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ANALYSIS OF INNOVATION ACTIVITY IN THE REGIONS OF KAZAKHSTAN

Currently, Kazakhstan is experiencing an active development of the innovation system. On the basis of statistical data of the regions of Kazakhstan were established ratings of the regions of the country, based on such indicators as: the level of activity in the field of innovation, the number of enterprises with innovations, the volume of innovative products, the volume of realized innovative products, the volume of realized innovative products supplied for export, the share of innovative products in relation to GRP, the number of enterprises suspended or abandoned, related to the development of product and process innovations, the cost of implementation of the innovation process, the cost of innovation, and the cost of innovation. The purpose of this study is to analyze the indicators characterizing the innovation activity of the regions of Kazakhstan for 2022.

A number of problems that hinder the development of a full-fledged regional innovation system were identified, such as: the problem of science and education being disconnected from market requirements, and the lack of an effective mechanism for introducing the results of scientific research into the real sector of the economy.

The research used methods of data collection, structuring and analysis. The method of comparison was used to identify differences in the indicators of science statistics.

The analysis of innovation activity in the regions of Kazakhstan has shown that there is an imbalance in regional innovation development, which is characterized by a low level of innovation use in industrial enterprises and is characterized by a relatively insignificant impact of innovation on the creation of gross regional product.

Keywords: innovation, state regulation, innovation activity, state programs, financing, region, regional development, innovation activity, gross domestic product, projects.

Кілт сөздер: инновациялар, мемлекеттік реттеу, инновациялық қызмет, мемлекеттік бағдарламалар, қаржыландыру, аймақ, аймақтық даму, инновациялық қызмет, жалпы ішкі өнім, жобалар.

Ключевые слова: инновации, государственное регулирование, инновационная деятельность, государственные программы, финансирование, регион, региональное развитие, инновационная активность, валовый внутренний продукт, проекты.

JEL classification: J45

Introuduction. Strategic benchmarks of Kazakhstan formation are achievable only with the development of the highest technologies, modernization of industrial, technological, IT networks, provision of resources reproduction, reasonable management of scientific and technological process, reaching a new level of industrial-innovative development. In this regard, the establishment and formation of qualitatively functioning innovation systems, the relevance of the consideration and development of a common comprehensive theory aimed at research, including all aspects of innovative development of regions, the development of theory and methodology of system modeling of the processes of formation and implementation of programs of innovative development of regions deserve special importance.

The key factors of innovative development of territories, such as expenditures on innovation activities, the number of R&D personnel and others, the influence of which is confirmed by the results of a huge number of studies, can have both positive and negative impact on the innovative activity of enterprises in different territorial systems [1].

Thus, at the heart of innovative development is a complex relationship and mutual influence of technological, scientific, managerial, economic opportunities and needs of society; the result of such complex interaction needs to be investigated.

State regulation contributes to the creation of conditions for the activation of innovation activity, as an important role in the development of innovation systems is carried out by the state. The effectiveness of the

implementation of the state regulation of innovation activity in the development of the country's economy, which can occupy from 60 to 70 percent, this factor depends on the specific economic conditions of the country, in this regard, this economy is called knowledge-intensive.

Thus, at the heart of innovative development is a complex relationship and mutual influence of technological, scientific, managerial, economic opportunities and needs of society; the result of such complex interaction needs to be investigated.

The theoretical basis of the main objectives of this article is represented by the studies of foreign and domestic scientists on the issues of innovation activity. The information base for the study of this issue was formed by the data of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan and the results of the authors' research.

The article used the method of comparison of quantitative indicators of innovation activity of the regions of Kazakhstan according to the data of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. The rating assessment was given on the basis of such indicators as: the level of activity in the field of innovations (%), the number of enterprises with innovations (units), the volume of innovative products (mln. tg.), the volume of realized innovative products (mln. tg.), the volume of realized innovative products exported (mln. tg.), the share of innovative products in relation to GRP (%), the number of enterprises suspended or abandoned, related to the development of product and process innovations (units), the cost of innovation (million tg.), the cost of technological (product and process) innovations (thousand tg.) [2].

Literature review. The intensification of state innovation activity is relevant and is due to the development of laws and regulations, the absence of which limits not only legal, but also organizational support. Currently, it is necessary to intensify innovation activities based on the choice of goals, justification of priorities, allocation of resources, and new methods of its implementation. The Government faces important issues of creating a favorable climate to stimulate innovation processes; it is necessary to determine which sectors will become generators of economic growth and issues of attracting innovative resources.

Foreign scientists who have contributed to the study of innovation include Gonzalo Rodriguez Bara [3], Stojanovic I., Raifle A. and M. Selakovich [4] and others.

In the Kazakhstani economic literature, the analysis of innovation processes is carried out in the works of N.K. Nurlanova [5], S.B. Baizakov [6], A.N. Toksanov, A.H. Galieva [7], M.I. Maslennikov [8], and others.

Thus, each of these authors made their own contribution, which contributed to the formation of fundamental concepts and methodologies for analyzing structural changes in the economy. The main objectives of innovative development are to strengthen the innovation activity of the country's regions, to create conditions for the transition of production sectors to the 5th and 6th technological modes, to promote interaction between research and educational institutions.

Main part. Recently, innovation activity based on scientific knowledge, introduction of new ideas, technologies and products in various spheres of society has been increasingly referred to the factors of economic development of Kazakhstan. Currently, Kazakhstan's economy is being transformed in order to improve the country's competitiveness, the main factors of which are technological transformation - overcoming technological backwardness, mastering modern techniques and technology.

In Kazakhstan, at present, the monitoring of innovation activity does not include indicators that correlate the costs and results of innovation activity of enterprises. Indicators of costs and results of innovation activity contain mainly only statistical data. The results of innovation activity we observe only thanks to statistical data. which makes it difficult to draw a conclusion about the activity of innovation activity at enterprises in the regions of the country. In this study we also analyzed on the basis of official statistical data on the republic.

In general, it is worth highlighting a number of problems that hinder the development of a full-fledged regional innovation system, such as: the problem of isolation of science and education from market requirements.

The results of the analysis are presented in Table 1.

Table 1

Status of indicators of innovative activity of regions of Kazakhstan for 2022*

Regions (oblasts, cities of republican significance)	Number of enterprises with innovations, %	Total volume of innovative products sold, %	Volume of sold innovative products exported, %	Costs for implementing innovations, total, %	Costs of technological (product and process) innovations, %	Share of innovative products in relation to GRP, %	Expenditures on implementation of innovations, total, %
Akmola	2,1	17,4	17,6	2,6	2,2	10,8	2,6
Aktobe	4,9	5,8	4,9	3,8	3,6	6,2	3,8
Almaty	2,1	3,7	5,4	2,3	2,7	3,7	2,3
Atyrau	2,3	1,2	1,0	42,9	43,6	1,0	42,9
East Kazakhstan	3,5	4,0	3,9	2,4	2,4	1,9	2,4
Zhambyl	1,3	4,2	3,4	1,3	1,3	11,1	1,3
West Kazakhstan	1,2	1,4	1,3	1,2	1,2	1,5	1,2
Karaganda	9,2	15,5	2,7	8,1	8,5	8,5	8,1
Kostanayskaya	3,8	15,5	33,0	0,7	0,6	27,8	0,7
Kyzylorda	2,6	2,9	2,7	2,3	2,0	4,4	2,3
Mangystau	1,6	0,6	0,6	1,6	1,8	0,3	1,6
Pavlodar	4,6	7,9	6,7	4,3	2,8	6,4	4,3
North Kazakhstan	4,9	5,7	5,7	8,3	8,3	3,6	8,3
Turkestan	2,5	1,9	1,1	0,3	0,3	1,3	0,3
Almaty city	31,6	8,1	5,7	14,6	15,2	1,1	14,6
Astana	19,4	2,3	2,3	3,2	3,3	1,2	3,2
Shymkent	2,5	1,9	1,8	0,3	0,2	9,3	0,3
TOTAL	100	100	100	100	100	100	100

* Official Internet resource www.stat.gov.kz of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan [9]

Based on the data in Table 1, ratings of the regions of Kazakhstan were established, the results of which are presented in Table 2.

It should also be added that the majority of universities and scientific organizations are technologically backward. In this regard, the problem of developing services to create connections between science and production is also relevant [10].

Table 2

Ratings of Kazakhstan's regions according to indicators for 2022*

Regions (regions, cities of republican significance)	Number of enterprises with innovations, %	Level of activity in the field of innovation, %	Volume of sold innovative products (goods, services), total, %	Volume of sold innovative products exported, %	Share of innovative products in relation to GRP, %	Costs for implementing innovations, total, %	Technological costs (product and process) %
Akmola	13	12	1	1	3	8	10
Aktobe	5	4	6	7	7	6	5
Almaty	14	14	10	6	9	11	8
Atyrau	12	11	16	16	16	3	1
Vostochno-Kazakhstansk	8	10	9	8	11	9	9
Zhambyl	16	13	8	9	2	13	13
West Kazakhstan	17	17	15	14	12	14	14
Karaganda	3	2	2	10	5	2	3
Kostanayskaya	7	8	3	2	1	15	15
Kyzylorda	9	5	11	11	8	10	11
Mangystau	15	16	17	17	17	12	12
Pavlodar	6	6	5	3	6	5	7
North Kazakhstan	4	1	7	5	10	1	4
Turkestan	11	9	14	15	13	16	16
Almaty city	1	7	4	4	15	4	2
Astana	2	3	12	12	14	7	6
Shymkent	10	15	13	13	4	17	17

* Compiled by the authors

According to the conducted analysis, the results of which are presented in Tables 1 and 2, the overall ranking of the country's regions by the level of innovation activity was calculated. According to the data presented in Table 3, Mangistau region ranks 17th by three indicators.

Table 3

General rating of innovative activity of regions of Kazakhstan for 2022*

№ п/п	Regions of Kazakhstan	Sum of ranks	Overall rating of innovative activity
1	Karaganda	27	1
2	North Kazakhstan	32	2
3	Almaty city	37	3
4	Pavlodar	38	4
5	Aktobe	40	5
6	Akmola	48	6
7	Kostanayskaya	51	7
8	Astana	56	8
9	East Kazakhstan	64	9
10	Kyzylorda	65	10
11	Almaty	72	11
12	Zhambyl	74	12
13	Atyrau	75	13
14	Shymkent	89	14
15	Turkestan	94	15
16	West Kazakhstan	103	16
17	Mangystau	110	17

* Compiled by the authors

In Kazakhstan, the volume of innovative products in 2022 amounted to 1.9 trillion tenge - 36% more than a year earlier. Regionally, the most innovative products in value terms were produced in the Akmola region - 253 billion tenge, plus 2.2 times per year. The top 3 regions also included Karaganda and Kostanay regions. The least number of innovative products were produced in the Mangistau region.

In terms of industry, the highest level of innovation activity was observed in the field of higher education (59.2%), healthcare (33.3%), and scientific research and development (30.6%). The spheres of financial and insurance activities (6.6%), as well as trade and repair of cars and motorcycles (7.9%) are also far from innovative activity.

As noted earlier, innovative development is influenced by coordinated, consistent, «nationwide» approaches to innovation, which in our view need to move forward in three directions: technological, monetary and financial, and socio-political. The priority here should be made on the fact that the role of technological innovation is not sufficient for the economic growth of the region, there is the importance of creating a common basis for the innovation economy and the creation of monetary and financial and management groups of innovation.

Conclusion. Thus, the innovative development of the region is a complex and multifaceted process that depends on many factors. The authors of this study have structured and classified the key groups of factors affecting the innovative development of regions. These groups include the level of innovation activity, the share of innovative products in relation to GRP, the cost of innovation, the number of enterprises with innovations, and other factors. This article analyzes the activity indicators of the regions of Kazakhstan based on the selected seven indicators. The ranking of regions according to these indicators showed that Atyrau region is the leader in innovation. For other indicators the data differ: the share of innovative products in relation to GRP - Kostanay region. The most innovation-active regions are Karaganda, Kostanay and Aktobe regions of Kazakhstan. Outsiders, as the data of the table show, are West Kazakhstan, Turkestan and Mangistau regions.

Among the main problems we highlighted the low efficiency of links between production enterprises, scientific and other organizations; the lack of an effective mechanism for introducing the results of scientific research into the real sector of the economy; problems related to budget financing of science; weak domestic demand for innovation; the lack of an effective regional innovation policy.

The special individual characteristics of the region and the proximity of all actors of the regional innovation system play an important role in the creation of innovations. The effect of knowledge spillover in innovation systems contributes to the diffusion of innovations. When regional structures are actively involved in innovation processes, this stimulates the transfer of information and reduces the costs and risks associated with innovation.

The importance of state intervention lies in the state's recognition of innovation activity as determining the economic growth of the country [11].

To ensure socio-economic development of the region on the basis of innovation, the following conditions are necessary: technological and intellectual potential to launch innovation processes; constant growth of participants of the innovation "chain"; the presence of an institutional system focused on supporting innovative development; active interest of economic entities, individuals and the national innovation system as a whole in the application of innovation.

In conclusion, it is necessary to emphasize the importance of harmonious development of all elements of innovation potential of the region. Only with a balanced approach to the improvement of scientific and technological base, production capabilities, human capital, innovation infrastructure, social environment, innovation policy and macroeconomic conditions it is possible to ensure stable and successful innovative development. This integrated approach contributes to the region's competitiveness in the modern world.

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ҚАЗАҚСТАН ӨНІРЛЕРІНДЕГІ ИННОВАЦИЯЛЫҚ ҚЫЗМЕТТІ ТАЛДАУ

Андатпа

Соңғы уақытта Қазақстанның экономикалық даму факторларының қатарына ғылыми білімге, қоғам өмірінің түрлі салаларына жаңа идеяларды, технологиялар мен өнімдерді енгізуге негізделген инновациялық қызмет жатқызыла бастады. Қазіргі уақытта елдің бәсекеге қабілеттілігін арттыру мақсатында Қазақстан экономикасы қайта құрылуда, оның негізгі факторлары технологиялық трансформациялар – технологиялық артта қалушылықты еңсеру, заманауи техника мен технологияны игеру болып табылады.

Қазақстан өңірлеріндегі инновациялық қызметке жүргізілген талдау өнеркәсіптік кәсіпорындарда инновацияларды пайдаланудың төмен деңгейімен сипатталатын және жалпы өңірлік өнімді құруға инновациялардың салыстырмалы түрде шамалы әсерімен ерекшеленетін өңірлік инновациялық дамуға теңгерімсіздік бар екенін көрсетті. Осы зерттеудің мақсаты Қазақстан өңірлерінің 2022 жылғы инновациялық белсенділігін сипаттайтын көрсеткіштерге талдау жүргізу.

Зерттеудің әдіснамалық негізі отандық және шетелдік ғалымдардың стратегиялық басқару, бағдарламалық-нысаналы басқару, Өңірлік даму, инновациялық даму, өңірлердің орнықты дамуы мәселелері бойынша іргелі еңбектері болды.

Қазақстан экономикалық дамуды жеделдетуге және экономиканы әртараптандыруға мүмкіндік беретін құрал ретінде инновациялық қызметті жандандыруға айтарлықтай күш салуда. Бастамалар ұлттық инновациялық жүйенің компоненттерін жақсартуға, атап айтқанда, инновациялық қызметті қолдаудың мемлекеттік институттарын құруға бағытталған.

Мухамеджанова А.А., Нургалиева С.Ж., Кайдарова С.Е., Байбашева Г.Н.

АНАЛИЗ ИННОВАЦИОННОЙ ДЕЯТЕЛЬНОСТИ В РЕГИОНАХ КАЗАХСТАНА

Аннотация

В последнее время к числу факторов экономического развития Казахстана все чаще стали относить инновационную деятельность, базирующуюся на научных знаниях, внедрении новых идей, технологий и продукций в различные сферы жизни общества. В настоящее время происходит преобразование экономики Казахстана с целью повышения конкурентоспособности страны, главными факторами которого являются технологические трансформации – преодоление технологической отсталости, освоение современной техники и технологии.

Проведенный анализ инновационной деятельности в регионах Казахстана показал, что существует дисбаланс в региональном инновационном развитии, что характеризуется низким уровнем использования инноваций на промышленных предприятиях и отмечено относительно незначительным влиянием инноваций на создание валового регионального продукта. Целью данного исследования провести анализ показателей характеризующих инновационную активность регионов Казахстана за 2022 год.

Методологической основой исследования явились фундаментальные труды отечественных и зарубежных ученых по проблемам: стратегического управления, программно-целевого управления, регионального развития, инновационного развития, устойчивого развития регионов.

Казахстан прилагает значительные усилия на активизации инновационной деятельности как средстве, позволяющем ускорить экономическое развитие и диверсифицировать экономику. Инициативы направлены на улучшение компонентов национальной инновационной системы, в частности, на создание государственных институтов поддержки инновационной деятельности.

