ҚАЗАҚСТАН РЕСПУБЛИКАСЫ ҰЛТТЫҚ ҒЫЛЫМ АКАДЕМИЯСЫНЫҢ

ХАБАРШЫСЫ

ВЕСТНИК

НАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК РЕСПУБЛИКИ КАЗАХСТАН

THE BULLETIN

THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN

PUBLISHED SINCE 1944

1

JANUARY – FEBRUARY 2021



NAS RK is pleased to announce that Bulletin of NAS RK scientific journal has been accepted for indexing in the Emerging Sources Citation Index, a new edition of Web of Science. Content in this index is under consideration by Clarivate Analytics to be accepted in the Science Citation Index Expanded, the Social Sciences Citation Index, and the Arts & Humanities Citation Index. The quality and depth of content Web of Science offers to researchers, authors, publishers, and institutions sets it apart from other research databases. The inclusion of Bulletin of NAS RK in the Emerging Sources Citation Index demonstrates our dedication to providing the most relevant and influential multidiscipline content to our community.

Қазақстан Республикасы Ұлттық ғылым академиясы "ҚР ҰҒА Хабаршысы" ғылыми журналының Web of Science-тің жаңаланған нұсқасы Emerging Sources Citation Index-те индекстелуге қабылданғанын хабарлайды. Бұл индекстелу барысында Clarivate Analytics компаниясы журналды одан әрі the Science Citation Index Expanded, the Social Sciences Citation Index және the Arts & Humanities Citation Index-ке қабылдау мәселесін қарастыруда. Web of Science зерттеушілер, авторлар, баспашылар мен мекемелерге контент тереңдігі мен сапасын ұсынады. ҚР ҰҒА Хабаршысының Emerging Sources Citation Index-ке енуі біздің қоғамдастық үшін ең өзекті және беделді мультидисциплинарлы контентке адалдығымызды білдіреді.

НАН РК сообщает, что научный журнал «Вестник НАН РК» был принят для индексирования в Emerging Sources CitationIndex, обновленной версии Web of Science. Содержание в этом индексировании находится в стадии рассмотрения компанией Clarivate Analytics для дальнейшего принятия журнала в the Science Citation Index Expanded, the Social Sciences Citation Index и the Arts & Humanities Citation Index. Web of Science предлагает качество и глубину контента для исследователей, авторов, издателей и учреждений. Включение Вестника НАН РК в Emerging Sources Citation Index демонстрирует нашу приверженность к наиболее актуальному и влиятельному мультидисциплинарному контенту для нашего сообщества.

Бас редакторы

х.ғ.д., проф., ҚР ҰҒА академигі

М.Ж. Жұрынов

Редакция алкасы:

Абиев Р.Ш. проф. (Ресей)

Абылкасымова А.Е. проф., академик (Қазақстан)

Аврамов К.В. проф. (Украина)

Аппель Юрген проф. (Германия)

Банас Иозеф проф. (Польша)

Велесько С. проф. (Германия)

Велихов Е.П. проф., РҒА академигі (Ресей)

Кабульдинов З.Е. проф. (Қазақстан)

Қалимолдаев М.Н. проф., академик (Қазақстан), бас ред. орынбасары

Қамзабекұлы Д. проф., академик (Қазақстан)

Койгелдиев М.К. проф., академик (Қазақстан)

Лупашку Ф. проф., корр.-мүшесі (Молдова)

Новак Изабелла проф. (Германия)

Полещук О.Х. проф. (Ресей)

Поняев А.И. проф. (Ресей)

Сагиян А.С. проф., академик (Армения)

Таймагамбетов Ж.К. проф., академик (Қазақстан)

Хрипунов Г.С. проф. (Украина)

Шәукенова З.К. проф., корр.-мүшесі (Қазақстан)

Юлдашбаев Ю.А. проф., РҒА академигі (Ресей)

Якубова М.М. проф., академик (Тәжікстан)

«Қазақстан Республикасы Ұлттық ғылым академиясының Хабаршысы».

ISSN 2518-1467 (Online), ISSN 1991-3494 (Print)

Меншіктенуші: «Қазақстан Республикасының Ұлттық ғылым академиясы»РҚБ (Алматы қ.).

Қазақстан Республикасының Ақпарат және коммуникациялар министрлігінің Ақпарат комитетінде 12.02.2018 ж. берілген № 16895-Ж мерзімдік басылым тіркеуіне қойылу туралы куәлік.

Тақырыптық бағыты: *іргелі ғылымдар саласындағы жаңа жетістіктер нәтижелерін* жария ету.

Мерзімділігі: жылына 6 рет.

Тиражы: 2000 дана.

Редакцияның мекенжайы: 050010, Алматы қ., Шевченко көш., 28, 219 бөл., 220,

тел.: 272-13-19, 272-13-18, http://www.bulletin-science.kz/index.php/en/

© Қазақстан Республикасының Ұлттық ғылым академиясы, 2021

Типографияның мекенжайы: «NurNaz GRACE», Алматы қ., Рысқұлов көш., 103.

Главный редактор

д.х.н., проф. академик НАН РК

М.Ж. Журинов

Редакционная коллегия:

Абиев Р.Ш. проф. (Россия)

Абылкасымова А.Е. проф., академик (Казахстан)

Аврамов К.В. проф. (Украина)

Аппель Юрген проф. (Германия)

Банас Иозеф проф. (Польша)

Велесько С. проф. (Германия)

Велихов Е.П. проф., академик РАН (Россия)

Кабульдинов З.Е. проф. (Казахстан)

Калимолдаев М.Н. академик (Казахстан), зам. гл. ред.

Камзабекулы Д. проф., академик (Казахстан)

Койгельдиев М.К. проф., академик (Казахстан)

Лупашку Ф. проф., чл.-корр. (Молдова)

Новак Изабелла проф. (Германия)

Полещук О.Х. проф. (Россия)

ПоняевА.И. проф. (Россия)

Сагиян А.С. проф., академик (Армения)

Таймагамбетов Ж.К. проф., академик (Казахстан)

Хрипунов Г.С. проф. (Украина)

Шаукенова З.К. проф., чл.-корр. (Казахстан)

Юлдашбаев Ю.А. проф., академик РАН (Россия)

Якубова М.М. проф., академик (Таджикистан)

«Вестник Национальной академии наук Республики Казахстан».

ISSN 2518-1467 (Online), ISSN 1991-3494 (Print)

Собственник: РОО «Национальная академия наук Республики Казахстан» (г. Алматы).

Свидетельство о постановке на учет периодического печатного издания в Комитете информации Министерства информации и коммуникаций и Республики Казахстан № 16895-Ж, выданное 12.02.2018 г.

Тематическая направленность: *публикация результатов новых достижений в области фундаментальных наук.*

Периодичность: 6 раз в год. Тираж: 2000 экземпляров.

Адрес редакции: 050010, г. Алматы, ул. Шевченко, 28, ком. 219, 220, тел. 272-13-19, 272-13-18.

http://www.bulletin-science.kz/index.php/en/

© Национальная академия наук Республики Казахстан, 2021

Адрес типографии: «NurNazGRACE», г. Алматы, ул. Рыскулова, 103.

Editor in chief

doctor of chemistry, professor, academician of NAS RK

M.Zh. Zhurinov

Editorial board:

Abiyev R.Sh. prof. (Russia)

Abylkasymova A.E. prof., academician (Kazakhstan)

Avramov K.V. prof. (Ukraine) **Appel Jurgen,** prof. (Germany)

Banas Joseph, prof. (Poland) Velesco S., prof. (Germany)

Velikhov Ye.P. prof., academician of RAS (Russia)

Kabuldinov Z.E. prof. (Kazakhstan)

Kalimoldayev M.N. prof., academician (Kazakhstan), deputy editor in chief

Kamzabekuly D. prof., academician (Kazakhstan) Koigeldiev M.K. prof., academician (Kazakhstan)

Lupashku F. prof., corr. member (Moldova)

Nowak Isabella, prof. (Germany)

Poleshchuk O.Kh. prof. (Russia)

Ponyaev A.I. prof. (Russia)

Sagiyan A.S. prof., academician (Armenia)

Taimagambetov Zh.K. prof., academician (Kazakhstan)

Khripunov G.S. prof. (Ukraine)

Shaukenova Z.K. prof., corr. member. (Kazakhstan)

Yuldashbayev Y.A., prof., academician of RAS (Russia)

Yakubova M.M. prof., academician (Tadjikistan)

Bulletin of the National Academy of Sciences of the Republic of Kazakhstan.

ISSN 2518-1467 (Online), ISSN 1991-3494 (Print)

Owner: RPA "National Academy of Sciences of the Republic of Kazakhstan" (Almaty).

The certificate of registration of a periodical printed publication in the Committee of information of the Ministry of Information and Communications of the Republic of Kazakhstan No. **16895-Ж**, issued on 12.02.2018.

Thematic focus: publication of the results of new achievements in the field of basic sciences.

Periodicity: 6 times a year. Circulation: 2000 copies.

Editorial address: 28, Shevchenko str., of. 219, 220, Almaty, 050010, tel. 272-13-19, 272-13-18,

http://www.bulletin-science.kz/index.php/en/

© National Academy of Sciences of the Republic of Kazakhstan, 2021

Address of printing house: «NurNaz GRACE», 103, Ryskulov str, Almaty.

BULLETIN OF NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN ISSN 1991-3494

Volume 1, Number 389 (2021), 231 – 237

https://doi.org/10.32014/2021.2518-1467.31

UDC 338.242.2

A. Nurgaliyeva¹, A. Zeinullina², G. Nurbayeva³, B. Serekbayeva², G. Bolsynbekova⁴

¹Toraighyrov Pavlodar State University, Pavlodar;

²Shakarim University, Semey;

³Innovative Eurasian University, Pavlodar;

⁴Kazakh Humanitarian Law Innovation University, Semey.

E-mail: nurgalieva_a72@mail.ru, aigul-zeinullina@mail.ru, nuvi79@mail.ru, bak-serikbaeva@mail.ru, bolsynbekovag@mail.ru

EVALUATING THE EFFECTIVENESS OF USING FINANCIAL RESOURCES AIMED AT INNOVATIVE INDUSTRIALIZATION

Abstract. In the new global reality, the most appropriate model for long-term development of Kazakhstan is the industrial and innovative model. The need to implement industrial and innovative development is dictated by the challenges of the XXI century, the economic imperatives of globalization. Lagging indicators such as labor productivity, which today is only 39 thousand US dollars, while this indicator in the OECD countries is on average more than 2.5 times higher. The share of manufacturing in GDP in 2017 is only 12%, while this figure in developed countries such as China is about more than 35%. In order to enter the top 30 developed countries, further development of the industrial and innovative model is required. It is no accident that in his last two messages, the President focuses on the development of new technologies, new models of digitalization, the need to accelerate the introduction of more complex products, increase the technological level, and increase the share of exports. The development of Kazakhstan's economy requires qualitative and structural changes in the economy and a shift away from its dependence on raw materials, an increase in the share of manufacturing, high-tech industries and the expansion of exports of finished products. The formation of a competitive economy requires huge financial resources that will be directed to innovative industrialization on a long-term basis. The new global reality has led to a reduction in the ability to attract funding. Lack of internal sources of financing, reduction of external sources of financing of the banking system of Kazakhstan, insufficient development of the Kazakhstan stock market significantly limit the ability to meet the needs of the real sector of the economy in financial resources.

Keywords: capital, investment, finance, innovation, financial resources, industrialization, financing, lending, modernization.

The success of innovative industrialization is largely indicated by the ways of financial support and its organizational forms. The multiplicity of sources of financing and their diversification serve as a guide in organizing the principles of financing the country's industrialization. The financing system includes sources of financing, methods, forms, and mechanisms for attracting financial resources. Consider the sources of financial support for industrial and innovative processes. Sources of Finance are a complex economic category, which in the course of economic activity are transformed into technical, innovative, material and intellectual and other types of resources. Sources of financing are the receipt of funds that are intended for the acquisition of current and long-term assets, in order to meet obligations to investors, creditors, the state, contractors, and costs for conducting current activities. It can also be expressed in other words as money that is used as investment resources. Sources of financing for innovative industrialization can be the state, enterprises, local governments, financial and industrial groups, investment and innovation funds, small and medium-sized businesses, and individuals. All of them are participants in the economic process and contribute to the development of industrial and innovative activities.

There is the following classification of funding sources:

- 1) on property relations: own sources of financing; attracted sources of financing; borrowed sources of financing;
- 2) by type of owner: state financial resources (funds of non-budgetary funds and budgetary funds, shares and other fixed and current funds, state borrowings, state property); investment financial resources of economic commercial and non-commercial entities, public associations and individuals (attracted and own funds of enterprises, non-state pension funds, collective investors, insurance companies, etc.); investment resources of foreign investors (foreign States, international financial and investment institutions, institutional investors, banks and credit institutions);
 - 3) by time characteristics: short-term; long-term; indefinite.
 - 4) in relation to the object: internal: own; external: attracted and borrowed.

Thus, despite the significant growth of the above indicators in dynamics for 2012-2016, Kazakhstan still has a low level of technological development compared to other countries, as evidenced by its position in world statistics. For the period 2012-2016, the total amount of all funds allocated for Research & Development financing in the Republic of Kazakhstan amounted to 316 billion tenge. In 2016, expenditures on science and innovation in Kazakhstan as a % of GDP amounted to 0.14%. Kazakhstan is significantly inferior to developed and some developing countries in these indicators, being in the 4th technological order, with low performance of science with weak links to the real economy, while the world is already moving along the 6th technological order. At the same time, the international academic Council recommends that the share of expenditures on innovative and industrial development for developing countries should be about 1-1.5% of GDP. For example, in Russia this indicator is equal to 1.3% of national GDP, in China-1.4%, Germany-2.5%, the United States-2.8%, Japan-3.3%. The volume of issued patents in our country is 1671, while in China-26,292, in Russia-19,641, in the United States-154,760, in Japan-217,364 [1-5].

In developed countries, such as Japan, the United States, and the United Kingdom, the share of spending on research, development, and implementation of new equipment and technologies increases every year. Kazakhstan still has a very low level of R & d expenditures, which causes the low competitiveness of the domestic industry. The share of innovation activity in foreign countries is the result of high competitiveness of innovative-active enterprises. Where, over time, innovatively inactive subjects are forced out of the market. In 2017, Kazakhstan ranked 78th out of 127 countries in the world ranking of the Global innovation index, falling by 3 positions compared to 2016. The key index is based on two subordinate indexes: Innovation Input – the key elements of the national economy that provide innovation activity and Innovation Output-the results of innovation activity in the economy [6-7].

According to the Innovation Input Index, in 2017, Kazakhstan ranked 64th (an increase of 1 position in comparison with 2016), including the indicators of human capital and research – 71st (a decrease of 5 positions), the development of innovation infrastructure – 60th (a decrease of 6 positions), the level of market development – 80th (an improvement of 12 positions) and the level of business development – 87th (an improvement of 9 positions). At the same time, according to the results of innovation activity (Innovation Output) Kazakhstan ranks only 93rd, including 88th in terms of results in the field of knowledge and technology (a decrease of 5 positions), and 95th in terms of creative activity (an improvement of 4 positions).

As a result, there is a decrease in such parameters as human capital and research, innovative infrastructure, knowledge and technology. Thus, according to the rating results, Kazakhstan was in the group of "Underperformers", which indicates the presence of the following problems: insufficient development of the innovation and technology market; low level of business innovation activity; low level of research performance; low level of readiness to turn ideas into successful projects startups; underdevelopment of the venture capital; incorrect / untimely use of certain support tools at different stages of development of innovative projects leads to unjustified financial risks and an increase in the share of stressful assets; weak legislation and the lack of commercially attractive technology companies and projects on the market hampers the development of the venture Finance market. Another important problem is that according to the world economic forum's global economic competitiveness Report for 2017-2018, Kazakhstan's position in 2017 compared to 2016 has deteriorated by 4 points and was recorded in 57th place out of 137 [8-9].

Among the factors in this rating "Technological readiness", Kazakhstan took 52nd place in 2017, improving its position by 4 points (table 1).

Sub-factors for technological readiness and innovation	2012	2013	2014	2015	2016	2017	Increase or decrease (from 2017 to 2012)
Place from 140 countries	51	50	50	42	53	57	-6
Technological readiness	87	55	57	61	56	52	+35
Innovations	116	103	84	85	72	72	+44
Availability of the latest technologies	103	90	88	93	89	90	+13
Ability of companies to implement modern technologies	113	91	78	90	90	71	+42
FDI and technology transfer	100	85	93	107	103	95	+5
Ability to innovate	101	92	74	69	68	73	+28
Quality of research institutes	121	108	102	99	81	63	+58
Companies ' R & d expenses	107	94	77	68	55	61	+46
Cooperation between universities and business in the field of R & d	119	90	79	88	88	66	+53
Public procurement of high-tech products	93	71	58	74	63	55	+38
Availability of scientists and engineers	106	104	98	83	70	64	+42
Note - compiled on the basis of data [10]							

Table 1 – Subfactors for technological readiness and innovation

To develop an internationally competitive national innovation system, Kazakhstan needs to focus on the following factors: creating favorable conditions for increasing the availability and transfer of modern technologies; creating mechanisms to increase business demand for modern technologies; creating effective tools to support innovative projects and promote them to the market; development of the venture industry and increasing the availability of venture capital. Based on the results of the analysis (table 2), the following strengths and weaknesses, opportunities and threats of the research and innovation system of Kazakhstan were identified.

Table 2 – SWOT analysis of the research and innovation system in Kazakhstan

Strengths	Weaknesses	
- Commitment to improving and expanding the	- Insufficient level of research achievements at the international	
technological and innovation system;	level;	
- Strategic plans and government programs for economic growth and innovation;	 Lack of interactive communication between research institutions and commercial firms; 	
- Increasing the number of legal, strategic initiatives	- Low demand for new knowledge and research results from	
and reforms to support R & d.	business structures;	
	- Insufficient funding in General.	
Opportunities	Threats	
- Raising awareness of the benefits of innovation and	Dependence of the macroeconomic climate on the oil and gas	
strengthening the innovative potential of companies;	sector;	
- Success in distributing revenue from the oil and gas	- «Brain drain;	
industry to research and other industry sectors;	Decrease in the number of graduates of higher educational	
- Strengthening ties and learning from the experience	institutions and a low number of students who have completed the	
of foreign companies in Kazakhstan;	PhD program;	
The course of production and trade towards	- Increased competition, mainly from Central Asia;	
knowledge-intensive goods and services;	- Unrealistic optimistic expectations of short-term impact and	
 Increasing the participation of domestic SMEs in 	success of the commercialization project;	
innovation-oriented strategies;	- Inappropriate program goals;	
- Using the silk road initiative.	- Poor communication and coordination between participants in the	
	innovation process.	
Note - compiled on the basis of data [10]		

Based on the analysis of financial sources of innovative development we have developed the following key recommendations: expand the scope of grants to support business innovation; promote the development of financial markets for diversification and investment in innovation; improve legislation for

the development of the venture capital market and ensure the introduction of innovative venture capital business into practice; it is necessary to develop a mechanism for joint financing of innovations by both the state and business. World experience shows that the state should not Finance, the state should help the private sector to Finance. Thus, our analysis of the financing of innovative development in Kazakhstan showed that despite the significant scale of measures taken to support innovation, the key problems are still: weak financial incentives for the transfer of advanced technologies; low efficiency of mechanisms for solving and searching for priority technological tasks; weak level of business receptivity to technological innovations; lack of technological and managerial competencies; low activity of innovative technologies in the education system; weak control system for the implementation of innovative projects.

Kazakhstan's innovation policy should be oriented in the following directions: participation in the formation of high-tech industries, in the creation of an effective system for the transfer of foreign and intersectoral technologies; participation in the creation and support of modern scientific and innovative infrastructures (technoparks, national research centers, science and technology parks), where there are scientific and technical and industrial organizations and enterprises with scientific and technological base; application of the existing scientific and technical potential in the development of advanced industries.

Limited investment resources make it necessary to use them effectively. State programs conducted in relation to industrial and innovative development are the main basis for evaluating the effectiveness of investment funds. The efficiency of using investment resources aimed at implementing the SPIIDRK means not only achieving quantitative indicators, but also qualitative ones. The state program of industrial and innovative development of the Republic of Kazakhstan for 2015-2019 has been implemented for 3 years. Accumulated over the years of industrialization potential and government support within the SPIIDRK ensured positive growth rates in the manufacturing sector even in crisis conditions that already characterized its effect on the economy of Kazakhstan. The effectiveness of the state program is determined by the degree of achievement of the set goals and its indicators. The SPIIDRK has set 4 target indicators and 11 indicators of results. 2 of the 11 SPIIDRK results indicators have not been achieved: on the implementation of 4 projects aimed at solving technological problems of industries, as a result of the suspension of funding for innovative grants in 2016 due to the need to bring regulatory documents on the provision of innovative grants in accordance with the Entrepreneurial code of the Republic of Kazakhstan, which entered into force on 01.01.16 (plan for 2016-2017 – 4, fact-2 units).); the creation of 2 technology development centers – as a result of delays in decision-making procedures for the creation and registration of centers, the conclusion of agreements with foreign partner companies (plan for 2016-2017-2, fact -0).

The effectiveness of the SPIIDRK was confirmed by the growth of the country's industrial production in 2017 (107.1%), overcoming the negative impact of the crisis. At the same time, taking into account the low base of 2016, the mining sector (109.3%) outpaced the manufacturing sector (105.1%) in terms of production growth. However, due to the stable positive dynamics, over the 3 years of implementation of the SPIIDRK, the manufacturing sector (105.9% in 2017 to 2014) is ahead of the mining sector (103.7%) in terms of real production growth. As a result, the contribution of the manufacturing sector to the country's economy has increased. So, in 2017. compared to 2015, the share of the manufacturing industry in the: GDP - by 1.9 % (from 10.1% to 12%), industry – by 0.4 % (from 40% to 40.4%), exports – by 1.6 % (from 30.5% to 32.1%), employment - by 0.4 % (from 6.6% to 7.0%), gross foreign direct investment (FDI) – by 6.6 % (from 17.4% to 24%). The range of engineering products has been expanded with high-tech products that have never been produced in our country before: cargo ships, buses, screw pumps, trailed wheel equipment, railway axles and wheel pairs, bicycles. Well-known companies such as General Electric, General Motors, Alstom, Talgo, LG and others work in the industry. The production of new types of products in the chemical industry (phosphoric-potash fertilizers, 2,4-D acid 2-ethylhexyl ether, liquid fertilizers CAS), the production of building materials (granite slabs) [10-15].

With the help of the industrialization program, the image of the industry has been qualitatively updated. There are 26 new manufacturing sectors, such as the automobile industry, railway engineering, titanium industry, medical equipment and equipment manufacturing, solar and wind energy. This is facilitated by the implementation of projects to modernize existing and create new modern manufacturing industries within the framework of the industrialization Map and the regional business support maps. Over 3 years of implementation of the SPIIDRK, 378 projects totaling more than 3.1 trillion were commissioned, it will create more than 31 thousand new jobs in such sectors as oil refining, production of

construction materials, metallurgy, railway, electrical engineering, agricultural engineering, Agrochemistry, food production. As a result, the contribution of industrial projects to the total number of employees in the sector increased from 1.9% in 2015 to 5.5% in the 4th quarter of 2017. New directions of export of domestic goods are emerging. For example, deliveries of copper, yellow phosphorus and passenger cars to the UAE, zinc and lead to Vietnam, other silicon to Slovakia, Spain and Italy, starter batteries to China and the Republic of Benin, ammophos to Argentina, transformers to Belarus, capacitors to Hungary, etc. [16-17].

Today, Kazakhstan exports a total of more than 800 goods from the manufacturing sector to 115 countries. The country is a world leader in the supply of ferroalloys, yellow phosphorus, flour, and cottonseed oil. The growth of competitiveness of domestic products is confirmed by the entry into foreign markets of metallurgy products (locomotives, switches, fiber-optic cable, electric locomotives, ventilation equipment), chemical industry (hydrochloric acid, polypropylene, sodium cyanides), construction materials (stoneware slabs, multi-layer insulating glass products). At the same time, projects with the maximum IEDP score are oriented towards both domestic and foreign markets, with a significant volume of exports of high value-added products, are characterized by a high level of labor productivity comparable to the world average, and also have a significant socio-economic effect on employment, environmental friendliness and budgetary receipts. IERP is an indicator of the level of expected impact of investment projects and export operations financed by the Bank on the socio-economic development of the country, during the period of their service in the Bank. The IEDI indicator for 2016 exceeds the planned values by 0.9%. The implemented projects have a significant effect on the socio-economic development of the country, creating the basis for the industrial and innovative development of Kazakhstan.

Evaluation of the efficiency of the investment project DBK carries out using three main indicators of the discounted method: net present value, internal rate of return, investment payback period. DBK also requires the provision of the following performance indicators: revenue, gross margin, net profit, debt-to-equity ratio, debt coverage ratio by operating cash flows. All performance indicators are calculated for the full funding period. It is also worth noting that DBK also had problem loans. So in 2013, DBK transferred 42 problem loans to JSC Investment Fund of Kazakhstan (IFK). And this is 35% of 118 projects for the entire period of DBK activity [49]. IFK specializes in supporting and restoring economic activity of industrial, agro-industrial and infrastructure organizations regardless of the sector of the economy, promoting the rehabilitation of enterprises, launching production, improving the socio-economic situation in the regions [18-19].

The Development Bank of Kazakhstan transferred the assets of 42 problem borrowers to the IFK, among which: 5 health-improving measures were planned (ACIG JSC, Astana Polygraphy JSC, Semipalatinsk Leather and Fur Plant LLP, IKBK JSC, Zhanabas Agroholding LLP"); 5 (this is 14.2% of the total number of projects) are not subject to rehabilitation due to their establishment by the court as insolvent and recognition of them or their pledgers as bankrupt; the following works are carried out for 25 borrowers: claims work (debt collection, judicial implementation of collateral), 99 claims were filed, part of them was satisfied (57), are under consideration (5), left without consideration (14), denied satisfaction (14), returned (8), discontinued (1); as a result of the repayment of the debt, the amount of 191.36 million tenge was repaid. The basis of our research was an assessment of the effectiveness of the implementation of state programs on the example of SPIIDRK and SPAIIDRK according to the following main criteria, such as: commercial performance-which takes into account the financial implications of the program for its participants; budget efficiency - through expenditures of the national and local budgets, as well as funds of the national Fund of the Republic of Kazakhstan for the purpose of industrialization; economic efficiency-takes into account the cost effectiveness and results obtained that are not included in the direct financial interests of the participants.

To improve the assessment of the effectiveness of investment use, it is necessary to take into account the impact of financing instruments on the macroeconomic indicators of Kazakhstan. For the effective implementation of DBK's activities, we propose the introduction of new mechanisms for financing investment projects: project financing-carried out by issuing loans and (or) purchasing bonds, if the funds from the placement of bonds are directed by the Issuer to the implementation of the investment project; mezzanine financing-carried out by providing a subordinated loan with the right to convert it into shares or equity interests of the Borrower. This mechanism is proposed to be implemented with a funding period of

5-20 years, and with a minimum amount of funding -7.0 billion rubles; syndicated financing-carried out by issuing a loan through the conclusion of a single agreement with other syndicate participants, where the DBK acts as the organizer or participant of the syndicate, while its participation share should not exceed 50% of the total amount of financing. We suggest setting a minimum amount of syndicated financing in the amount of 7.0 billion tenge, 3.5 billion tenge of which will be financed by the DBK [22-23].

Thus, based on the results of the analysis, we can conclude that today there are problems of attracting investment in innovative industrialization. The lack of long-term money in the banking sector, the weak development of the stock market, reduced competitiveness in the world market, a decrease in exports of finished products, all these factors affect the development of an innovative industrial cluster. It is also worth noting the budget distribution of money, assessing the effectiveness of the state policy and the role of SPIIDRK 2, we can conclude that there is a positive growth in financing innovative industrialization. The Development Bank of Kazakhstan plays a special role in financing long-term projects by the state.

А. Нургалиева¹, А. Зейнуллина², Г. Нурбаева³, Б. Серекбаева², Г. Болсынбекова⁴

¹С. Торайғыров ат. Павлодар мемлекеттік университеті, Павлодар қ.;
 ²Шәкәрім университеті, Семей қ.;
 ³Инновациялық Еуразия университеті, Павлодар қ.;
 ⁴Қазақ инновациялық гуманитарлық-заң университеті, Семей қ.

ИННОВАЦИЯЛЫҚ ИНДУСТРИЯЛАНДЫРУҒА БАҒЫТТАЛҒАН ҚАРЖЫЛЫҚ РЕСУРСТАРДЫ ПАЙДАЛАНУ ТИІМДІЛІГІН БАҒАЛАУ

Аннотация. Жаңа жаһандық нақтылық жағдайында Қазақстанның ұзақ мерзімді дамуының неғұрлым тиімді моделі индустриялды-инновациялық модель болып табылады. Индустриялық-инновациялық дамуды іске асыру қажеттілігі XXI ғасырдың сын-қатерлеріне, жаһанданудың экономикалық императивтеріне байланысты. Бүгінгі күні 39 мың АҚШ долларын құрайтын еңбек өнімділігі сияқты көрсеткіштердің артта қалуын көрсетіп отыр. Бұл көрсеткіш ЭЫДҰ елдерінде орта есеппен 2,5 еседен астам жоғары. Өңдеуші өнеркәсіптің ЖІӨ-дегі үлесі 2017 жылы бар болғаны 12%-ды құрады, ал бұл көрсеткіш Қытай сияқты дамыған елдерде шамамен 35%-ды құрайды. Дамыған 30 елдің қатарына кіру үшін индустриялық-инновациялық модельді одан әрі дамыту қажет. Жолдауда Президент жаңа технологияларды, цифрландырудың жаңа модельдерін дамытуға, неғұрлым күрделі өнімді жедел енгізу, технологиялық деңгейді арттыру, экспорт үлесін ұлғайту қажеттілігіне баса назар аударуды табыстады.

Қазақстан экономикасын дамыту үшін экономикадағы сапалы және құрылымдық өзгерістер және оның шикізатқа тәуелділігінен арылу, өңдеуші өнеркәсіптің, жоғары технологиялық салалардың үлесін ұлғайту және дайын өнім экспортын кеңейту қажет. Бәсекеге қабілетті экономиканы қалыптастыру үшін ұзақ мерзімді негізде инновациялық индустрияландыруға бағытталатын орасан зор қаржылық ресурстар қажет. Жаңа жаһандық жағдайында қаржыландыруды тарту мүмкіндіктерінің қысқаруына әкелді. Қаржыландырудың ішкі көздерінің жетіспеушілігі, Қазақстанның банк жүйесін қаржыландырудың сыртқы көздерінің қысқаруы, қазақстандық қор нарығының жеткіліксіз дамуы экономиканың нақты секторының қаржылық ресурстарына қажеттіліктерін қанағаттандыру мүмкіндіктерін едәуір шектейді.

Кілт сөздер: сөздер: капитал, инвестиция, қаржы, инновация, қаржылық ресурстар, индустрияландыру, қаржыландыру, несиелеу, модернизациялау.

А. Нургалиева¹, А. Зейнуллина², Г. Нурбаева³, Б. Серекбаева², Г. Болсынбекова⁴

¹Павлодарский государственный университет им. С.Торайгырова, Павлодар;
²Университет Шакарима, Семей;
³Инновационный Евразийский университет, Павлодар;
⁴Казахский гуманитарно-юридический инновационный университет, Семей

ОЦЕНКА ЭФФЕКТИВНОСТИ ИСПОЛЬЗОВАНИЯ ФИНАНСОВЫХ РЕСУРСОВ, НАПРАВЛЕННЫХ НА ИННОВАЦИОННУЮ ИНДУСТРИАЛИЗАЦИЮ

Аннотация. В условиях новой глобальной реальности наиболее целесообразной моделью долгосрочного развития Казахстана является индустриально-инновационная модель. Необходимость реализации индус-триально-инновационного развития диктуется вызовами XXI века, экономическими императивами глобализации. Отставание таких показателей, как производительность труда, которая на сегодняшний день составляет лишь 39 тыс. долл. США, в то время как данный показатель у стран ОЭСР в среднем выше более чем в 2,5 раза. Доля обрабатывающей промышленности в ВВП в 2017 году составляет всего 12%, в то время как в данный показатель в развитых странах, таких как Китай составляет порядка более 35%. Для того чтобы войти в 30-ку развитых стран,

требуется дальнейшее развитие индустриально-инновационной модели. И не случайно в своих посланиях Президент делает акцент на развитии новых технологий, новых моделей цифровизации, необходимости ускоренно внедрять более сложную продукцию, повышения технологи-ческого уровня, увеличение доли экспорта.

Для развития экономики Казахстана необходимы качественные и структурные изменения в экономике и уход от ее сырьевой зависимости, увеличение доли обрабатывающей промышленности, высокотехнологичных отраслей и расширение экспорта готовой продукции. Для формирования конкурентоспособной экономики необходимы колоссальные финансовые ресурсы, которые на долгосрочной основе будут направлены на инновационную индустриализацию. Новая глобальная реальность привела к сокращению возможностей привлечения финансирования. Нехватка внутренних источников финансирования, сокращение внешних источников финансирования банковской системы Казахстана, недостаточная развитость казахстанского фондового рынка значительно ограничивают возможности удовлетворения потребностей реального сектора экономики в финансовых ресурсах.

Ключевые слова: капитал, инвестиция, финансы, инновация, финансовые ресурсы, индустриализация, финансирования, кредитования, модернизация.

Information about authors:

Nurgaliyeva Ainash, candidate of economic sciences, professor of the department «Economics», Pavlodar State University. S.Toraigyrova E-mail: nurgalieva a72@mail.ru, https://orcid.org/0000-0002-3818-7013;

Zeinullina Aigul, candidate of economic sciences, Acting Assoc. Professor of the department «Finance and accounting», NLC«Shakarim state University of Semey». E-mail: aigul-zeinullina@mail.ru, https://orcid.org/0000-0002-4787-4966;

Nurbayeva Gulmira, candidate of economic sciences, associate Professor of the department «Business and management», Innovative university of Eurasia. E-mail: nuvi79@mail.ru, https://orcid.org/0000-0001-7006-4403;

Serekbayeva Bakyt, master of Economics, senior lecturer of the department «Finance and accounting», NLC «Shakarim state University of Semey» E-mail: bak-serikbaeva@mail.ru, https://orcid.org/0000-0001-6872-0002;

Bolsynbekova Gulnara, Kazakh Humanitarian Law Innovation University, Semey city. E-mail: bolsynbekovag@mail.ru, https://orcid.org/0000-0002-8925-3041

REFERENCES

- [1] Official website of the «Kazakhstan Institute of industry development» (www.kidi.gov.kz).
- [2] Kuchukova N.K. Sources of financing of industrial and innovative development of Kazakhstan // Economy. Finance. Researches. 2010, (no. 2). P.72-77.
- [3] Lekarkina N. K. Problems of attracting investments and opportunities for their solution. Economic journal "Investment Assessment". 2016, P.7-15.
- [4] Kuchukova N. K. Modernization of the financial system of Kazakhstan in the context of globalization: monograph / L.N. Gumilyov Eurasian national University. Astana: Master of SOFTWARE, 2013. 366 p.
- [5] Nazarbayev N. N. "Strategy" Kazakhstan-2050": a new political course of the established state", Kazakhstanskaya Pravda, December 15, 2012, p.1-8.
- [6] State program of industrial and innovative development of the Republic of Kazakhstan for 2015-2019 dated August 1, 2014 No. 874. Astana, 2014.
- [7] Address of the President of the Republic of Kazakhstan to the people of Kazakhstan "New development opportunities in the fourth industrial revolution".-10.01.2018.
 - [8] Global innovation index 2017
 - [9] Site NATR Analytics [Electronic resource]: http://analytics.natd.gov.kz.
- [10] Research activities in Kazakhstan [Electronic resource]: http://www.kazportal.kz/nauchno-issledovatelskaya-deyatelnost-v-kazahstane/.
- [11] Ivashchenko A. A., Kolobov D. V., Novikov D. A. Mechanisms for financing innovative development of the firm. Moscow: IPU RAS, 2005, 66 p.
- [12] Kerimbek G., Moldashbayeva L., Jrauova K., Satymbekova K., Imanbaeva Z. "History and prospects of development of the stock exchange"/ NEWS of the national academy of sciences of the Republic of Kazakhstan, Volume 1, Number 323 (2019), 60-65. ISSN 2224-5294. https://doi.org/10.32014/2019.2224-5294.8
 - [13] The Global Competitiveness Report 2015-2016. Klaus Schwab, World Economic Forum https://www.weforum.org/
 - [14] Global Innovation Index https://www.globalinnovationindex.org/
- [15] Abdygapparova S. B. Innovative potential of Kazakhstan: mechanisms of activation: monograph. Almaty: Ekonomika, 2010. 158p.
- [16] Baimuratov U. B., Saparova B. S. Influence of transnational corporations on the development of the economy of Kazakhstan//Transit economy. 2008.
 - [17] Ivanova N. Innovative sphere: results of the century. //World economy and international relations. No. 8. 2011. 22-35 p.
 - [18] Asia-Pacific Trade and Investment Report 2017: Channelling Trade and Investment into Sustainable Development.
- [19] R.K. Berstembaeva, N.B. Rubenkova, Zh.A. Toyzhigitova "Financial mechanism for supporting entrepreneurs and hedging their risks". Reports of the national academy of sciences of the republic of Kazakhstan. Volume 2, Number 324 (2019), 80-85. https://doi.org/10.32014/2019.2518-1483.41

Publication Ethics and Publication Malpractice in the journals of the National Academy of Sciences of the Republic of Kazakhstan

For information on Ethics in publishing and Ethical guidelines for journal publication see http://www.elsevier.com/publishingethics and http://www.elsevier.com/journal—authors/ethics.

Submission of an article to the National Academy of Sciences of the Republic of Kazakhstan implies that the described work has not been published previously (except in the form of an abstract or as part of a published academic thesis or as an electronic preprint, see http://www.elsevier.com/postingpolicy), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. In particular, translations into English of papers already published in another language are not accepted.

No other forms of scientific misconduct are allowed, such as plagiarism, falsification, fraudulent data, incorrect interpretation of other works, incorrect citations, etc. The National Academy of Sciences of the Republic of Kazakhstan follows the Code of Conduct of the Committee on Publication Ethics (COPE), and follows the COPE Flowcharts for Resolving Cases of Suspected Misconduct (http://publicationethics.org/files/u2/New_Code.pdf). To verify originality, your article may be checked by the Cross Check originality detection service http://www.elsevier.com/editors/plagdetect.

The authors are obliged to participate in peer review process and be ready to provide corrections, clarifications, retractions and apologies when needed. All authors of a paper should have significantly contributed to the research.

The reviewers should provide objective judgments and should point out relevant published works which are not yet cited. Reviewed articles should be treated confidentially. The reviewers will be chosen in such a way that there is no conflict of interests with respect to the research, the authors and/or the research funders.

The editors have complete responsibility and authority to reject or accept a paper, and they will only accept a paper when reasonably certain. They will preserve anonymity of reviewers and promote publication of corrections, clarifications, retractions and apologies when needed. The acceptance of a paper automatically implies the copyright transfer to the National Academy of Sciences of the Republic of Kazakhstan.

The Editorial Board of the National Academy of Sciences of the Republic of Kazakhstan will monitor and safeguard publishing ethics.

Правила оформления статьи для публикации в журнале смотреть на сайте:

www:nauka-nanrk.kz

ISSN 2518-1467 (Online), ISSN 1991-3494 (Print)

http://www.bulletin-science.kz/index.php/en/

Редакторы М. С. Ахметова, Д. С. Аленов, А. Ахметова Верстка на компьютере А.М. Кульгинбаевой

Подписано в печать 10.02.2021. Формат 60х881/8. Бумага офсетная. Печать – ризограф. 20,17 п.л. Тираж 500. Заказ 1.