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The Role of Public Enterprises in the Innovative Development of the Economy of the Republic of Tajikistan

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ABSTRACT

The **relevance** of the study is due to the lack of scientific research devoted to assessing the state and searching for new tools to activate innovative processes in the economy of Tajikistan, as well as a number of systemic problems that have developed in the innovation sphere. The article **aims** to study the role of state-owned enterprises in Tajikistan in the innovative development of the national economy in modern conditions. The **objectives** of the research are 1) analysis of factors influencing the innovative development of the economy of Tajikistan; 2) assessment of the role of public enterprises in the innovative development of the economy; 3) development of proposals to increase the innovative activity of state-owned enterprises. The author applies **methods** of analysis of statistical data and strategic documents of Tajikistan and the public corporate sector, generalization, grouping, observation, benchmarking, tabular and graphical analysis. The study shows that the problems of innovative development of Tajikistan are determined by the discrepancy between the chosen model of public administration and innovative development, which is a key deterrent to modernization and transition to an innovative path. It was revealed that most of the deterring factors of innovative development were formed not in the external, but the internal environment and they are localized in the field of public administration. Due to the low socio-economic status of the country, insufficient development of state institutions and institutions of a market economy, and control over the expenditure of budgetary resources, even large state-owned enterprises are experiencing financial difficulties. The author **concludes** that the government of Tajikistan should conduct financial rehabilitation of unprofitable enterprises, abandon ineffective management methods, carry out a comprehensive audit of tax incentives, revise the model for managing innovative development of the economy as a whole – shift the focus from large but ineffective state-owned enterprises to comprehensive support for science and small forms of innovative entrepreneurship.

Keywords: innovative development; innovation activity, innovation process; factors of innovative development; public enterprises; Tajikistan

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INTRODUCTION

In the context of the global crisis, the deterioration of the situation in world markets due to the coronavirus (Covid-19) pandemic and other negative global trends, the internal economic policy of the Republic of Tajikistan (RT) is becoming increasingly important, covering not only the commercial but also the state (public) sector 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 an increase in the technological level and competitiveness of production, the release of innovative products to the domestic and foreign markets, the growth of import substitution, the acceleration of socio-economic development and the achievement of national strategic goals.

Over the past decade, the government of the RT has taken certain 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 RT “On the Technological Park”,¹ the Law of the RT “On Innovation Activity”,² “Program of innovative development of the Republic of Tajikistan for the period up to 2020”,³ Strategy for innovative development of the Republic of Tajikistan for the period up to 2020⁴ and other regulations.

¹ Law of the Republic of Tajikistan “On the Technological Park” as of July 21, 2010 No. 629. Legislation of the CIS countries; URL: https://base.spininform.ru/show_doc.fwx?rgn=31664 (accessed on 20.03.2021).

² Law of the Republic of Tajikistan “On innovative activities” as of April 16, 2012 No. 822. Legislation of the CIS countries; URL: https://base.spininform.ru/show_doc.fwx?rgn=51674 (accessed on 20.03.2021).

³ Decree of the Government of the Republic of Tajikistan as of April 30, 2011, No. 227 “On approval of the Program of innovative development of the Republic of Tajikistan for 2011–2020”; URL: https://innovation.tj/documents/menu/ru/Ob_utverzhenii_programma.pdf (accessed on 20.03.2021).

⁴ Decree of the Government of the Republic of Tajikistan as of May 30, 2015, No. 354 “On the Strategy of Innovative Development of the Republic of Tajikistan for the Period until 2020”; URL: <https://innovation.tj/documents/menu/ru/strategiya%20rus.pdf> (accessed on 20.03.2021).

In 2015, the formation of innovative research centers and technology parks at the Academy of Sciences and higher professional educational institutions of the country began.

At the same time, the development of innovations in Tajikistan, including in the industrial sector, is hampered by several some problems, without the solution of which the goals and objectives set in strategic documents to increase the innovative activity of economic entities are unattainable. Among such problems:

- weak potential of Tajik science and vocational education;
- low level of spending on research and development (R&D) (0.12% of GDP);
- low quality of state regulation of innovation processes; absence of innovation infrastructure (technology parks, clusters, business incubators, technology transfer centers);
- high dependence of the country on foreign investments and technologies;
- high accounts payable of state-owned enterprises;
- low efficiency of industrial state-owned enterprises, despite the presence of significant government support in the form of subsidies, tax incentives, and preferences.

The formed complex of problems requires critical reflection and updating of existing approaches and models, the search for new tools and incentives to activate innovative processes in the economy of Tajikistan.

DEGREE OF RESEARCH PROBLEM DEVELOPMENT

The issues of innovative development of the economy are hardly the most discussed area of research in modern science. The theoretical and empirical material devoted to this issue is limitless and is constantly updated with new research. Fundamental works, which formulate the main approaches to the economic essence of innovation, the formation of an innovation system,

the mechanism of state regulation of innovation processes, include the works of J. Schumpeter [1], B. Szántó [2], A. Toffler [3, 4], F. Fukuyama [5], B.-A. Lundvall [6], R. Nelson [7], L. Edvinsson [8], L.N. Abalkin [9], A. Ya. Yakobson [10], S. Yu. Glaz'ev [11], N.D. Kondrat'ev [12], O.G. Golichenko [13], B.N. Kuzyk [14], Yu.V. Yakovets [15] and others.

A certain contribution to the study of the innovative component of the economy of Tajikistan in various sectors of the economy was made by Tajik economists Kh. A. Abdukodirov [16], U. M. Dzhumayev [17], G. D. Jurabaev [18], N. A. Zhdankin [19], D. B. Kodirzoda [20], F. A. Kodirov [21], S. J. Komilov [22], Yu. Kh. Madzhitov [23], N. R. Mukimova [24], T. D. Nizomova [25], I. S. Okilov [26], J. R. Rakhmonov [27], M. N. Toshmatov [28], M. K. Faizulloev [29], P. D. Khojaev [30], B. K. Sharipov [31] and others.

However, in existing studies, little attention is paid to a critical assessment of the innovative component of the activities of enterprises in the Central Asian region (CAR) in general and state-owned enterprises in Tajikistan, in particular.

The **novelty** of this study is due to the identification of the stimulating and slowing factors for the development and implementation of innovations in Tajikistan; study of the compliance of the activities of state-owned enterprises of the RT with the innovation agenda and the development of proposals to increase innovation activity in the economy.

ANALYSIS OF FACTORS INFLUENCING INNOVATIVE DEVELOPMENT

OF THE ECONOMY OF TAJIKISTAN

Modern states, as complex systems in constant interaction with a turbulent external environment, experience a powerful global influence from international actors and institutions. They are also

influenced by factors of different types: from political to socio-cultural and scientific and technological. There are two groups of factors influencing the innovative development of the economy:

1) stimulating the development and implementation of innovations;

2) slowing down the implementation of innovative activities.

Both those and other factors can manifest themselves at different levels: global, macro, meso and micro levels. "Factor" in this case is understood as a condition, reason, parameter, indicator that affects the innovation process and the result of this process.⁵

General economic conditions, the state of the 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 the volume of government spending on education, science, and research and development.

The factors of the meso-level include the conditions of regional development, and the factor of the micro-level is the conditions for the development and achievement of specific economic entities in the innovation sphere [32, 33].

The main indicators of Tajikistan in The Global Innovation Index 2020 (Fig. 1) indicate a low level of innovative development of the economy, including in comparison with other CAR countries, the republic ranks only 109th.

Innovative development as an economic phenomenon is a continuous process of searching and using the latest methods for

⁵ Dictionary of Economics. M. Yu. Agafonova, A. N. Azrilian, O. M. Azrilian et al. M.: Institute of New Economics, 1997. p. 864.

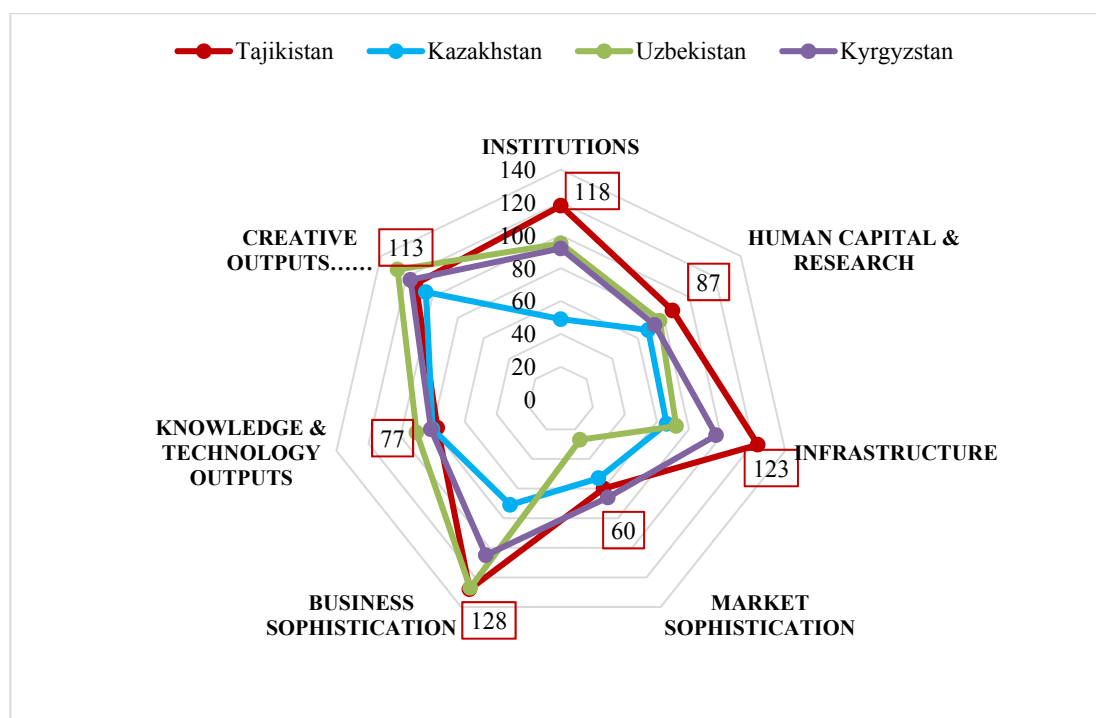


Fig. 1. Comparison of Tajikistan's position (place by sub-index) with other countries of Central Asia in The Global Innovation Index, 2020

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).

economic and social development, based on knowledge and innovation [31, 34]. Since the formation of an innovative economy is a complex, multidimensional and long-term process associated with socio-political and institutional-economic transformations, as well as the choice of promising directions of state policy [22], the basic conditions created by the state are of particular importance for the innovative development of the economy [35] and regional authorities [19, 36]. These basic conditions are:

- regulatory framework;
- availability of strategic priorities (strategy, concept, government 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. [1, 37].

While recognizing certain achievements of Tajikistan over 30 years of independence, many experts note the complexity of the social and economic state of the republic [18, 21]. For Tajikistan, it has become a kind of “tradition” of high dependence on remittances of Tajik migrants (third place in the world (31%) after Tonga — 35.2% and Kyrgyzstan — 33.6%, (Fig. 2), permanent inflation, inflated rates on loans, high taxes, a weak judicial system.

These factors are the determinants of the high share of the “shadow” economy, reducing the republic’s prestige in the eyes of investors. According to a study by the International Monetary Fund, the average estimate of the share of the “shadow” economy in Tajikistan in the period 1991–2015 is was 42.99%. For comparison: the same indicator in Russia was 38.42% for the indicated period, in Kazakhstan — 38.88%, Kyrgyzstan — 47.92% [39].

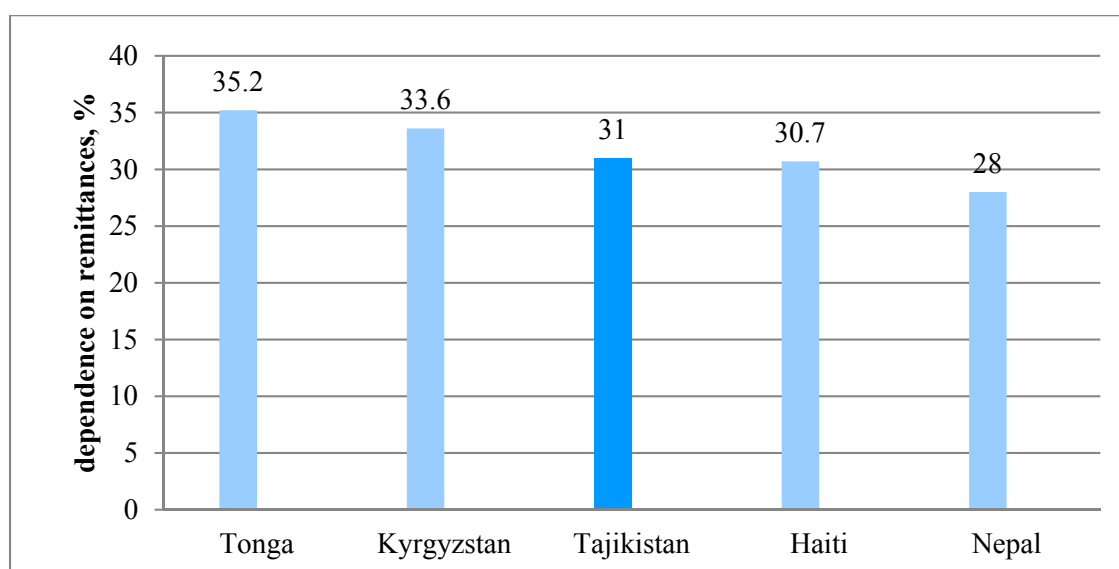


Fig. 2. The level of dependence of some countries on remittances of migrant workers, %

Source: compiled by the author according to [38].

The investment climate and business environment in the republic remain unattractive, despite the government's efforts to encourage entrepreneurship and accelerate reforms. Tajikistan traditionally attracts investments and external loans from neighboring countries of the region, including China, Russia, and, to a lesser extent, Iran. In 2019, foreign direct investment (FDI) from China increased by 6% to USD\$ 62.3 million; in 2019, Tajikistan's total debt to China exceeded USD\$ 1.5 billion, which is more than half of the country's external debt [38, p. 9]. Russia, with USD\$ 33.1 million, is the second-largest source of foreign direct investment in 2019, followed by the United Kingdom (USD\$ 13.9 million) and Turkey (USD\$ 13.5 million). Qatar has invested USD\$ 384.5 million in an elite residential complex of the republic and the largest mosque in the region and is also exploring investment opportunities in the infrastructure and banking sector of the RT.

Tajikistan is a challenging place to do business, according to the U.S. Department of State analysts: bureaucratic and financial hurdles, corruption, a largely dysfunctional banking sector, non-transparent tax system, and countless business inspections greatly

hinder investors. The absence of private investment creates pressure on the Tax Committee to enforce or reinterpret tax regulations arbitrarily in order to meet ever-increasing revenue targets.⁶

The country's external public debt is increasing annually: if in 2014 it was USD\$ 2.6 billion, then in 2019 it reached USD\$ 3.5 billion, which is twice the volume of industrial production. At the same time, as follows from the Program of State External Borrowings of the Republic of Tajikistan for 2020–2022,⁷ the government plans to receive about USD\$ 1 billion more, which may lead to a sharp increase in external debt.

Accounts payable of enterprises of various forms of ownership are even higher, it approached USD\$ 7 billion. The situation is getting more complicated, therefore, the government of Tajikistan, on the one hand, expresses interest in attracting foreign investment (this task is designated as a

⁶ 2020 Investment Climate Statements: Tajikistan. URL: <https://www.state.gov/reports/2020-investment-climate-statements/tajikistan/> (accessed on 21.03.2021).

⁷ Decree of the Government of the Republic of Tajikistan as of 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". URL: http://www.adlia.tj/show_doc.fwx?rgn=135075 (accessed on 20.03.2021).

Table 1

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 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.

priority in the “National Development Strategy of the Republic of Tajikistan for the period until 2030” (NDS-2030)⁸), and on the other hand, it constantly focuses on the development of the National Innovation System, as evidenced by the Strategy and Program of Innovative Development of the Republic of Tajikistan for the period until 2020 and other regulations.

⁸ National Development Strategy of the Republic of Tajikistan for the period until 2030 (NDS-2030); URL: https://mintrans.tj/sites/default/files/2017/september/nacionalnaya_strategiya_razvitiya_rt_na_period_do_2030_goda.pdf (accessed on 18.03.2021).

However, 2020 has already made its own adjustments, the government has not presented the updated draft Strategy and Program for innovative development to the expert community and business circles. At the same time, the same problems remain: absence of funding for R&D; funds allocated for research and development are spent ineffectively; the problem of aging of scientific personnel has not been fully resolved.

Despite the proclamation of an “innovative” course and market priorities for economic development, there is

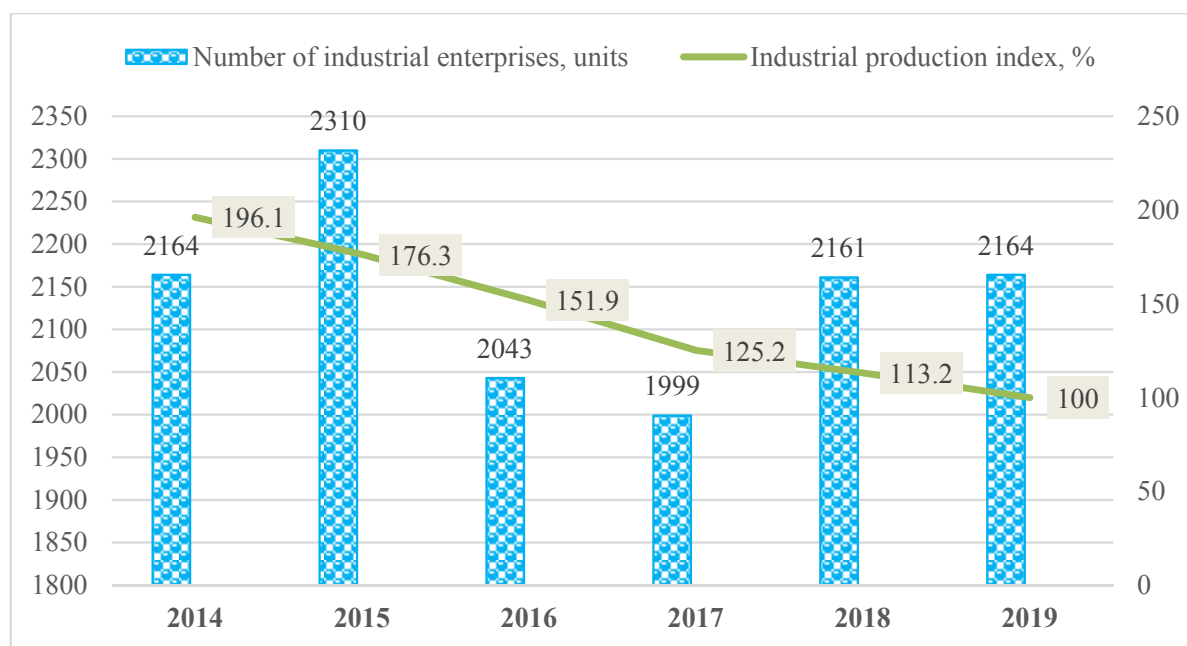


Fig. 3. Dynamics of the number of industrial enterprises and indices of total industrial production in the Republic of Tajikistan, 2014–2019

Source: compiled by the author according to the Industry of Tajikistan: Agency on statistics under the President of the Republic of Tajikistan; 2020.

excessive administrative interference in the private sector and “innovative” barriers for enterprises in the republic, including a lack of qualified personnel, insufficient financial resources, and depreciation of fixed assets, a high level of taxation, a high percentage of bank loans, risks of implementing long-term innovative projects.

As of 2020, Tajikistan ranked 106th out of 190 countries in the Doing Business Report.⁹ However, a high tax burden remains in the republic, which is associated with the introduction of distorting methods of collecting taxes to achieve the planned income indicators. In turn, the activities of small and medium-sized enterprises are constrained by deficiencies in the regulatory framework and racketeering. A separate problem for businesses is access to credit resources due to high-interest rates.

Another problematic issue is the process of creating and implementing fundamental

scientific and technological innovations, which is complex and requires coordinated efforts of diverse teams with reliable funding and organizational support, which can be represented as a multi-channel creative process. This can be achieved through the development and creation of a modern mechanism to support the development and implementation of innovations, which has not yet been created in Tajikistan [40, p. 132].

Based on the analysis of the literature and practice of state management of the innovation process in Tajikistan, it is possible to identify the factors that stimulate and slow down the introduction of innovations (*Table 1*).

As shown in *Table 1*, the factors that hinder the innovative development of the republic’s economy are much greater than the stimulating ones. Moreover, most of the slowing factors were formed not in the external, but in the internal environment, and they are localized mainly in the sphere of state management of innovative development.

⁹ Doing Business 2020. URL: <https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402.pdf> (accessed on 22.09.2020).

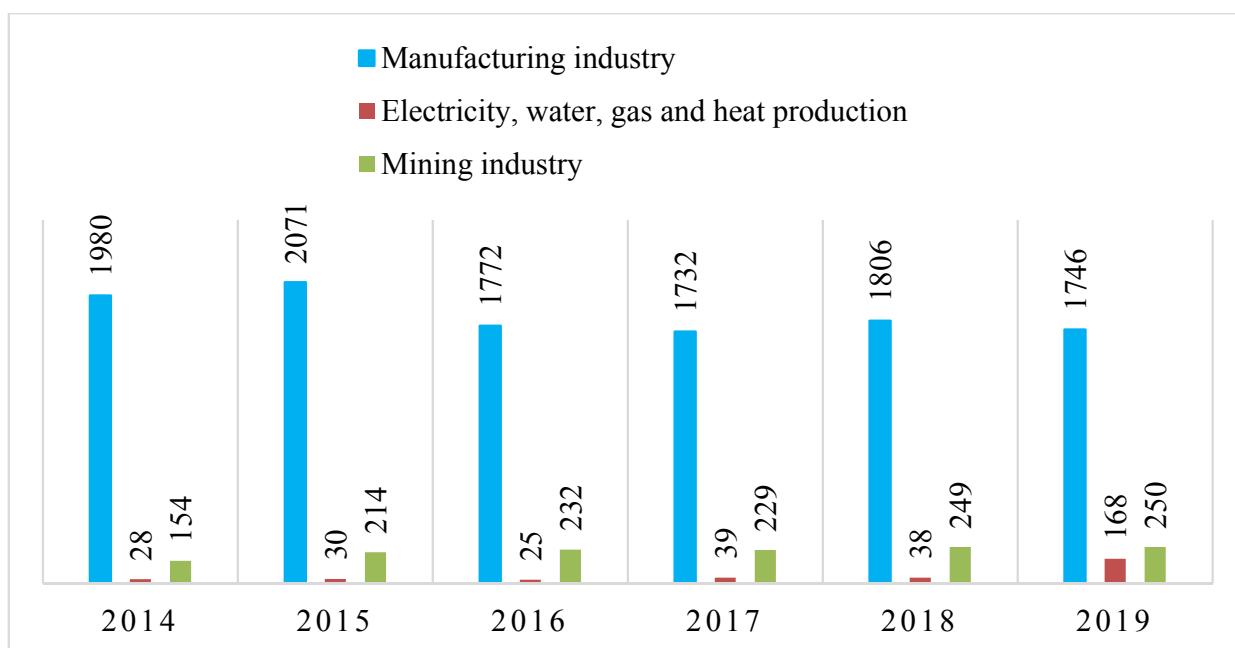


Fig. 4. Dynamics of the number of industrial enterprises in the Republic of Tajikistan by industry, 2014–2019, %

Source: compiled by the author according to the Industry of Tajikistan: Agency on statistics under the President of the Republic of Tajikistan; 2020.

ASSESSMENT OF THE ROLE OF STATE ENTERPRISES IN INNOVATIVE DEVELOPMENT OF THE ECONOMY

Tajikistan is an agro-industrial country, 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 in the field of information technology (IT).

If we analyze the dynamics of the number of industrial enterprises, then it is unstable. For example, at the end of 2019, there were 2,164 units, the same number in 2014. In 2017, there was a sharp decrease in the number of industrial enterprises (to 1999 units), while in 2015 there were 2310 units (Fig. 3).

The manufacturing industry occupies the largest share in the structure of production in the RT, followed by the production and distribution of electricity, water, gas, and heat, and the third by the mining industry (Fig. 4).

Currently, the government of RT manages state unitary enterprises (GUP) and open

joint-stock companies. The Government of the RT has a share in the authorized capital of 140 companies: 136 joint-stock companies and 3 limited liability companies.¹⁰ Large Tajik enterprises, whose shares are owned by the government of the RT, are Tajik Aluminum Company (TALCO) (100%), Rogun (95%), Tajiktelecom (95%), divisions of Barki Tojik (100%), Dushanbe International Airport (100%), Tajiktransgaz (100%), Tajik Air (100%), and others.

However, the practical results of the implementation of state innovation programs and projects in Tajikistan are far from obvious. The state's stake on state-owned enterprises as “drivers” of innovative growth does not justify itself. Neither the private nor the public sector has shown sufficient interest in innovation. Large innovative projects are implemented in the republic only at the initiative of the state.

¹⁰ State-owned enterprises of Tajikistan come under the control of supervisory boards; URL: <https://asiaplustj.info/ru/news/tajikistan/economic/20200116/gospredpriyatiya-tadzhikistana-perehodyat-pod-upravlenie-nablyudatelnih-covetov> (accessed on 22.03.2021).

Table 2

Key profit and loss indicators of OAO "TALCO", 2015–2018, thousand USD

Indicators	2015	2016	2017	2018
Revenue (income)	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 OAO "TALCO" for the period 2015–2018.

Typically, these projects are funded by global multinational corporations, which receive significantly more than local state-owned enterprises. An example of this is the State Unitary Enterprise JSC "Tajik Aluminum Company" (TALCO).

TALCO is one of the world's largest aluminum producers and is developing dynamically. The design capacity of TALCO is 517 thousand tons of aluminum per year with the production of 360 thousand tons of baked anodes.

TALCO expresses its intention to implement a program of gradual and complete modernization of aluminum production and its transfer to new modern technologies.¹¹ One of the first innovative solutions of the enterprise was the target investment project "Transfer of TALCO to the use of local raw materials" and the opening of a chemical plant with an estimated cost of USD\$ 111 million.

The second targeted innovation project is "Construction of an alumina complex from

alumina-containing ores in the Republic of Tajikistan" based on the Turpi, Devonasu, and Tutek deposits. The implementation of these projects resulted in the creation of a new "Tajik Chemical and Metallurgical Corporation" (TCM).¹²

Since 2017, TALCO has begun to develop cooperation with the large Chinese corporation China Road and Bridge Corporation (CRBC) on the construction of an Industrial Technopark in the Yavan District — a complex of interconnected industries focused on the development of the industrial sector of the RT in the amount of USD\$ 100 million.¹³

At the same time, the profit and loss indicators of TALCO according to the financial statements indicate instability and negative dynamics of financial results. Decrease in income, high cost of production, unprofitable operating activities were noted (Table 2).

¹¹ TALCO. Modernization programs. URL: <https://www.talco.com.tj/ru/sustainable-development/programmy-modernizacii> (accessed on 22.03.2021).

¹² Targeted investment projects of TALCO. URL: https://www.talco.com.tj/sites/default/files/_investors/prezentacii/tselevyye_investitsionnyye_proyekty.pdf (accessed on 25.09.2020).

¹³ TALCO. Investment projects. URL: <https://www.talco.com.tj/ru/investors/investicionnyye-proekty> (accessed on 22.03.2021).

Table 3

Key profit and loss indicators of “Barqi Tojik”, 2015–2018, thousand somoni

Indicators	2015	2016	2017	2018
Revenue (income)	1,548,665	1,688,621	2,113,647	2,684,735
Cost price	(907,143)	(1,218,902)	(1,956,333)	(1,514,288)
Gross profit	641,522	469,719	599,359	469,719
Net total loss	(2,842,786)	(2,339,218)	(3,406,167)	(3,342,519)

Source: compiled by the author according to the financial statements of “Barqi Tojik” according to IFRS for the period 2015–2018.

From the author’s perspective, one of the reasons for the ineffectiveness of the activities of TALCO (not the only one) is the use of a tolling scheme. Tolling — processing of foreign raw materials with the subsequent export of finished products. Under this scheme, foreign counterparties supply raw materials (alumina) to the country and export finished products, while TALCO provides only processing services and receives a fixed income for this. Under this scheme, neither imported raw materials for aluminum plants nor products of its processing are subject to customs duties and VAT. The main advantages are received by the company’s foreign counterparties, not TALCO. The huge potential of the plant is used extremely ineffectively, the budget loses millions of dollars annually, subsidizing TALCO’s unprofitable activities and receiving fewer taxes.

Another strategically important state corporation in Tajikistan for the modernization of the country is Barki Tojik (engaged in the production, transmission, distribution and sale of electricity and heat energy mainly in the local market). The

company is experiencing similar problems. Consolidated statements of Barki Tojik for the period 2015–2018 demonstrates high production costs and unprofitable activities (Table 3).

Such financial indicators look paradoxical, given that Tajikistan has enormous hydropower potential, as it owns 4% of the world’s hydropower resources and 53% of the CAR resources. The republic is ranked 8th in the world in terms of the potential of hydropower resources and is a leader in terms of specific reserves. The total volume of hydropower resources is estimated at 527 TWh, including a technically feasible capacity of 202 TWh, economically feasible to build — 172 TWh. The total capacity of the installed HPPs is 4,070 MW, and the average annual production is about 17 TWh. However, these resources have yet to be used rationally and efficiently [41, p. 214].

Hydroelectric power plants account for about 94% of the republic’s generating capacities, but, according to some estimates, only 5% of their potential is used. The country faces power shortages ranging from 3.0 to 3.5 GWh, resulting in regular power

outages from October to April. But due to the lack of the possibility of exporting surplus electricity in the spring and summer period, hydroelectric power plants do not operate at full capacity, dumping water idle.

The potential of Tajikistan's hydropower resources, a significant part of which has not yet been developed, determines the strategic directions for the development of energy, the most important of which are the construction of large and small hydropower plants, the implementation of energy efficiency programs and the entry of the domestic electric power industry to the external market. Optimization of the structure of energy consumption in the domestic market and the commissioning of new capacities will allow in the future bringing the export potential of the country's electric power industry to 7.5–8 TWh in summer and 2–2.5 TWh in winter.

The increase in electricity exports, which ensures a stable inflow of foreign exchange into the country and contributes to the strengthening of the geopolitical importance of the energy sector in 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 clear benefit, will be effective if it provides the maximum income in foreign currency at the minimum costs associated with their production and delivery to the foreign market.

An equally important branch of the national economy is the gold mining industry. According to B. K. Sharipov [31, p. 110], the disadvantages of the development of gold mining enterprises of the RT include:

- 1) absence of a clear strategy for innovative development;
- 2) low qualification of personnel;
- 3) poor motivation and incentives for staff;

4) imperfection of the mechanisms for training and professional development of personnel;

5) innovative development is not at the appropriate level;

6) a narrow range of goods;

8) low level of technical equipment;

9) low wages.

Thus, despite the fact that state-owned enterprises in Tajikistan play a leading role in the national economy, most of them are in urgent need of financial recovery.

GENERALIZATION OF RESEARCH RESULTS AND PROPOSALS TO INCREASE INNOVATIVE ACTIVITY OF STATE ENTERPRISES

Analysis of the literature and the author's analysis of the practice of state management of the innovation process in Tajikistan made it possible to identify factors that stimulate and slow down innovative development in Tajikistan. Among the stimulating factors identified: the creation of the foundations of legal regulation of innovation; determination of priorities for innovative development of the economy; work on the formation of innovative research centers and technology parks. The slowing down factors include: a low indicator of the Global Innovation Index (109th place out of 131 possible); the complexity of the socio-economic situation in the republic, high public debt and credit indebtedness of enterprises, a high proportion of the "shadow" economy; unattractiveness of the innovation sector for Western investors due to the complexity of doing business: bureaucratic and financial hurdles, corruption; insignificant R&D funding and ineffective spending of budgetary resources allocated for these purposes: absence of funding for innovative development in strategic documents, and in some cases — absence of measurable indicators related to the definition of priority areas of innovation: absence of updated versions

of the Strategy and Program for innovative development of the economy for 2021 and subsequent years; issues with the creation and implementation of fundamental scientific and technological innovations; administrative and “innovation” barriers hindering the development of small forms of innovative entrepreneurship; lack of highly qualified specialists.

Currently, the basis of the economy of Tajikistan is made up of state-owned industrial enterprises, which have already become a special subject of the market. But at the same time, 90 are a constant source of financial problems for the state budget. Although the role of state-owned enterprises in innovation processes is quite significant due to their special position in the economy, most of them are in urgent need of financial recovery. The problem is that the role of state-owned enterprises is essentially reduced to attracting investments and grants from foreign investors, international organizations, budget subsidies, and tax incentives. The external debt of enterprises is increasing, and deep structural transformations in the economy with their participation do not occur. The state budget supports unprofitable companies and systematically loses taxes. In recent years, there has never been a cost-benefit analysis of tax incentives provided to state-owned enterprises that identify the advantages and disadvantages of providing industry-specific incentives, lost fiscal costs to the government, and net benefits to the public in the form of new jobs or other social effects.

In the current conditions, it is advisable for the Government of Tajikistan to revise the model of innovative development management: to shift the emphasis from large, but ineffective state-owned enterprises to comprehensive support of the scientific sector and small forms of innovative entrepreneurship. The main argument in favor of such a maneuver is the fact that the key player in the innovation

process is an innovative entrepreneur, a person who not only generates an idea but also personally promotes it to the market. The task of the state is to support proactive people, to provide them with access to state funding and free legal aid. In this, we see the key to enhancing the innovation process in Tajikistan. As for the scientific sector, it always initiates new research and development. Support measures here can be an inter-university competition for innovative projects, technology parks, support for young scientists, and an increase in salaries for active researchers in priority areas of R&D.

CONCLUSIONS

Most of the problems in the innovative development of Tajikistan are caused by the discrepancy between the chosen model of state management of innovative development. In general, the socio-economic situation in the country remains difficult both from the point of view of domestic economic policy, budget revenues, and the investment climate, which is a key constraining factor for modernization and the transition to innovative development of the economy.

It was found that most of the slowing factors were formed not in the external, but in the internal environment and are localized mainly in the sphere of state management of innovative development.

The 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 certain successes. But due to the weakness of the socio-economic situation, insufficient development of state institutions and institutions of a market economy, control over the expenditure of budgetary resources, even fairly large state-owned enterprises experience financial difficulties, as a rule, the management of

enterprises is highly dependent on the decisions of representatives of the state apparatus.

It is proposed to the Government of Tajikistan to conduct financial recovery of unprofitable enterprises, abandon ineffective management methods, carry out

a comprehensive audit of tax incentives, revise the model of managing innovative development of the economy as a whole – shift the focus from large but ineffective state-owned enterprises to comprehensive support of the scientific sector and small forms of innovative entrepreneurship.

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