large state-owned enterprises, lack of regular monitoring and evaluation of the effectiveness of the Civil Code and the approved methodology for evaluating their activities by regulatory authorities; unbalanced fiscal policy in relation to the Civil Code (redundancy of tax benefits provided by the state). Based

on this, the conditions for regulating the institution of state corporations in the Republic of Tajikistan are assessed unsatisfactorily in the dissertation.

An assessment of the process of institutionalization of the functioning of state corporations in Tajikistan leads to the conclusion that the role of the modern state has significantly changed and evolved throughout recent history. And this evolution suggests that it is not easy to achieve "good governance" and "efficiency" of state organizations, but it is the quality of governance in this area that is the key to achieving sustainable socio-economic development, both of the state itself and of the whole society.

The process of institutionalization of state organizations, characterized by a dynamic and often unpredictable nature, requires a lot of effort, time, and the presence of rules that can change under the influence of various factors, both internal and external environment. Despite the extensive theoretical literature and empirical studies on the development and quality of state institutions, including in their relationship with political regimes, not all the conclusions made by researchers can be agreed when it comes to assessing the effectiveness of state organizations in developing countries. The array of English-language literature practically does not reflect the diversity of processes and factors of institutionalization taking place in post-Soviet countries. In addition, one should not ignore the fact that even in economically developed countries, not all problems have been solved in the public sector, for example, within the framework of public-private partnerships.

The uniqueness of the institutionalization of Tajikistan's state structures is manifested not only in the Soviet legacy and the objective difficulties of the transition to a market economy, but also in the internal contradictions between regional elites. The executive power in the republic has a pronounced autocratic management style, which has become forced rather than intentional, it was formed in the process of searching for an internal political compromise.

The institution of state corporations, in the legal sense of this concept, is absent in the republic. Tajikistan's legislation on state-owned enterprises needs to

be improved. It is advisable to include and disclose the content of the legal structures "corporation" and "state corporation" in the Civil Code of the Republic of Tajikistan, it is also necessary to fix in the law the functions of state corporations, their powers, features of interaction with state structures, rules on management responsibility and other key provisions specifying their legal status.

Currently, state property is managed by the Government of the Republic of Tajikistan in various formats: lease; concession; conservation; transfer of property from balance sheet to balance sheet; write-off of property; restructuring and privatization; sale of shares and property; PPP; creation and liquidation of state enterprises. Although it is possible to call these forms "developed" only with a certain degree of conditionality. Some forms of state property management need to be improved at the legal and institutional levels, including ensuring transparency of the activities of state-owned enterprises and the creation of a system of public control.

Assessing the role of state corporations in the modernization of the economy of Tajikistan, it can be stated that the republic has achieved some success with the help of international organizations and foreign investments of foreign corporations. But due to the lack of development of the state institutions of Tajikistan and the institutions of the market economy, even fairly large national enterprises are experiencing great difficulties in adapting to the market environment. The course towards privatization and corporatization of inefficient state-owned enterprises is generally correct, however, given the socio-economic situation in the country, mass privatization of state-owned enterprises seems impractical at present. Modernization and transition to an innovative way of economic development in Tajikistan is possible today only on the basis of existing state-owned enterprises.

CHAPTER 3 MAIN DIRECTIONS OF INNOVATIVE MODERNIZATION IN STATE CORPORATIONS OF THE REPUBLIC OF TAJIKISTAN

3.1 Main directions of innovative modernization of the economy of the Republic of Tajikistan

When considering modern states as complex systems that are in constant interaction with a turbulent external environment, experiencing powerful global influence from international actors and institutions, as well as the impact of factors of a very different order: from political (external and internal) to socio-cultural and scientific -technological, we can distinguish two groups of factors that affect the innovative development of the economy:

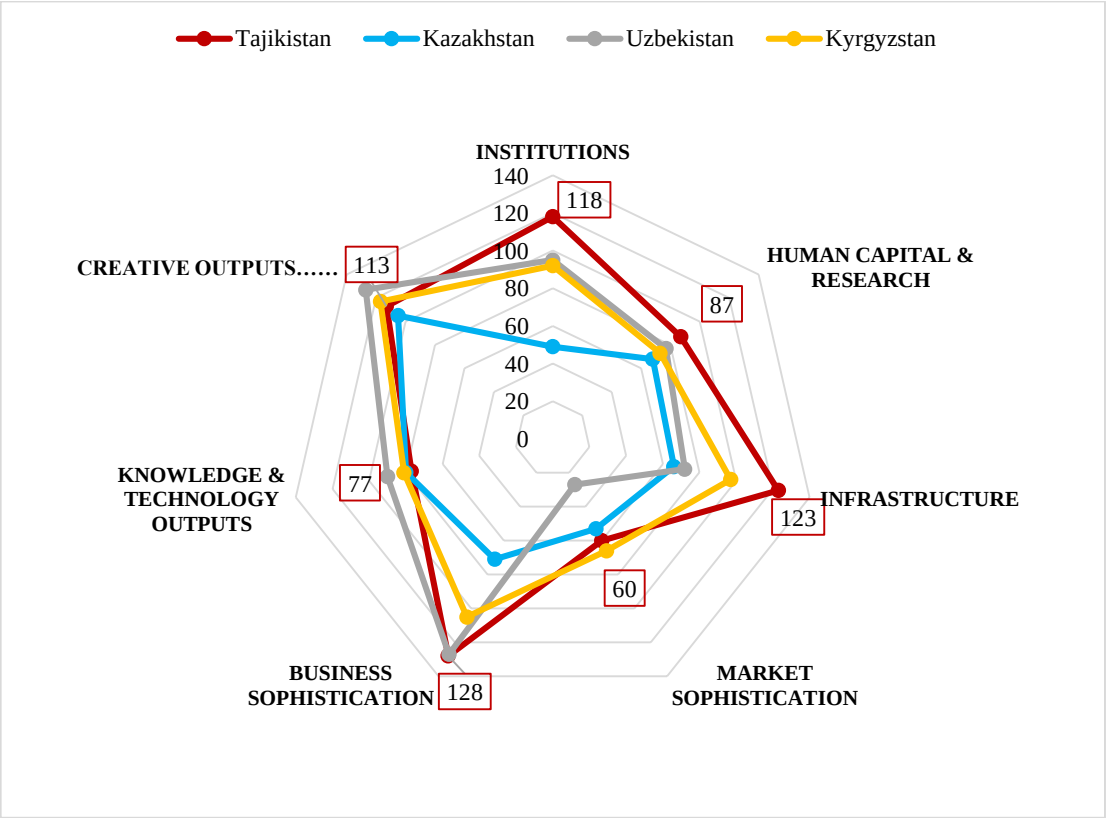
1) factors that stimulate the development and implementation of innovations;

2) factors that slow down the implementation of innovative activities.

Both those and other factors can manifest themselves at different levels: global, macro-, meso- and microlevel. Global factors include general economic conditions, the state of world markets for scientific and technological products, the country's position in the Global Innovation Index and other global rankings, scientific achievements of representatives of the national academic community, its participation in international scientific exchange, international projects. etc.; the macro level is characterized by the main macroeconomic indicators of the country, the structure and volume of public spending on education, science, R&D; the meso-level factors include the conditions for regional development, and the micro-level factors include the conditions for the development and achievement of specific economic entities in the innovation sphere[98].

[98] Klochkova A.V., Shukurova M.A. Ways of adaptation of innovations in hydropower, taking into account the specifics of countries on the example of the Republic of Tajikistan // Scientific Journal of ITMO Research Institute. Series: Economics and Environmental management. - 2020. - No. 3. - pp. 62-70; Mirzoeva E.S. Management of innovation and investment activities at the stages of the life cycle of an industrial enterprise // Bulletin of the Tajik National University. A series of socio-economic and social sciences. - 2019. - № 5-1. - pp. 206-212.

The main indicators of Tajikistan in The Global Innovation Index 2020 (Fig. 3.12) indicate a low level of innovative development of the economy, including in comparison with other CAR countries, the republic occupies only 109th position.



Pic. 3.12 - **Comparison of Tajikistan's position (place by sub-index) with other countries of Central Asia in The Global Innovation Index, 2020**

Source: compiled by the author according to The Global Innovation Index 2020: [40]. URL: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf (accessed on 22.03.2021).

Since the formation of an innovative economy is a complex, multifaceted and lengthy process associated with socio-political and institutional and economic transformations, as well as the choice of promising areas of state policy, the basic conditions created by the state and regional authorities are of particular importance for the innovative development of the economy. These basic conditions are: the regulatory framework; availability of strategic priorities (strategies, concepts, state programs); the level of protection of the results of intellectual activity; innovation policy, investment policy, science and technology policy; tax policy; the level of support for science and education, small innovative forms of entrepreneurship, which together provide the actual level of innovative activity of enterprises, etc.). All these areas are extremely relevant for Tajikistan.

According to one of the surveys conducted within the framework of the UNECE international project for Tajikistan on strengthening innovation policy, the industrial sector has the highest potential for innovative development in the country (Appendix 1). The situation in Tajikistan as a whole is assessed by various participants associated with the scientific and technical sphere as "satisfactory". Conditions for innovative business in Tajikistan were also assessed as "satisfactory". Taking into account the spread of responses between different groups of respondents, it can be concluded that the business culture in Tajikistan needs further development and improvement, especially in terms of business literacy (Appendix 2). Among the main problems hindering innovative development, the survey participants named corruption, lack of skilled labor and insufficient funding (Appendix 3).

Based on the analysis of the literature and observations of the practice of state management of the innovation process in Tajikistan, it is possible to identify factors that stimulate and slow down the implementation of innovation activities in the Civil Code (Table 3.6).

Table 3.6 - **Factors influencing the innovative development of the economy of Tajikistan**

Stimulating factors	Deterring factors
1. Creation of the foundations of legal regulation of innovation activity	1. Low ranking in the Global Innovation Index (109 out of 131)
2. The government has identified the priorities for innovative development of the economy	2. The complexity of the socio-economic situation in the republic, high public debt and credit debt of enterprises, a high proportion of the “shadow” economy
3. Work is underway to form innovative research centers and technology parks	3. Unattractiveness of the innovation sector for Western investors due to the complexity of doing business: bureaucratic and financial hurdles, corruption
	4. The insignificant funding for R&D and the ineffectiveness of spending budget funds allocated for these purposes
	5. The absence of strategic documents of the size of financing for innovative development, as well as in a number of documents of specific (measurable) indicators related to the definition of priority areas of innovation
	6. Absence of updated versions of the Strategy

Stimulating factors	Deterring factors
	and Program for innovative development of the economy for 2021 and subsequent years
	7. Issues with the creation and implementation of fundamental scientific and technological innovations
	8. Administrative and "innovation" barriers hindering the development of small forms of innovative entrepreneurship
	9. Lack of highly qualified specialists

Source: compiled by the author.

As the provisions of Table. 3.6, there are much more factors slowing down innovative development than stimulating ones. Moreover, most of the slowing down factors were formed not in the external, but in the internal environment, and they are localized mainly in the field of public management of innovative development.

From our point of view, one of the problematic issues is the process of creating and implementing fundamental scientific and technological innovations in state corporations, which is complex and requires coordinated efforts of diversified teams with reliable funding and organizational assistance, which can be represented as a multi-channel creative process. This can be ensured by the development and creation of a modern mechanism to support the development and implementation of innovations, which has not yet been fully established in Tajikistan.

However, it is impossible to deny the increasing role of state corporations in the modern economy of Tajikistan in recent years. According to forecasts, the role of state corporations in the economy of the republic will grow in the future. The main goal of infrastructure development, outlined in the NDS-2030, is the formation of territories for innovative development in the country, building up the innovative potential of the regions, which will contribute to raising the level of the country's socio-economic development. NDS-2030 consists of three medium-term stages (2016-2020, 2021-2025, 2026-2030) and includes four strategic goals:

1. Ensuring energy security and efficient use of electricity.

2. Getting out of the communication impasse and turning the country into a transit country.

3. Ensuring food security and access of the population to quality nutrition.

4. Expansion of productive employment.

The National Development Strategy of Tajikistan until 2030 defines the following priorities:

1. Improving legislation in the field of investment, international trade and the introduction of international standards for product quality and safety.

2. Purposeful attraction of foreign aid to solve national, sectoral and regional problems through wider and better use of management information systems.

3. Entrepreneurship development with a gender perspective, investment and exports.

4. Improving the Tax Code of the Republic of Tajikistan in order to simplify tax administration and reduce the tax burden on businesses; introduction of installment payment of VAT on machinery and technological equipment, a significant expansion of the list of imported industrial goods exempt from VAT.

5. Development of a multi-level institutional system to support entrepreneurship in regional and sectoral clusters for the development of entrepreneurship, specialized funds and support for the creation of infrastructure organizations.

6. Implementation of a policy to encourage foreign direct investment as one of the main conditions for the industrial and innovative development of the economy.

7. Increasing the protection of the rights of entrepreneurs, both at the level of the judiciary, and the creation of an ombudsman institution.

8. Consistent implementation of the policy of reducing the administrative procedures for doing business and creating a system of administrative support for medium and large investment projects of the private sector (the "single window" principle).

9. Small business development in rural areas and mountain regions. through the use of local raw materials and complex processing of agricultural products.

10. Creation and development of a full-fledged stock market.

11. Improvement of regulatory legal acts and regulations for the development of environmentally friendly business and environmental investments.

12. Improvement and strengthening of the Investment Management Institute at the national and regional levels.

At the same time, it is impossible not to admit that with the onset of the coronavirus crisis, many tasks of economic growth and innovative development of the Republic of Tajikistan will not be implemented. On May 6, 2020, the Executive Board of the International Monetary Fund (IMF) approved the allocation of $189.5 million in budget support to help Tajikistan. Development partners including the World Bank (WB) and the Asian Development Bank (ADB) have also provided about $150 million in financial support to Tajikistan to other socially disadvantaged groups, and extended coverage of targeted social assistance to all 68 districts of the country. The National Bank of Tajikistan has developed an Action Plan to Eliminate the Consequences of the Pandemic for the Banking Sector. This allowed the exchange rate to depreciate by 17% during 2020.

In order to implement the set strategic goals and priorities, it is expedient for Tajikistan to maintain and develop cooperation with international development institutions in the future.

For many years, the Government of the Republic of Tajikistan has been actively cooperating with the IMF, the World Bank (WB), the European Bank for Reconstruction and Development (EBRD), ADB and a number of other international financial organizations that provide the republic with information, advisory and financial support (in the form of grants and attraction of direct foreign investment), promoting regional integration and economic reforms. In particular, in accordance with the Country Strategy for Tajikistan for 2020-2025 (“Tajikistan

Country Strategy 2020-2025”), approved by the Board of Directors of the EBRD on February 26, 2020, the Bank will pursue the following key priorities in Tajikistan:

 Increasing competitiveness and improving the business environment;

 Promoting regional integration, energy reforms and infrastructure development;

 Support for greater access to better infrastructure and business services for women, youth and less developed regions.

Tajikistan is assessed by EBRD experts as the most vulnerable in terms of future climate change risks in Central Asia. In particular, agriculture could be affected by low rainfall, drying up water resources, less snow accumulation in mountain glaciers, and more frequent extreme weather events.

The EBRD also draws attention to the fact that Tajikistan has one of the youngest segments of the population among the countries of operations of the Bank: the average age in the republic is only 22 years.

Regional cooperation is seen by the EBRD as key to Tajikistan's economic development to expand trade and ensure energy security.

The EBRD's activities in Tajikistan cover all sectors of the economy, including energy, infrastructure, financial sector, corporations, small and medium-sized enterprises (SMEs), reaching €696 million in a total of 127 projects. The dynamics of payments for the portfolio of projects is shown in fig. 3.13.

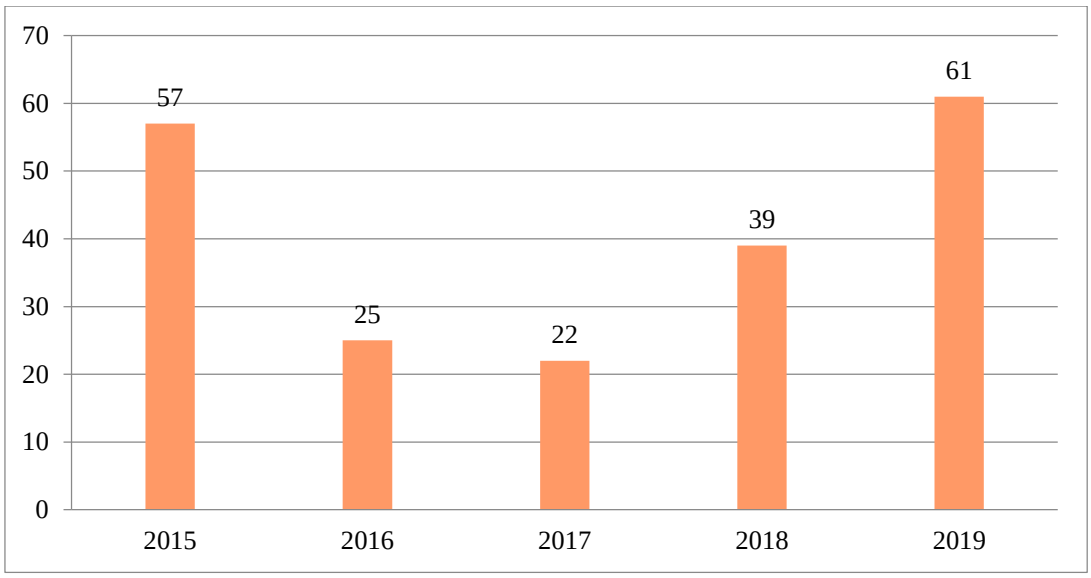


Figure 3.13 – Dynamics of payments on the project portfolio, €m

Sourse «Tajikistan Country Strategy 2020-2025». Approved by the Board of Directors EBRD on 26 February 2020.

Thus, the EBRD supported the unbundling of the electricity sector and the reform of tariffs through interaction with the state corporate structures of the republic through the restructuring of the national energy company Barki Tojik. This led to the division of Barqi Tojik into 3 divisions responsible for the generation, transmission and distribution of electricity; decisions on further restructuring of the company have not yet been made.

The Government of the Republic of Tajikistan approved the Program for the Development of Renewable Energy Sources and the Construction of Small Hydro Power Plants for 2016-2020, according to which 64 small hydro power plants with a total installed capacity of 5 to 10,000 kW were to be built by 2020. However, some of the projects are underfunded.

Due to external investments in the coming years, it is planned to implement construction projects in Tajikistan: the Shurab HPP (planned capacity is 300 MW); Zarafshan HPP (160 MW); Dupulinskaya HPP (90 MW); HPP "Nurobod - 2" (160 MW); Sangvorskaya HPP (160 MW); Shurab HPP (850 MW); Fondarya HPP (160 MW); Oburdon HPP (120 MW); Sangiston HPP (140 MW); Aini HPP (160 MW); Sanobod HPP (125 MW); Ufatinsky HPP (160 MW); Shtienska HPP (160 MW); Fon-Yagnobskaya HPP - (500 MW) and others.

According to the Master Plan for the Development of the Energy Sector of Tajikistan until 2039, developed and presented in 2017 by Corporate Solutions Consulting Limited (CSCL) together with Manitoba Hydro International Ltd. (MHI), the capacity and cost of hydropower projects with studies is as follows (Table 3.8)[99].

Table 3.8 - Capacity and cost of hydropower projects with research

Hydropower project	Installed capacity		Annual energy		Capital expenditures
	Number of units	Total (MW)	Average (GWh)	Guaranteed (GWh)	(mil. of dollars USA)
Fandarya	5	182,5	569	475	305,1
Sanabad	4	125	1 082	1 053	280,0
Nurek	4	100	579,9	517,9	148,5
Aini	2	160	637	579	304,0
Javan	4	126	451	451	255,5
Shurab	4	862,5	3 213	2 656	1 710

Source: Master Plan for the Development of the Energy Sector - Final Report. ADB, 2017.

Deepening cooperation between state-owned enterprises of the Eurasian Economic Union, and in the long term integration of the republic into the EAEU, for example, in the energy sector, can become a strategically important area of innovative modernization of the Tajik economy.

Currently, between the EAEU member states (Armenia, Belarus, Kazakhstan, Kyrgyzstan, Russia) there are still fundamental differences in the organization of the electricity market as a whole due to the different organizational structure of the industry, different approaches to power trading and the formation of tariffs of electric grid companies. At best, the launch of the Union's single energy market will take place no later than 2025. Due to the complexity of the problem, its solution is seen in the creation of an "Energy Ring", i.e. inclusion in the orbit of energy integration not only of the EAEU member states, but also of neighboring states. The main reason for the formation of such a system for the participating countries is not so much the possibility of simplified import and

[99] The Master Plan for the Development of the Energy Sector is the Final Report. ADB, 2017; [Electronic resource]; URL: https://mewr.tj/wp-content/uploads/files/Plan_razv_enrgo_tom1.pdf (accessed: 02.10.2020).

export of electricity, but rather the system-wide positive effects. The potential participants of the energy ring are characterized by different modes of energy consumption, both daily and seasonal. This will make it possible to organize the exchange of excess energy, optimize the operation of power plants, increase the reliability of the system, thereby significantly reducing the cost of energy generation.

It is important to take into account that all the countries of the Union set themselves similar tasks, namely: increasing the productivity of enterprises and increasing the share of knowledge-intensive and high-tech industries in GDP, attracting investments in manufacturing, transport infrastructure, energy and energy efficiency; efficient use of resources; export support in high-value-added industries and the development of small businesses. Accordingly, we can expect the emergence of concepts aimed at the development of these priority industries. The ultimate goal for the future until 2025 should be to bring the coverage of the common market to 100% as close as possible.

Deepening Eurasian integration through the EAEU energy single market will open up new prospects for corporate interaction for "middle-tier" investors. The fact is that for large businesses, cross-border barriers are less painful: resources allow them to be overcome effectively (the largest companies, for example, are members of the councils of foreign investors under presidents). Companies of the "middle echelon" are limited both in cash and in administrative resources and weight. The EAEU Single Market will provide them with a wider range of opportunities to build value chains and scale their business activities.

Regional integration can significantly affect the economic development and modernization of the economy of each section of the association. But there is no denying that cooperation in the region can have both positive and negative effects. The country with the highest economic level (in this case Russia) will always have more power and influence than other participating countries.

As is known from world practice, participants in regional integration are not only countries with good opportunities for economic growth, but also countries

that are still economically underdeveloped and need support from other participants. For a small country compared to the leader of integration, the association is able to strengthen competition in the sector of traded goods on the world market. This increased competition can help to increase efficiency, reduce costs and increase the demand for inputs in these sectors, which will increase the relative demand for capital. Integration can also affect the prices of capital goods. Reducing tariffs and trade costs for the import of basic equipment can lead to lower prices for investment goods, increasing profit margins and savings. Increased competition from capital goods may also stimulate the national capital goods industry to become more efficient.

On the one hand, cooperation between Tajikistan and the EAEU countries (or the integration of Tajikistan into the EAEU) may lead to increased competition. But, on the other hand, this condition can also have negative consequences for such a relatively poor country as Tajikistan. Although such a country may have enough of its own natural resources to be used, sometimes a country is not ready and cannot compete with a richer country. In our opinion, this problem can be solved only through mutual consultations and coordinated decisions of all participants of the regional association.

Despite the support of external development institutions, the functioning of state-owned enterprises in Tajikistan in conditions of economic uncertainty and high risks associated with it, dependence on foreign economic conditions, low competitiveness of goods and services determine a range of complex problems that can be solved only through systemic modernization reforms in strategic sectors of industry. This actualizes the formation in Tajikistan of a competitive type of industrial production and high-tech industries, not necessarily large, but capable of generating high technologies and modernizing the country's sectoral reproduction system. Industrial modernization should be based on internal growth factors using modern technologies and business methods with a gradual increase in the innovative potential of each industry.

Along with the above measures, in our opinion, Tajikistan should pay special attention to the human factor - stimulating innovation and entrepreneurship in state corporations. Public sector entrepreneurs usually express themselves in terms of recognition and career, rather than the monetary profit of the enterprise. But the desire to create and get results is achieved in much the same way as for a private entrepreneur, although perhaps they are more associated with the satisfaction that comes from contributing to a common cause.

Despite legal restrictions, the range of entrepreneurial activity in the public sector can be quite wide. Such activities can be conditionally divided into direct and indirect state business activities. Direct entrepreneurship in the public sector takes place within the public sector and manifests itself in innovative manipulations of this environment (especially government spending, management and service mechanisms) for the public good. Examples of direct state entrepreneurship include the creation of new government goods and services, improving the quality of existing government goods and services, improving the efficiency of production of government goods and services, and improving governance in state corporations. In contrast, indirect entrepreneurship in the public sector operates by innovatively changing the private sector's economic environment to induce desirable behavior on the part of private sector entrepreneurs, again for the benefit of society. Examples of indirect entrepreneurship in the public sector usually manifest themselves in innovative changes in the private sector, industry rules of the game (i.e. changes in laws, regulations, etc.), which often focus on increasing private sector economic growth and stimulating public sector production in the private sector, as well as through innovations such as privatization and social entrepreneurship.

Given the uncertain nature of the innovation process, it is impossible to achieve an ideal level of innovation in the public sector. However, it is possible to improve the institutional conditions necessary for the creation of innovations in the public sector, that is, the conditions for ensuring the recognition and use of innovations in the public sector.

3.2 Methods of innovative modernization in public corporations

Previous analysis has shown that many GCs are now among the world's largest companies and major players in the global capital market. In many countries, SOEs are often established in strategic industries and act as vehicles for accelerated development and global expansion. The efficiency of state-owned enterprises in many cases improves due to increased competition, discipline in the capital market, and improvements in management. Nevertheless, many state-owned enterprises, especially in post-Soviet countries, still lag behind the global ones, and their activities are associated with high economic, financial and opportunity costs for the economy as a whole.

Sustainable economic growth in the world practice of most countries is ensured on the basis of innovative factors, the implementation of programs for the modernization of the national economy and its structural transformations. The adoption of a country's socio-economic development modernization project is usually followed by a strategy covering industry, investment and innovation policy. Modernization involves the technical and technological renewal of the leading sectors of the economy and their improvement, which leads to the diversification of production.

The state, carrying out the modernization of industry on the basis of the Civil Code, should actively search for methods and tools to stimulate the innovative and investment activity of private capital. As such a tool, many experts recommend using the PPP concept.

In the last decade, the governments of many countries, including Tajikistan, began to consider various forms of PPP as alternative or additional ways to finance and manage a set of infrastructure projects. The PPP mechanism is used in transport projects, in the field of housing and communal services (electricity, water supply and sewerage systems), the provision of social services, the construction of schools, hospitals and a wide range of other applications.

On the side of the state in PPP projects are the powers of the owner, the likelihood of tax and other benefits, guarantees, and in addition the acquisition of certain volumes of economic resources. The government, as a PPP entity, has the right to reassign funds from purely production projects to public purposes, if necessary, and this not only contributes to the general improvement of the public and financial climate, increases the investment rating of the state, but also directly affects partner projects. PPP allows the state to start implementing its own functions at lower cost - control, regulation, observance of social interests. In the field of infrastructure development, the state is able to shift the focus of its own work from certain difficulties in the construction, operation and maintenance of facilities to administrative and control functions.

At the same time, the shortcomings of public institutions in the framework of PPPs sometimes manifest themselves in excessive government intervention in business affairs, since government structures are usually bureaucratic.

One of the most difficult problems of the public sector remains the issues of ensuring control over the implementation of PPP projects, which have not yet found an optimal solution in any country in the world. As a rule, revealed abuses during the implementation of large projects are discovered after the fact, when the damage can no longer be hidden or repaired. A classic example of "natural corruption" is the construction of the airport. W. Brandt in Berlin, when the growth of the initial construction estimate increased by 10 times, and the deadlines for commissioning the facility were repeatedly disrupted. Well-known examples are also facts of corruption at the construction site of the 2014 Olympics in Sochi (Russia) and EXPO-2017 (Kazakhstan).

The lack of forms of interaction between the state and business in critical situations, which was the COVID-19 pandemic, became a separate topical problem of public-private partnership.

The Law of Tajikistan “On Public-Private Partnership” was adopted in 2012, but its implementation in practice still leaves much to be desired. The most significant problems for partners in the framework of PPP in Tajikistan can be

considered: imperfection of legislation and contracts, competitive selection procedures, lack of a clear system for planning and forecasting the achievement of the final results of the project, difficulty in assessing future benefits and risks of the project, poor project planning and planning of capital investments by the State customers, in most cases, the list of projects that have already been identified and assigned as priorities in the relevant industry is unclear, financial irregularities, uncertainty and changes in the macroeconomic situation, lack of information, lack of transparency in assessments.

In particular, information about PPP projects in Tajikistan on the Internet portal (http://ppp.tj/) is limited to brief information about the cost, location of projects and initiators. Project passports are uploaded only in Tajik. Most of the site pages are not filled with information.

Currently, there are 32 projects in the PPP Register of Tajikistan, among which a number of projects provide for the reconstruction of electrical substations, the modernization of water supply and irrigation networks in settlements, the creation of a modern information and logistics network system, and others. The largest projects in terms of potential funding are: Construction of a plant for processing consumer waste in a district in the city of Dushanbe ($250,000,000); Construction of a new railway line Kolkhozabad - Dusti - Pyanji Poyon ($81,818,000); Creation of a "Transport and Logistics Center" on the territory of the free economic zone (FEZ) "Sughd" ($ 50,000,000); Construction of the railway line “Railway station “Spitamen” – FEZ “Sughd” ($46,000,000); Construction of a sewage line and a treatment facility, FEZ Dangara ($25,000,000).

But it is noteworthy that the law does not provide for any “competition” of PPP projects, their comparative analysis, when making a decision on the amount of budget financing.

The problems listed above can be eliminated by developing a clear algorithm, fixed in the form of a special regulatory act.

First of all, it must be borne in mind that all PPP projects, without exception, are characterized by multicriteria and a significant degree of uncertainty. From this

point of view, the selection of PPP projects is the adoption of complex multi-criteria investment decisions based on an assessment of which project, among several projects submitted for consideration, best achieves a given goal under existing constraints.

Uncertainty is the incompleteness or inaccuracy of information about the conditions for the implementation of the project, including the costs and results associated with them. Uncertainty implies the presence of factors under which the results of an action are not deterministic, and the degree of possible influence of these factors on the results is unknown.

In this regard, a special procedure for establishing integral criteria for the selection (selection) of projects is needed. The most successful, as a rule, will be the project that satisfies the greatest number of criteria.

Most of the criteria for selecting PPP projects do not differ from the generally accepted criteria for selecting projects in investment management - this is the optimization of risk and profitability, with the only difference being that the greater the risk that a private investor takes on when financing a project, the greater the profitability, which he calculates in the implementation of financing, and the more preferences the private partner expects from the public partner in the form of reimbursement of funds invested in the project.

Project risk analysis is usually divided into two types: qualitative and quantitative. Qualitative analysis aims to identify (identify) factors, areas and types of risks. Quantitative risk analysis makes it possible to numerically determine the size of individual risks and the risk of the project as a whole.

Qualitative risk assessment can be relatively simple, its main task is to identify possible types of risks, as well as factors that affect the level of risks in a particular activity.

Risk factors can be both the general state of the industry or the state of the object itself, and the socio-economic state of the region and the country's economy as a whole.

Despite the rather long period of formation of the PPP methodology, there are no universal models and methods for selecting and evaluating projects suitable for use in all specific situations and industries; each project situation corresponds to a certain set of methods and models. In this regard, it is proposed to take into account a number of principles when choosing a project selection model developed by world practice, namely: realism, compliance with the goals of the organization, reflection of environmental factors, flexibility, ease of use, low costs and the ability to use IT technologies, the ability to effectively distribute risks between partners, acceptability of project implementation.

Evaluation of PPP projects can be carried out by different methods, the main of which are the evaluation of economic, financial and social effects. If we consider the range of significant parameters for evaluating a PPP project in the context of innovative modernization, then, from our point of view, they can be grouped as follows (Table 3.9).

Table 3.8 – Significant parameters (criteria) for evaluating a PPP project in the context of innovative modernization of the economy

Group	**Indicator**	
	for a private partner	**for a public partner**
Financial and economic indicators	NPV IRR Payback period ROI profitability The amount of investment in the project EVA EBITDA Project scale Riskiness (level of risk) Innovation	Project objectives The significance of the project for the country (region, city, village) Compliance with industry priorities Perspective Riskiness (level of risk) Financial viability of the private partner, including the absence of tax arrears Social efficiency Budget efficiency Financial efficiency The amount of investment in the project Category of cost recovery to a private partner (full, partial, without compensation)
Macroeconomic indicators	Inflation rate The level of the Central Bank's key rate The level of development of PPP legislation	The share of industry financing in GDP
Industry indicators	Compliance with industry standards	State of infrastructure in the project region

Group	Indicator	
	for a private partner	**for a public partner**
	The level of satisfaction with the quality of the supplied products	The level of innovation in the industry The level of digitalization of the industry The level of satisfaction with the quality of the supplied products
Management indicators	Percentage of project completion The urgency of the project Quality of project management	Percentage of project completion The urgency of the project Quality of project management
Note: compiled by the author.		

Table 3.9 provides a far from complete list of indicators (criteria) that may be really important for making a decision on a PPP project in each specific case in the context of innovative modernization. In addition, a significant number of these indicators are difficult to measure. Therefore, it is advisable to use the methods of scoring given by experts.

Most indicators (parameters) are difficult to calculate due to the lack of information and initial data. This is a big problem for Tajikistan. It is not always possible to correctly assess the level of significance, innovativeness, prospects and quality indicators of the project, and the decision to include the project in the roadmap (or Register) still needs to be made. In this regard, it is possible to use the synthesis of fuzzy set theory with project management methodology.

The main advantage of fuzzy set models is that they provide the expert with greater flexibility in evaluating numerical indicators. For example, when answering the question, what will be the expected income from the project, the expert can indicate the pessimistic d_pess, the optimistic d_opt, and the most probable d_ver estimate, and the information obtained can be combined as a fuzzy triangular number: D = (d_pess, d_opt, d_ver). Further, it remains only to use the found fuzzy numerical indicators in the tasks of comparing objects and optimization.

The result of evaluating the quality indicator of the project is a fuzzy number lying on the interval from 0 to 1. Finding the weights for the indicators is the most important and meaningful step. The standard method for constructing weights is the analytical hierarchical process proposed by Saaty.

It is not necessary to consider exclusively financial or industry indicators when selecting PPP projects, but they should not be neglected either. It is necessary to find a balance point between high and low risk projects, between strategic and tactical, between profitable and less profitable, etc.

The situation is also complicated by the fact that sometimes the indicators to which it is necessary to strive can contradict each other (for example, reducing risk and increasing profitability at the same time).

Among the "conflicting" criteria for choosing an alternative, as a rule, are the following:

cost, price and quality;

high profit and risk;

cost and environmental safety;

cost and technological characteristics;

service cost and customer satisfaction, etc.

It is recommended to evaluate the effectiveness of a PPP project by commensurating the expected and actual results with the goals of the project.

Setting project goals:

- specificity (the goal should correspond to the scope of the project);

- specificity (there should be no fuzzy wording that allows arbitrary or ambiguous interpretation);

- measurability (achievement of the goal can be checked);

- achievability (the goal should be achievable during the project implementation period under normal conditions, except for force majeure);

- relevance (compliance of the goal statement with the expected final results of the project implementation).

The development-driven weak socio-economic conditions of Tajikistan continue to be a problem for the implementation of PPP projects. Tajikistan is a relatively poor country, the economy is fragile and dependent on relationships with the Russian economy (particularly through remittances). The Government of the Republic of Tajikistan has limited opportunities to conclude PPP contracts and

make payments from the state budget. It is likely that these economic conditions will continue to be a problem for the structuring and implementation of PPP projects in the future. This means that various forms of project subsidies (particularly from development partners) should be present in most, if not all, future PPP projects that will be implemented by public corporations and brought to market.

The methods of innovative modernization in state corporations can also be considered:

- improvement of business processes and organizational structure of state corporations in the direction of managing innovative development;

- organization of development and implementation of basic and critical industrial technologies;

- search for opportunities to apply and borrow technologies for the production of high-tech civilian and dual-use products;

- formation and effective development of the innovation infrastructure of state corporations, including the system of managing rights to the results of intellectual activity;

- creation on the basis of state corporations of new development institutions, venture funds, business accelerators and technology parks;

- expansion and deepening of cooperation with leading universities and scientific organizations in carrying out R&D and organizing the production of innovative products;

- the actual modernization and technological development of the Group of Companies through a significant improvement in the main indicators of the efficiency of production systems.

The goals of the general corporate strategy of a state corporation should be determined based on the characteristics of the Civil Code and the economic and social effects that are planned to be obtained from its implementation. Among these effects are: increase in revenue indicators, market share, increase in the efficiency and effectiveness of the Group of Companies: reduction in costs or

production costs, improvement of its quality, increase in safety and labor productivity; human capital development: staff training and development programs, employee satisfaction and engagement; increasing the efficiency of using investments, increasing the number of start-up projects or reducing the time it takes to create and bring new products to the markets.

There is also the problem of the size of state corporations. Of course, this problem is not unique to the public sector, but it is quite common. Many state-owned companies at the national level are quite large and with this size there are difficulties in organizational management and motivation, which are a significant obstacle to the implementation of innovations. In large public sector organizations, there are always internal forces that work against innovation. In this regard, it is advisable to allocate special innovation departments in large state-owned companies, which should be entrusted with appropriate powers and responsibilities. These departments should report directly to the CEO.

We believe that the following should be among the main target indicators and indicators of corporate innovation programs and strategies:

- the share of innovative products in revenue;
- the share of R&D costs in revenue;
- number of received patents;
- the number of created "know-how";
- number of innovative products;
- proceeds from the sale of innovative products;
- proceeds from the export of innovative products.

Thus, the methods of innovative modernization in state corporations can be different, their choice for a particular state corporation should take into account the specifics of the industry, the goals and objectives of the Civil Code, its size, organizational structure, the current level of innovation, digitalization, production and financial efficiency, the level of personnel training, wages fees, the state of production assets.

3.3 Strategic aspects and prospects for innovative transformations in public corporations of the Republic of Tajikistan

In the context of the aggravation of the geopolitical situation in the Central Asian region and its possible destabilization, in particular on the Afghan-Tajik border, it seems important to consider the strategic aspects and prospects of innovative modernization of state corporations of Tajikistan from this perspective, especially since the country already has experience of existence in conditions of external and internal armed conflicts. The special importance of the strategic aspects of the transformation of state corporations in the new conditions is also dictated by the fact that any external or internal conflict in Tajikistan soon receives international resonance due to the special position of the republic, which is a border country of the CIS with a problematic and unstable region of the Middle East.

Modernization of national industry is one of the pillars on which the military power of any state is based, as well as its readiness and stability. The goals of modernization are to close existing gaps, provide qualitatively improved capabilities and/or reduce costs. Modernization entails replacing existing military technology, usually production platforms, weapons or systems, with more powerful and more advanced ones. Modernization is more than just replacing equipment. In order to achieve a significant increase in military efficiency, the new element must be associated with the appropriate organization, the concept of production operations, infrastructure management and human resources.

One of the best historical examples of military modernization of industry, including the interaction of new technologies, organizations, resources and production concepts, is the experience of the Soviet Union during the Great Patriotic War of 1941-1945. The mobilization and modernization nature of the Soviet economy made it possible to defeat the enemy, who managed to conquer almost all of Europe and use its resources for military purposes. The extensive scientific literature shows the main mechanisms of concentration of political-

ideological, technical-technological, financial, labor and other resources in the hands of the state. In a difficult wartime situation, emergency management bodies were created, acting jointly with the local authorities. There have been structural changes in the management of industry. With the strengthening of the centralization of management in solving operational issues, the role of local authorities has increased.

Another example is the United States, which, after the end of World War II, twice used investments in advanced technologies to offset the military advantages of its main competitors. These strategically oriented modernization efforts have radically changed the equipment, organization, and operations of the American military. Today, defense leaders are seeking to restore US military technological superiority by investing in new areas such as undersea systems, hypersonics, electronic warfare, big data analytics, advanced materials, 3D printing, and energy. propulsion systems, robotics, autonomy, human-machine interfaces, and advanced sensing and computing techniques. As part of the new Long-Range Research and Development Planning Program (LRRDPP) 2014, efforts were made to identify, develop and implement breakthroughs in the most advanced technologies and systems, especially in the field of robotics, autonomous systems, miniaturization , big data and advanced manufacturing.

The government of Tajikistan needs to be aware that Central Asia is a geostrategic region important for the national security interests of the three world powers: the US, China and Russia, regardless of their level of activity in Afghanistan. The United States is emphasizing cooperation in areas where it has a comparative advantage, in particular by encouraging private sector activity and transparent government policies and regulations that promote compliance with international standards, including environmental safeguards. China is considered the main investor in the Tajik economy. Investments were spent mainly on the implementation of structural reforms, in particular, on the construction of roads and tunnels. China is also considered the main investor in the industrial sector of the republic. China seeks to gain a foothold in the Sughd region and, in general, in

the north of Tajikistan, since this territory has huge reserves of zinc and lead. The complex of ores in this area is considered strategic, that is, they are very rare. Russia provides significant support to Tajikistan in various areas of military-technical cooperation, including in the form of: education and training of national military personnel in the universities of the Ministry of Defense of the Russian Federation; supply of ammunition, weapons and military equipment, military equipment; repair of military equipment and weapons. At the same time, Russia is not actively involved in the investment process of the republic.

It should be noted that in the international rating of military power, Tajikistan occupies only the 99th line out of a possible 138. According to the international company Global Firepower, only nine thousand people serve in the Tajik army. This is 0.1% of the total population. In 2020, Tajikistan allocated $79 million for defense and armaments. For comparison: Afghanistan allocated $262 million for defense in 2020, while in 2019 the military budget in this country was $238 million, and in 2018 - $204 million.[100]

After the collapse of the USSR, the defense industry of Tajikistan fell into decay. In particular, the chemical plant State Unitary Enterprise (SUE) "Dawn of the East" (renamed to "Nuri Khovar" from 06/06/2014), located in the Sughd region (Istiklol (former Taboshar)). In Soviet times, the plant was part of a complex of nuclear industry enterprises, in addition to processing various raw materials, the plant produced solid rocket fuel, processed uranium raw materials for nuclear energy and strategic nuclear forces of the USSR. In post-Soviet times, civilian products became the main ones - metal structures, rubber products, polyethylene pipes, and so on. At the same time, the plant retained the ability to produce pyroxylin, nitrocellulose and other "military" materials. In September 2012, the member countries of the Collective Security Treaty Organization (CSTO) agreed to conduct a joint defense industry modernization program. New military production facilities were to appear in Tajikistan, as well as the possibility

[100] Military expenditures and defense expenditures in Afghanistan, 2021; [Electronic resource]; URL: https://take-profit.org/statistics/military-expenditure/afghanistan / (accessed 12.07.2021).

of restoring and modernizing existing enterprises. Thus, the "Dawn of the East" had a chance to resume the production of military products.

At present, the SUE “Nuri Khovar” plant is a city-forming enterprise, belongs to the Ministry of Industry and New Technologies of the Republic of Tajikistan, as well as a closed type plant, has its own brand, its products are competitive in quality and price in the domestic and foreign markets. However, despite the agreements reached within the framework of the CSTO, there are no significant progress in the modernization of SUE Nuri Khovar. In the current organizational and legal status (SUE), the enterprise is limited in its strategic and innovative development. In this regard, from our point of view, it is necessary, first of all, organizational restructuring - the transformation of the State Unitary Enterprise into a joint-stock company, which will be endowed with the appropriate powers. The restructuring will allow the enterprise to transform into a corporation, determine strategic priorities, develop and start implementing a corporate innovative development strategy in the national interest. The variety of products manufactured by the State Unitary Enterprise, the modern technical and technological potential of the enterprise create a generally favorable environment for investment aimed at developing existing technologies and mastering new types of products and services.

Another enterprise that needs to change its organizational and legal status, potentially able to identify its strategic priorities in the national interests of the military-industrial complex, carry out innovative modernization and produce military-strategic products, is the State Unitary Enterprise "Fuluzoti Nodiri Tojikiston" (also located on the territory of the Sughd area). During the Soviet period, the State Unitary Enterprise was engaged in the processing of uranium raw materials. At present, the entire infrastructure of the enterprise has been retrained for the production of consumer goods.

Particular attention to the State Unitary Enterprise "Fuluzoti nodiri Tojikiston" is also due to the fact that the Goal of the National Concept of the Republic of Tajikistan on the rehabilitation of tailings of uranium ore processing

waste for 2014-2024.[101] is to create and ensure the effective functioning in Tajikistan of an integral system for handling radioactive waste accumulated in previous periods, which makes it possible to achieve minimization of the radiation impact on the population and the environment. The enterprise "Fuluzoti nodiri Tochikiston" retained its potential for processing uranium ore. The enterprise has ten large uranium tailings and rock dumps on its balance sheet. However, most of them in the area of Istiklol and Chkalovsk are in poor condition. The city of Istiklol with a population of about 12 thousand inhabitants is located at a distance of 0.5-4.0 km from the storage sites. The burial complex consists of an unpreserved open mine, which contains more than 15 million tons of uranium ore waste.

It is known from world practice that modernization of strategic enterprises and changes in military technologies often occur in clusters, reflecting certain needs of states, major achievements in science, production processes, organization of economic activity and even political structures. Many military historians call these "revolutions in military affairs." The creation of military-industrial clusters requires combining a complex combination of organizational, doctrinal and technological innovations to implement a new conceptual approach to the military-industrial complex. In the current geopolitical and socio-economic conditions, it is also advisable for Tajikistan to use the model of a military-industrial cluster, which could include the state Unitary Enterprises Nuri Khovar and Fuluzoti Nodiri Tojikiston, which have undergone restructuring and financial rehabilitation, already as state corporations, educational organizations and new innovative companies, including small ones, created for the implementation of high-tech projects.

The important components of the military-industrial cluster are skilled labor, advanced research and development, as well as adequate physical infrastructure, which includes reliable water supply and communications infrastructure capable of meeting the needs of modern industry.

[101] National Concept of the Republic of Tajikistan on rehabilitation of tailings dumps of uranium ore processing waste for 2014-2024; [Electronic resource]; URL: http://sng-atom.com/sites/default/files/NK%20505.pdf (accessed: 12.07.2021).

At the preliminary stage, experts need to conduct a cluster analysis of the territory, the purpose of which is to identify those areas of the economy in which the region (in particular, the Sughd region) has comparative advantages. This should be followed by the development of short- and long-term strategies for innovative growth of the regional economy. Increasing regional prosperity can be achieved by creating a favorable environment for the development of a military-industrial cluster. An industry cluster is considered to have a comparative advantage if the output, productivity and growth of the cluster are high compared to other regions. In addition, local infrastructure and joint efforts provide cluster industries with other advantages due to their common geographical location and common goals. Although the total number of jobs in industries with comparative advantages in the region may not account for most of the employment in the region, these industries are the economic engines of the rest of the economy. Workers, inventors, community, institutions such as government, educational institutions and other related organizations support cluster industries and influence a wide range of industry cluster groups.

Companies within a cluster usually demonstrate strong relationships. The flow of goods and services between geographically concentrated industries in the cluster is stronger than the flow connecting them with the rest of the economy. An industry cluster differs from the classical definition of industry sectors (for example, construction, manufacturing services, etc.), because it represents the entire value chain in a particular industry from suppliers to end-producers, including support services and specialized infrastructure. Being close to each other, enterprises can receive information, communicate and exchange input data in such a way as to add effects to the "collective" advantage, which otherwise could not be achieved alone. Clustering facilitates collaboration to overcome common challenges and obstacles. This can be done directly through the creation of industry associations or indirectly through regional legislation. Common goals and geographical concentration lead to the development of specialized skills, institutions and alliances within the cluster agglomeration.

Focusing on the military-industrial cluster does not mean that the innovative modernization of state-owned enterprises will be limited only to those who are employed in the cluster, and does not imply that other industries do not matter. It should be emphasized that high-tech employment sectors include many jobs that are not related to high technology. Thus, cluster focus is not an attempt to choose "winners" and not focus exclusively on highly qualified, elite positions. A cluster is a way to track modernization and employment trends underlying structural shifts in the economy. Cluster analysis is an attempt to maximize the effectiveness of public policy and investment, focusing primarily on the economic driving forces of the region. More importantly, non-cluster sectors receive positive benefits as a result of intersectoral relations existing in the economy. Since the industries in the economy are connected and interconnected, positive investments in one sector are also felt in many other sectors.

Cluster analysis is an evolving analytical tool, over time identifying clusters and statistics used to track them. As technologies and industries change, new clusters may appear, for example, an energy cluster, a transport cluster.

Some industries cannot be identified when applying strict cluster analysis rules due to their "developing" status and, therefore, will require special attention. New clusters are groups of relatively small interconnected industries that initially demonstrated high growth rates. These may be non-traditional industries, such as environmental technologies, which have not previously been assigned a separate sector. Since there are no official guidelines or standardized definitions for industry clustering, each of the possible new cluster proposals should be analyzed on a case-by-case basis to determine whether they exist in the region, how effective they are. Since cluster analysis determines which industries are included in the cluster and whether there is a certain concentration of clusters in the region, it can be used to analyze the possibilities of emerging clusters.

Tajikistan should take into account that today the national security of the country may be under more stress than at any time since independence. The number of geostrategic threats has increased, and the ways and means of modern

warfare are developing at an amazing rate. World competitors are involved in an intense and large-scale arms race aimed, firstly, at depriving each other of the military advantages they have won, and, secondly, at establishing their own military superiority. Advanced military and dual-use technologies are widely distributed. At the same time, the base of the military-industrial complex is being reduced to such an extent that there are many examples of single suppliers of critical goods. As a result, the innovation base in the field of national security of Tajikistan in the future will be energized from the inside and attacked from the outside.

Chapter 3 Conclusions

Among the main directions of innovative modernization of the economy of the Republic of Tajikistan are defined: improvement of the legal framework; clarification of strategic priorities (strategy, concept, state programs); increasing the level of protection of the results of intellectual activity; improving the quality of innovation policy, investment policy, science and technology policy; tax policy; increasing the level of support for science and education, small innovative forms of entrepreneurship, which together will ensure the actual level of innovative activity of enterprises.

To achieve the set strategic goals and priorities, Tajikistan will need to maintain and develop cooperation with international development institutions and regional organizations, including the EAEU. Regional integration can significantly affect the economic development and modernization of the economy of each section of the association. But it cannot be denied that cooperation in the region can have both positive and negative effects.

At present, it is important for Tajikistan to form a competitive type of industrial production and high-tech industries, not necessarily large ones, capable of generating high technologies and modernizing the sectoral system of the country's reproduction.

The Republic should pay special attention to the human factor - stimulating innovation and entrepreneurship in state corporations.

Among the methods of innovative modernization in state corporations, it is recommended to use: various forms of PPP, subject to the development and approval of a clear algorithm for selecting projects; improvement of business processes and organizational structure of state corporations in the direction of managing innovative development; organization of development and implementation of basic and critical industrial technologies; search for opportunities to apply and borrow technologies for the production of high-tech civilian and dual-use products; formation and effective development of the innovation infrastructure of state corporations, including the system of managing rights to the results of intellectual activity; creation on the basis of state corporations of new development institutions, venture funds, business accelerators and technology parks; expansion and deepening of cooperation with leading universities and scientific organizations in carrying out R&D and organizing the production of innovative products; the actual modernization and technological development of the Group of Companies through a significant improvement in the main indicators of the efficiency of production systems.

In the current geopolitical and socio-economic conditions, in order to conduct an effective innovative modernization of industry, it is advisable for Tajikistan to use the model of a military-industrial cluster, which could include the restructuring and financial recovery of the SUE "Nuri Khovar" and "Fuluzoti Nodiri Tojikiston" as state corporations, educational organizations and new innovative companies, including small ones created to implement high-tech projects.At the preliminary stage, experts need to conduct a cluster analysis of the territory, the purpose of which is to identify those sectors of the economy in which the region (in particular, the Sughd region) has comparative advantages. This should be followed by the development of short-term and long-term strategies for innovative growth of the regional economy. This will allow clustered enterprises to receive information, communicate and exchange inputs in a way that adds effects to a “collective” advantage that otherwise could not be achieved alone. Clustering will facilitate collaboration to overcome common problems and obstacles.

CONCLUSION

In the course of the study of the role of state-owned enterprises of Tajikistan in the innovative modernization of the national economy, the economic nature and essence of state corporations as an institution of market economy were clarified; methodological approaches to assessing the effectiveness and role of state corporations in the modernization of the economy were studied; mechanisms and features of regulation of state corporations were considered; the conditions of regulation of the institute of state corporations in the Republic of Tajikistan were analyzed; the process of institutionalization was assessed functioning of state corporations in Tajikistan; the role of state corporations in the modernization of the republic's economy is revealed; the main directions of innovative modernization of the economy of the Republic of Tajikistan are determined, including the choice of the most optimal methods of innovative modernization in state corporations and the justification of strategic aspects and prospects of innovative transformations in state corporations of the Republic of Tajikistan.

As a result of the research, the author came to the following conclusions and conclusions.

The economic nature and essence of state corporations as institutions of a market economy are determined by various factors of the external and internal environment in different historical periods. In modern conditions, these factors are often determined by circumstances associated with the danger of providing vital sectors of the national economy to the private sector. State corporations operate in almost all sectors of the economy and pursue certain goals. State corporations can be both commercial and non-commercial.

The author considers the following to be the main positive functions of state corporations: 1) state corporations appear in conditions when private business does not show its ability and initiative in investing strategically important sectors of the national economy; 2) the institution of state corporations allows public authorities to significantly influence market processes, including through the organization of

cooperation between public and private structures; 3) state corporations are often created in in conditions of crisis, to support the economy and workers.

The study of methodological approaches to assessing the effectiveness and role of state corporations in the modernization of the economy has shown that these approaches differ in diversity, but no generally accepted assessment methodology has been formed in any country today. According to the author, there is currently a shortage of scientific research on evaluating the effectiveness of state corporations in relation to countries with a transitional type of economy.

An analysis of the mechanisms and features of regulation of state corporations abroad revealed the following: the property of state corporations is formed by government contributions, and the activities of the State Corporation are always regulated by special regulations; state corporations in most countries of the world receive budget subsidies, which often place an additional burden on the state budget; the State Corporation is allowed to conduct business, but only for the purposes for which state authorities, as a rule, do not interfere in the current activities of state corporations; the greatest economic efficiency in the context of innovative modernization of the economy is demonstrated by state corporations in those countries where the state has been able to provide strict administrative control over top managers and transnational financial flows of the GC; the activities of the GC are characterized by either low transparency or low efficiency, or both combined; the activities of the GC are characterized by many financial violations and corruption risks.

The analysis of the conditions of regulation of the institution of state corporations in the Republic of Tajikistan allowed us to conclude that since independence, the country has overcome many problems, made significant steps to restore the economy after the deep crisis of the 90s of the twentieth century. But in general, the socio-economic situation in the country remains difficult, both in terms of economic policy, budget revenues, and the investment climate, which is a deterrent to modernization and transition to an innovative way of economic development. Tajikistan's public sector is undergoing reform, and market

institutions are not properly formed, which hinders the implementation of deep structural reforms in the economy.

Taking into account the prevailing conditions at the moment, the framework of the Tajik economy is largely made up of state-owned enterprises, which currently act as the most important instrument of economic, financial, innovation and investment policy, they have become a new form in ensuring national interests in the economy.

At the same time, the main problems of the development of state corporations in Tajikistan include: low transparency of the Civil Code; unavailability of financial statements; poor quality of public administration; unprofitability of large state-owned enterprises, lack of regular monitoring and evaluation of the effectiveness of the Civil Code and the approved methodology for evaluating their activities by regulatory authorities; unbalanced fiscal policy in relation to the Civil Code (redundancy of tax benefits provided by the state). Based on this, the conditions for regulating the institution of state corporations in the Republic of Tajikistan are assessed unsatisfactorily in the dissertation.

An assessment of the process of institutionalization of the functioning of state corporations in Tajikistan has led to the conclusion that the role of the modern state has changed significantly and evolved throughout recent history. And this evolution suggests that it is not easy to achieve "good governance" and "efficiency" of state organizations, but it is the quality of governance in this area that is the key to achieving sustainable socio-economic development, both of the state itself and of the whole society.

The process of institutionalization of state organizations, characterized by a dynamic and often unpredictable nature, requires a lot of effort, time, and the presence of rules that can change under the influence of various factors, both internal and external environment. Despite the extensive theoretical literature and empirical studies on the development and quality of state institutions, including in their relationship with political regimes, not all the conclusions made by

researchers can be agreed when it comes to assessing the effectiveness of state organizations in developing countries.

The author is convinced that the uniqueness of the institutionalization of state structures in Tajikistan is manifested not only in the Soviet heritage and objective difficulties of transition to a market economy, but also in internal contradictions between regional elites. The executive power in the republic has a pronounced autocratic management style, which has become forced rather than intentional, it was formed in the process of searching for an internal political compromise.

It is established that the institution of state corporations, in the legal sense of this concept, is absent in the republic. Tajikistan's legislation on state-owned enterprises needs to be improved. It is advisable to include and disclose the content of the legal structures "corporation" and "state corporation" in the Civil Code of the Republic of Tajikistan, it is also necessary to fix in the law the functions of state corporations, their powers, features of interaction with state structures, rules on management responsibility and other key provisions specifying their legal status.

Currently, state property is managed by the Government of the Republic of Tajikistan in various formats: lease; concession; conservation; transfer of property from balance sheet to balance sheet; write-off of property; restructuring and privatization; sale of shares and property; PPP; creation and liquidation of state enterprises. Although it is possible to call these forms "developed" only with a certain degree of conditionality. Some forms of state property management need to be improved at the legal and institutional levels, including ensuring transparency of the activities of state-owned enterprises and the creation of a system of public control.

The assessment of the role of state corporations in the modernization of the economy of Tajikistan allowed us to state that the republic has achieved some success with the help of international organizations and foreign investments of foreign corporations. But due to the lack of development of the state institutions of

Tajikistan and the institutions of the market economy, even fairly large national enterprises are experiencing great difficulties in adapting to the market environment. The course towards privatization and corporatization of inefficient state-owned enterprises is generally correct, however, given the socio-economic situation in the country, mass privatization of state-owned enterprises seems impractical at present. Modernization and transition to an innovative way of economic development in Tajikistan is possible today only on the basis of existing state-owned enterprises.

The Government of Tajikistan has been proposed to carry out financial rehabilitation of unprofitable enterprises, abandon inefficient management methods, carry out a comprehensive audit of tax benefits, revise the model of management of innovative development of the economy as a whole – shift the emphasis from large but inefficient state-owned enterprises to comprehensive support of the scientific sector and small forms of innovative entrepreneurship.

Among the main directions of innovative modernization of the economy of the Republic of Tajikistan, the author defines: improvement of the legal framework; clarification of strategic priorities (strategy, concept, state programs); increasing the level of protection of the results of intellectual activity; improving the quality of innovation policy, investment policy, science and technology policy; tax policy; increasing the level of support for science and education, small innovative forms of entrepreneurship, which together will ensure the actual level of innovative activity of enterprises.

To achieve the set strategic goals and priorities, Tajikistan will need to maintain and develop cooperation with international development institutions and regional organizations, including the EAEU. Regional integration can significantly affect the economic development and modernization of the economy of each section of the association. However, it cannot be denied that cooperation in the region can have both positive and negative effects.

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of generating high technologies and modernizing the sectoral system of the country's reproduction.

The Republic should pay special attention to the human factor - stimulating innovation and entrepreneurship in state corporations.

Among the methods of innovative modernization in state corporations, it is recommended to use: various forms of PPP, subject to the development and approval of a clear algorithm for selecting projects; improvement of business processes and organizational structure of state corporations in the direction of managing innovative development; organization of development and implementation of basic and critical industrial technologies; search for opportunities to apply and borrow technologies for the production of high-tech civilian and dual-use products; formation and effective development of the innovation infrastructure of state corporations, including the system of managing rights to the results of intellectual activity; creation on the basis of state corporations of new development institutions, venture funds, business accelerators and technology parks; expansion and deepening of cooperation with leading universities and scientific organizations in carrying out R&D and organizing the production of innovative products; the actual modernization and technological development of the Group of Companies through a significant improvement in the main indicators of the efficiency of production systems.

In the current geopolitical and socio-economic conditions, in order to conduct an effective innovative modernization of industry, it is advisable for Tajikistan to use the model of a military-industrial cluster, which could include the restructuring and financial recovery of the SUE "Nuri Khovar" and "Fuluzoti Nodiri Tojikiston" as state corporations, educational organizations and new innovative companies, including small ones created to implement high-tech projects.

At the preliminary stage, experts need to conduct a cluster analysis of the territory, the purpose of which is to identify those sectors of the economy in which the region (in particular, the Sughd region) has comparative advantages. This

should be followed by the development of short-term and long-term strategies for innovative growth of the regional economy. This will allow clustered enterprises to receive information, communicate and exchange inputs in a way that adds effects to a “collective” advantage that otherwise could not be achieved alone. Clustering will facilitate collaboration to overcome common problems and obstacles.

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APPENDIX

Annex 1 - Potential for innovative development of sectors of the economy of Tajikistan (results of the UNECE survey)

Table 3: The most popular sectors having STI development potential, percentage due to the listed average ir priority and total frequencies of responses

No.	Economic sector/industry	Average percentage of respondents, who indicate the sector	No.	Economic sector/industry	Percentage of total respondents, who indicate the sector
1	Industry	21,6%	1	Agriculture	21,4%
2	Energy/Electricity	11,6%	2	Banking	10,7%
3	Services	12,4%	3	Chemical industry	9,5%
4	ICT	3,9%	4	Construction	7,7%
5	Internet Providers	1,9%	5	Education sector	6,0%
6	Food processing	1,5%	6	Energy/Electricity	6,0%
7	Mining	6,6%	7	Financial sector	5,4%
8	Mobile Providers	2,7%	8	Food processing	5,4%
9	Education sector	6,0%	9	Freelancers	4,2%
10	State service	1,2%	10	Healthcare	3,0%
11	Agriculture	7,1%	11	ICT	3,0%
12	Banking	5,4%	12	Industry	2,4%
13	STI	0,8%	13	Internet Providers	2,4%
14	Sales	4,7%	14	Local Tourism	1,8%

Source: SCIENCE, TECHNOLOGY AND INNOVATION GAP ANALYSIS OF TAJIKISTAN, 2020; URL: https://unece.org/sites/default/files/2021-03/STI%20gap%20analysis_Tajikistan_Report_%20Bahodur%20Mengliev_0.pdf

Annex 2 - Average rating of the business environment, promoting innovation in Tajikistan (results of the UNECE survey)

No.	Aspects of the environment	Average rank
1	The authorities make efforts to reduce the administrative hurdles of doing business.	2,91
2	The authorities assign a high priority to SME development and SMEs have access to different forms of public support.	2,84
3	Entrepreneurship is encouraged and the development of entrepreneurial culture is supported by the authorities.	3,04
4	It is relatively easy for entrepreneurs to start and develop a new business.	2,98
5	Businesses cooperate with R&D and academic institutions for the commercialization of their R&D results.	3,49
6	Universities encourage the establishment of startups and spin-offs for the commercialization of innovative ideas.	3,53
7	The intellectual property rights of innovative entrepreneurs are well protected by law and regulations.	2,93
8	Innovative entrepreneurs and SMEs have access to public funds to support the initial stages of commercializing their ideas.	3,31
9	There exist adequate private funding sources to support innovative entrepreneurs and SMEs in the initial business stages.	3,29
10	SMEs have relatively easy access to bank credit and other commercial funding for the development of their business.	3,53

Source: SCIENCE, TECHNOLOGY AND INNOVATION GAP ANALYSIS OF TAJIKISTAN, 2020; URL: https://unece.org/sites/default/files/2021-03/STI%20gap%20analysis_Tajikistan_Report_%20Bahodur%20Mengliev_0.pdf

Annex 3 – The main problems hindering innovative development in Tajikistan (results of the UNECE survey)

No.	Category of responses	Percentage of respondents who indicate main existing problems, obstacles and bottlenecks that hinder innovative development (by choice)				
		1	2	3	4	5
1	Corruption	9,1%	18,2%	2,3%	0,0%	0,0%
2	Insufficiency of skilled labor	9,1%	9,1%	2,3%	2,3%	2,3%
3	Insufficient funding	9,1%	9,1%	9,1%	2,3%	0,0%
4	Taxing system	9,1%	0,0%	0,0%	0,0%	0,0%
5	Fiscal Policy	6,8%	0,0%	0,0%	0,0%	0,0%
6	Low literacy on STI	6,8%	11,4%	2,3%	0,0%	0,0%
7	Low skills of state representatives	6,8%	0,0%	2,3%	0,0%	0,0%
8	Administrative barriers	4,5%	0,0%	2,3%	0,0%	0,0%
9	Sufficient knowledge on STI	4,5%	2,3%	4,5%	2,3%	0,0%
10	COVID-19	2,3%	0,0%	0,0%	0,0%	0,0%
11	High rate for internet	2,3%	2,3%	0,0%	0,0%	0,0%
12	Insufficiencies in STI Program	2,3%	2,3%	0,0%	0,0%	0,0%
13	Lack of modern equipment	2,3%	0,0%	0,0%	0,0%	0,0%
14	Commercialization of innovations	0,0%	0,0%	6,8%	0,0%	0,0%
15	Too much state controlling visits	0,0%	2,3%	6,8%	0,0%	0,0%

Source: SCIENCE, TECHNOLOGY AND INNOVATION GAP ANALYSIS OF TAJIKISTAN, 2020; URL: https://unece.org/sites/default/files/2021-03/STI%20gap%20analysis_Tajikistan_Report_%20Bahodur%20Mengliev_0.pdf