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Development of regional economic infrastructure based on innovation

Abstract

Object: The purpose of this article is to consider the development of regional innovation activity: principles, objectives, operational elements, and approaches to managing the development of innovation activity at the regional level.

Methods: The research uses methods of statistical analysis, comparative analysis, and graphs.

Findings: The key results of the study are summarized in the following conclusions:

1) The study examines the main factors of competitiveness, their impact, and relevance to increasing competitiveness in the regional socio-economic system.

2) The study shows that the region has difficulty accepting and developing innovations and that the level of innovation is not yet at the proper level.

3) It was presented that innovation and logistics have a huge impact on the competitiveness of the region.

4) The growth rates of the number of innovative products and the growth rates of the share of large and medium-sized companies using digital technologies in the industry have been determined.

Conclusions: A detailed description of innovations in the region makes it possible to compare the levels of development of the innovation sphere in the region. The detection of the dependence of the subjects of economic relations on the conditions proposed in the study makes it possible to establish the characteristics of innovative interaction together with the external and internal components of the innovation process of the regional economy.

Keywords: development, spatial economic systems, regional economy, regional systems, infrastructure, traditions, innovations, economic sectors.

Introduction

Innovations serve as the cornerstone for shaping the infrastructure of the regional economy. The expansion of regional production and its sustainable growth necessitate continuous infrastructure enhancements, which are regarded as inherent prerequisites. Infrastructure stands out as a pivotal factor in propelling the development of the regional economy itself. For instance, the inadequate development of financial services, particularly in banking, and the inefficiencies in their management within the region pose significant hurdles to sectoral progress. Hence, financial institutions must promptly devise and implement various mechanisms to

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enhance their operational efficiency, serving as both direct and indirect influencers in this domain. Over the past decade, to mitigate risks, enterprises, governmental bodies, and regional communities have meticulously explored opportunities and distinctive attributes associated with innovative infrastructure development.

The integration of novel advancements into the infrastructures of regional financial systems and local markets across all tiers and sectors, alongside the operational domains of economic entities, constitutes a process of accumulating, fortifying, implementing, and shaping their capabilities. These innovations delineate the efficacy of technical and technological operations, coordination mechanisms, administrative frameworks, socio-economic structures, institutional frameworks, and other regional paradigms. Consequently, a notable infusion of innovation within the frameworks and infrastructures governing the operations of primary economic entities in both the tangible and financial realms of state economics exerts significant competitive pressures, underscoring the imperative to harmonize middle and lower-tier innovation across diverse sectors and facets of the regional economy.

Innovation infrastructure emerges as a specialized sector grappling with the imperatives of advancing innovative progress within the region. Aligned with the framework of establishing innovation systems at both national and regional scales, innovation infrastructure should comprise two inseparable components: dissemination infrastructure and societal innovation infrastructure. Furthermore, the former component places considerable emphasis not only on disseminating innovations but also fostering cooperation and partnerships among stakeholders engaged in the innovation ecosystem within the region. A crucial auxiliary role of innovation infrastructure lies in its potential to catalyze innovative development within the region and serve as a mechanism for cultivating a contemporary innovation culture within the regional innovation milieu.

Literature Review

The rapid pace of technological advancement has exerted a profound influence on the landscape of business and economics. These transformations have not only bolstered overall economic performance but have also revolutionized the operational paradigms of various businesses. A fresh perspective on business practices has emerged, emphasizing the creation of novel channels for job creation and market expansion, particularly through online and e-commerce platforms.

Technical innovations catalyze a qualitative overhaul of existing systems. A.P. Ndesaulwa and J. Kikula (2016) coin the term “Technovation”, amalgamating technology and innovation, underscoring their pivotal role in driving impactful changes in the global economy and enhancing market productivity. According to their viewpoint, the bedrock of innovation lies in research and development, meticulous business planning, and the proactive inclination of corporate management towards innovation integration. Sustaining competitiveness within a dynamic market and economic milieu necessitates continual innovation and targeted enhancements across critical business domains.

L. Mirani (2013) asserts that while advanced technological progress is indispensable, the effective coordination of existing business technologies and processes is equally crucial for attaining competitive advantages and maximizing productivity. As Peter Drucker (1985) aptly observes, “Innovation is an action that provides resources with new opportunities for wealth creation”. This underscores the pivotal role of innovation in generating and harnessing resources. Indeed, resources only attain economic value when they are utilized and leveraged effectively.

Drawing from the insights of M.E.B. Herrera (2015), an innovative approach systematically streamlines the procedures, guidelines, strategies, and practices involved in the adoption and utilization of innovations. Actively engaging in these processes not only broadens the scope of knowledge but also cultivates avenues for its effective application.

To effectively regulate economic development within regions, it becomes imperative to establish infrastructure while concurrently nurturing the educational standards and competencies of the populace. This creates an environment conducive to generating new knowledge and propelling technological advancements, thereby fostering the development and commercialization of creative concepts (Khanin et al., 2021).

Omelianenko and Yurchenko shed light on the primary services offered by prevalent institutional forms of innovation infrastructure, notably emphasizing the development of technology parks and various other facets (Omelianenko, Yurchenko, 2022).

The transformative effects stemming from alterations in the structure of innovation models within regions yield favorable outcomes on economic performance. These observations are grounded in the findings of rigorous research efforts.

Capello and Lenzi (2019) delved into the transformations within innovative models, noting their positive repercussions on economic metrics across the European Union. These insights hold potential for refining and advancing innovation policies not solely within the EU but also for fostering knowledge exchange among diverse regions to optimize innovation practices (Capello, Lenzi, 2019).

Exploring China's regional development disparities, Dai et al. (2022) and Luo et al. (2023) underscore the imperative of resource allocation efficiency for research and green innovation. Feng (2023) observes that technological innovation, coupled with governmental support, facilitated regional economic convergence in China post-2006. Hence, technological innovations can serve as catalysts for aligning economic development levels across disparate regions, potentially enhancing productivity, fostering new market creation, and sustaining competitiveness (Feng et al., 2023).

Many scholars highlight the pivotal role of cluster development in bolstering regional innovation infrastructure. By fostering a conducive innovation milieu and regulating conditions for innovation entities and clusters, governments stimulate their autonomous growth and facilitate the expansion of the service sector across diverse regions, thereby shaping a cohesive innovation infrastructure nationwide (Kniazevych et al., 2021).

In their research, Yu, W., Hong, J., Zhu, Y., Marinova, D., & Guo, X. affirm the influence of Creative Industries Clusters (CIC) on regional innovation and economic growth in China (Yu et al., 2014).

The efficacy of economic innovation demonstrates a positive correlation with sustainable development innovation effectiveness. This suggests that objectives in both economic and sustainable development innovation realms can be concurrently achieved (Rauter, 2019).

Hence, innovations assume a pivotal role in regional development, exerting significant influence on economic, social, and technological landscapes. They contribute to the emergence of new industries, business paradigms, and employment opportunities, while also shaping innovative infrastructure and clusters. Regions actively embracing innovations are poised to enhance their competitiveness in the global market, attracting investments and yielding business advantages. This proactive stance towards innovation not only propels regional growth but also fosters resilience in the face of evolving global dynamics. By continuously adapting and integrating innovative solutions, regions can stay ahead in the competitive landscape, attracting talent, investment, and opportunities. Moreover, the ripple effects of innovation extend beyond economic prosperity, influencing societal well-being and technological advancement.

Methods

The focus of investigation lies within the East Kazakhstan Region, with data drawn from regional statistics pertaining to research themes, legislative frameworks, and regulatory landscapes. The innovation potential, comprising various elements of innovation activity such as susceptibility and engagement in innovation initiatives, stands as a fundamental precursor to effective innovation management. It serves as a cornerstone in establishing mechanisms that facilitate the realization of innovative opportunities. Consequently, innovatization represents the degree of innovation integration, serving as a primary indicator of industry's innovative propensity. Hence, susceptibility to innovation delineates a system's capability to adeptly and efficiently navigate innovation implementation, crafting requisite organizational frameworks and conducive conditions — a true gauge of an entity's innovative stature.

The selection of appropriate measurement tools assumes paramount importance, as the quality, competence, and objectivity of these instruments significantly impact outcomes and subsequent managerial decisions. Evaluating regional innovative development poses a dual challenge: structuring evaluation criteria, which entails delineating logical frameworks for indicator groups that align with the essence, goals, and objectives of the evaluated processes, and justifying and leveraging diverse indicators for assessing regional innovative progress. These twin challenges are intricately intertwined, necessitating comprehensive research and concerted efforts for resolution.

Results

In the contemporary phase of societal advancement, innovative processes stand as paramount drivers for enhancing production efficiency and addressing critical socio-economic challenges. Innovative development emerges as the predominant thrust of both state policies and economic strategies. Particularly crucial for regions endowed with requisite industrial and intellectual capacities, innovations serve as potent catalysts for economic expansion. However, regional progress is contingent not only upon scientific and technological advancements and the adoption of modern methodologies but also on avenues for local self-governance.

Economic resources within a region constitute pivotal structural elements of the regional economy, wielding significant influence on the trajectory of innovative development. Exploring the determinants of innovative progress facilitates the identification of effective strategies for regional systems. Hence, elucidating the factors of innovative development, grounded in their impact on existing innovation potentials and contributions to regional innovation endeavors, holds promise for guiding policy formulation and strategic planning.

Assessing the landscape of innovation activity necessitates delineating key performance indicators. The Methodology for compiling statistics of research, development, and innovation, as endorsed by the Chairman of the Committee on Statistics of the Republic of Kazakhstan on October 6, 2016, specifies essential indicators including internal and external research and development expenditures, sources of financing for internal research and development, the number of research units, and the count of personnel engaged in research and development endeavors.

A scrutiny of the innovation landscape within the region reveals that the innovative activity of companies has reached 6.3% in the period spanning 2021 to 2022, with 108 innovative enterprises operational within the region. Table 1 showcases the key innovation metrics pertinent to the region.

Table 1. The main indicators of innovation activity in the region

Indicator	2018	2019	2020	2021	2022
Internal R&D costs, million tenge	209,6	236,3	224,4	180,2	185,2
GRP by production method, million tenge	749 879,0	795 551,2	837179,9	918 236,9	1085922,9
Share of domestic expenditures to GDP (in % of GRP)	0,028%	0,030%	0,027%	0,020%	0.017%
Number of respondents	1 047	1 001	1 047	1 049	1 023
Number of innovative and active enterprises	114	116	111	119	115
The level of activity in the field of innovation, %	10,89	11,59	10,60	11,34	11,24
The number of employees who performed research and development	312	229	182	135	93
The volume of innovative products, million tenge	16 028,0	16 500,4	11 753,8	11 312,8	13 804,9
Costs of technological innovations, million tenge	12 852,4	10 701,8	16 248,0	16 233,9	21 548,6
Note – compiled by the author on the basis of data from the Bureau of National Statistics					

Drawing from the latest available statistical data, an analysis is conducted on the indicators spanning the years 2018 to 2022. The tabulated data reveals a noteworthy trend in internal research and development (R&D) expenditures during this period. Specifically, internal R&D expenditures experienced a decline of 11.6% from the year 2018, amounting to 209.6 billion tenge.

Internal research and development costs denote the tangible financial outlays incurred in the pursuit of research and development activities within the country. In the year 2019, there was a notable surge in internal development costs, witnessing a spike of 12.74%, equivalent to 26.7 million tenge. However, subsequent years saw a downturn in R&D expenditures. In 2020, there was a 5% decrease, resulting in expenses totaling 224.4 million tenge. This downward trajectory persisted into 2021, with expenses plummeting by 19.7%, culminating in internal expenditures amounting to 180.2 million tenge. In 2022, there was a marginal uptick in expenses, recording an increase of 2.77%, albeit attributed to a reduction in the number of employees. Consequently, expenses stood at 185.2 million tenge for the year.

Regarding the Gross Regional Product (GRP) within the region, internal expenditures exhibited a downward trend over the study duration. For instance, in 2018, internal costs accounted for 0.028% of the GRP, a figure that dwindled to 0.017% by the conclusion of 2022. In 2019, internal costs constituted 0.03% of the GRP, signaling a slight uptick before subsequent declines ensued. In 2020, the proportion of internal costs stood at 0.027%, further diminishing to 0.020% in 2021. Meanwhile, the aggregate R&D expenditures across the republic amounted to 0.13% by 2022. Notably, the share of domestic R&D expenditures within the total government research spending structure reached 0.27%. Figure 1 illustrates the correlation between internal costs and research and development endeavors.

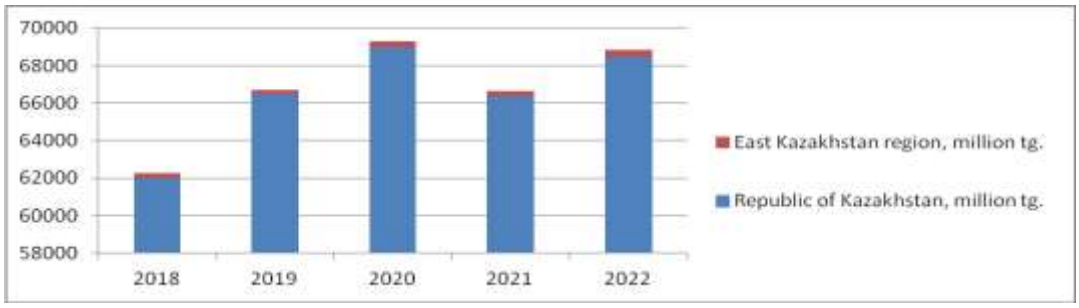

Figure 1. Ratio of internal R&D costs

Note – compiled by the author on the basis of data from the Bureau of National Statistics

The degree of innovation activity within organizations is contingent upon the interplay among involved entities, with the number of respondents serving as a determinant factor. Interestingly, despite fluctuations in organizational dynamics, there were no substantial shifts in innovation activity indicators during the observed period. For instance, while the activity level stood at 10.89% in 2017, it marginally increased to 11.24% by 2022. Figure 2 visually portrays the trajectory of innovation activity over the designated period.

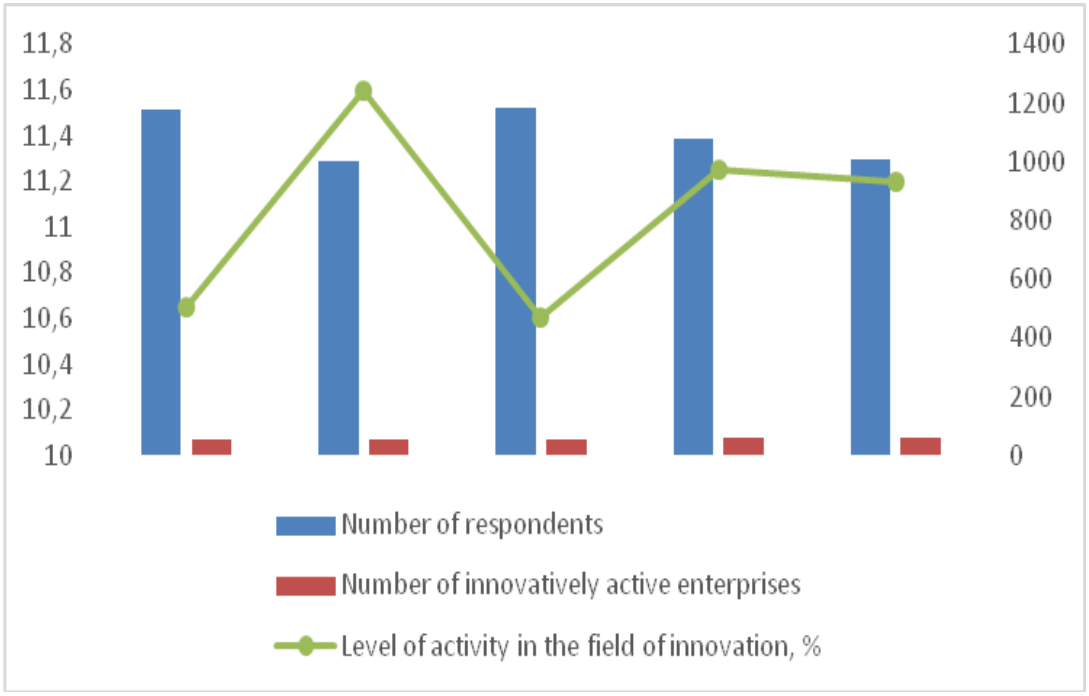

Figure 2. Innovative activity of enterprises

Note – compiled by the author on the basis of data from the Bureau of National Statistics

The diminished competitiveness of intelligent products coupled with their subpar technological efficiency precipitates a decline in the demand for innovations and market viability. The challenges plaguing the scientific and technical configuration of the innovation complex stem from various factors, including an excessive degree of production specialization, concentration within antiquated industrial hubs, and the prevalence of traditional and technologically lagging manufacturing sectors. These issues collectively impede the effective integration and diffusion of innovative solutions, hindering overall industrial advancement and economic growth.

Discussions

Within this overarching trend, regions characterized by high production specialization face heightened vulnerability to fluctuations in market conditions and economic downturns. Addressing these challenges necessitates the establishment of institutions fostering robust collaboration between the state and the private sector, facilitating seamless integration between scientific research and production processes. Primarily, the creation of effective information infrastructure is imperative to accurately gauge the actual demand for tech-

nologies and innovative products. This entails conducting comprehensive marketing and technological research to inform decision-making processes effectively. The delineation of the architecture of indicators for regional innovative development is elucidated in Table 2, laying the foundation for strategic planning and targeted interventions aimed at fostering sustainable innovation ecosystems.

Table 2. Formation of the architecture of indicators of innovative development of the region

<table>
<tr><td colspan="4">Innovative development of the region</td></tr>
<tr><td colspan="4">Goal: to achieve a balanced state of innovation</td></tr>
<tr><td colspan="4">Tasks: formation and development of innovative potential
- activation of innovative activity of the enterprises of the region
- increase of efficiency and effectiveness of innovative activity
- actualization of support for innovation activities in the region</td></tr>
<tr><td colspan="4">Criteria</td></tr>
<tr><td colspan="2">Formation and development of innovative potential</td><td colspan="2">Activation of Innovation Activity</td></tr>
<tr><td>1. Formation and development of education in the region</td><td>2. Formation and development of the scientific potential of the region</td><td>3. Efficiency of innovative activity of enterprises and organizations of the region</td><td>4. The effectiveness of innovative activities of enterprises and organizations in the region</td></tr>
<tr><td>5.1. Support of regional educational programs, supporting universities, and competitions</td><td>5.2. Support of scientists and scientific institutions, regional grants, competitions and awards</td><td>5.3. Regional financing of innovative projects, activation and support of innovative projects</td><td>5.3. Regional financing of innovative projects, activation and support of innovative projects</td></tr>
<tr><td colspan="4">Note – compiled by the author</td></tr>
</table>

Moreover, fostering innovative activities requires the development of legal frameworks and regulations that incentivize enterprises engaged in relevant technical advancements while facilitating synergies between scientific research and industrial operations.

Consequently, addressing the imperative of enhancing the mechanism for innovative regional development necessitates the development of methodological and analytical tools tailored to account for territorial and economic intricacies, the region's developmental stage, and the technological landscape. This holistic approach aims to enhance the overall competitiveness of the regional economy.

To propel further advancement in the innovation sphere, informed by insights into the initial conditions and structural facets of regional innovation potential, a plethora of tools must be leveraged to regulate the transfer process of scientific and technical outputs. The process of technology transfer, fundamental to innovation, facilitates the conversion of knowledge and technology into tangible new products and services, thereby driving economic growth and meeting societal demands.

Furthermore, innovation processes play a pivotal role in bolstering competitiveness and accelerating socio-economic progress within regions. The evolution towards an innovative economy should be aligned with productive forces and industrial relations, ensuring harmony and efficacy (Bayadilova et al., 2020).

This comprehensive approach to innovation financing underscores the importance of strategic planning and resource allocation in driving sustainable innovation ecosystems within regions. By forecasting innovation trajectories, optimizing financing channels, and instituting flexible mechanisms for financial adjustment, regions can effectively catalyze innovation-driven growth and maximize the socio-economic benefits derived from innovative endeavors.

In essence, the convergence of legal, methodological, and financial frameworks forms the bedrock of a conducive environment for innovation. By fostering synergies between science, industry, and governance, regions can unlock their innovation potential, driving economic diversification, job creation, and societal progress.

Conclusion

In summary, the identified imperfections and challenges in the innovative development of the region underscore the imperative of devising targeted measures to bolster innovation. These measures will be delineated by regional programs underpinning the strategy for scientific, technical, and innovative advancement. The execution of innovation policy necessitates a multifaceted approach, leveraging market dynamics, insti-

tutional frameworks, and managerial strategies. It is imperative to implement both financial and innovation policy measures, including:

– Creating avenues to incentivize and fund innovation endeavors by diverse investors, including national and regional authorities, as well as extrabudgetary funds.

– Facilitating close collaboration between legislative bodies, executive authorities, and the scientific community to govern innovation activities, ensuring researchers' involvement in key decision-making processes across all management tiers.

– Establishing mechanisms to provide incentives to companies adopting and commercializing innovative products.

– Promoting the adoption of medium-term loans with reduced interest rates.

– Introducing state-backed insurance for bank loans granted to implement innovative projects.

– Developing innovation infrastructure such as information centers, technology parks, and venture funds, alongside offering state assistance.

– Enhancing the legislative and regulatory framework for innovation.

– Elevating education and skill levels to master the theoretical and practical aspects of technology commercialization, intellectual property protection, and innovative project management, fostering an innovation-oriented culture.

– Implementing measures for intellectual property protection and enhancing the quality of issued patents.

– Upgrading informational resources in line with scientific and technical research and the requirements of companies for scientific and technical products.

– Developing strategies for commercializing the outcomes of scientific and technical research and their integration into production, along with initiating projects for economic support based on applied developments and their industrial implementation.

Investing in research and development (R&D) infrastructure, fostering partnerships between academia and industry, and nurturing a supportive regulatory environment are essential components of a robust innovation strategy. These efforts can spur breakthrough discoveries, facilitate technology transfer, and accelerate the commercialization of innovations, driving economic growth and job creation.

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Инновациялар негізінде аймақ экономикасының инфрақұрылымын дамыту

Аңдатпа:

Мақсаты: Мақаланың мақсаты аймақтық инновациялық дамуды қарастыру, атап айтсақ: принциптері, мақсаты, міндеті, функционалдық элементтері, аймақтық деңгейде инновациялық дамуды басқару тәсілдері.

Әдісі: Зерттеуде статистикалық талдау, салыстырмалы талдау және графика әдістері қолданылды.

Қорытынды: Зерттеудің негізгі нәтижелері келесі тұжырымдарда қорытындыланған:

1. Зерттеуде аймақтық әлеуметтік-экономикалық жүйеде бәсекеге қабілеттілікті арттыру мақсатында бәсекеге қабілеттіліктің негізгі факторларын, олардың әсері мен өзектілігін қарастырады.

2. Зерттеу көрсеткендей, аймақта инновацияны енгізу мен дамытуда қиындықтар бар, ал инновация деңгейі әлі тиісті деңгейде емес.

3. Аймақтың бәсекеге қабілеттілігіне инновациялар мен логистика сияқты факторлардың жоғары дәрежеде әсер ететіні көрсетілген.

4. Инновациялық өнім санының өсу қарқыны және осы салада цифрлық технологияларды пайдаланатын ірі және орта компаниялар үлесінің өсу қарқыны анықталды.

Тұжырымдама: Аймақтағы инновациялардың егжей-тегжейлі сипаттамасы аймақтағы инновациялық саланың даму деңгейлерін салыстыруға мүмкіндік береді. Экономикалық қатынастар субъектілерінің зерттеуде ұсынылған жағдайларға тәуелділігін анықтау аймақтық экономиканың инновациялық процесінің сыртқы және ішкі компоненттерімен бірге инновациялық өзара әрекеттесудің сипаттамаларын анықтауға мүмкіндік жасайды.

Кілт сөздер: даму, кеңістіктік экономикалық жүйелер, аймақтық экономика, аймақтық жүйелер, инфрақұрылым, дәстүрлер, инновациялар, экономика секторлары.

Ж.А. Абылкасимова, Л.С. Гумурзакова, Д.М. Акишева, Д.К. Саржанов, Ж.А. Амангельдиева

Развитие инфраструктуры региональной экономики на основе инноваций

Аннотация:

Цель: Целью данной статьи является рассмотрение развития региональной инновационной деятельности: принципы, задачи, оперативные элементы и подходы к управлению развитием инновационной деятельности на региональном уровне.

Методы: В исследовании использованы методы статистического анализа, сравнительного анализа и графики.

Результаты: Ключевые результаты исследования обобщены в следующих выводах:

1. В исследовании рассмотрены главные факторы конкурентоспособности, их воздействие и актуальность с целью повышения конкурентоспособности в региональной социально-экономической системе.

2. Исследование показывает, что регион с трудом принимает и развивает инновации, и уровень инноваций еще не находится на должном уровне.

3. Было представлено, что инновации и логистика оказывают огромное воздействие на конкурентоспособность региона.

4. Определены темпы роста количества инновационных продуктов и доли крупных и средних компаний, использующих цифровые технологии в отрасли.

Выводы: Детальная характеристика инноваций в регионе дает возможность сравнить уровни развития инновационной сферы в регионе. Обнаружение зависимости субъектов экономических взаимоотношений от предложенных в исследовании условий дает возможность установить характеристики инновационного взаимодействия вместе с внешними и внутренними компонентами инновационного процесса региональной экономики.

Ключевые слова: развитие, пространственные экономические системы, региональная экономика, региональные системы, инфраструктура, традиции, инновации, секторы экономики.

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Development of small innovative entrepreneurship and its effectiveness in the national economy of the Republic of Kazakhstan

Abstract

Object: The development of small innovative entrepreneurship contributes to the achievement of important social and economic goals. In this context, a number of important indicators can be used to evaluate the development of small business. These indicators include the number of small businesses operating in the small sector of the economy, the average wage rate, the growth of small business production, and the growth of investments in the small business sector. It helps to assess the effectiveness of investments in the small business sector.

In the current economic literature, the term "innovation" can be used to emphasize relevant and widely used concepts. It is important because it shows the processes of creating new paradigms of economic development through innovation and science education. Small innovative entrepreneurship plays an important role in the creation of innovative infrastructure and contributes to the integration of scientific production into the economy through the transfer of scientific knowledge and technologies.

Currently, it's evident that the financial health of Kazakhstan is closely linked to harnessing the economic capabilities of small-scale enterprises, along with the opportunities and provisions for their financial backing, highlighting the critical role of small businesses in the country's economic progression.

Methods: For an article on the development of small innovative entrepreneurship in Kazakhstan and its effectiveness in the national economy, it is proposed to use an integrated methodological approach. First, review existing research and literature to assess the current status and dynamics of the sector, and analyze statistical data to understand its scope and contribution to the country's economy. Based on the data obtained, it will be possible to formulate targeted recommendations to improve the situation in the field of small innovative entrepreneurship, thereby contributing to the sustainable economic development of the country.

Findings: The study highlights the significant contribution of small innovative entrepreneurship to the economic development of Kazakhstan, highlighting its role in creating jobs and stimulating innovation. Yet, for small enterprises to reach their full potential, enhancing governmental assistance and eliminating present obstacles is essential. This will facilitate the better incorporation of small businesses into the broader national economy.

Conclusions: The article explores the impact of small innovative entrepreneurship on the economy of Kazakhstan, analyzing government support measures and their effectiveness. The focus is on identifying barriers to growth and proposing strategies to enhance the contribution of small businesses to national economic development.

Keywords: Small innovative entrepreneurship, national economy, innovation, social economy, investments, small business, innovative infrastructure, technologies, economic growth.

Introduction

The pivotal role of small innovative enterprises within the framework of national and societal advancement in Kazakhstan is increasingly recognized due to the economy's operation as a dynamic system of collaboration among governmental bodies, the business community, and society at large. In the prevailing economic climate, small businesses emerge as crucial players, propelling economic expansion, driving scientific and technological innovation, enriching the market with high-quality offerings, and generating new employment opportunities. The success stories from economically advanced nations around the globe underscore the critical need for a vibrant and efficient small business sector as a cornerstone of national economic health (Gromova et al., 2020).

The expansion of small enterprises is a strategic lever for realizing significant socio-economic ambitions. The hallmarks of a thriving small business environment include a burgeoning number of small enterprises, a rise in employment opportunities within this sector, enhanced average earnings, amplified production of goods and services, and an uptick in investment directed towards small businesses (Maiti et al., 2020).

In today's global economic landscape, the influence of small businesses is substantial, particularly in the context of a post-industrial society which witnesses a redefinition of the socio-economic functions attributed to this sector. Small and medium-sized enterprises (SMEs) have become indispensable to the social reproduction process, a prerequisite for the successful socio-economic evolution of societies and for elevating production efficiencies (Chierici et al., 2020).

The active engagement of small businesses in innovative processes has been a defining trend of recent decades. Furthermore, the growth of small enterprises plays a pivotal role in shaping the middle class, a demographic that forms a significant portion of the economically active population within the global economic framework (Doroshenko et al., 2016). The enhanced role of SMEs in the economy of developed Western countries is linked with the diversification of their operational roles. The essential role of small businesses in fostering effective economic development in Kazakhstan is undeniable. Moving forward, there is a strategic aim to significantly heighten the contribution of SMEs to the Gross Domestic Product (GDP) of the nation, marking a commitment to leveraging the potential of small businesses to fuel economic growth and innovation (Lisowska, 2020).

Literature Review

In the article by Pletnev, Nikolaeva, and Kampa, a comparative analysis of the criteria for classifying enterprises as small and medium-sized businesses in different countries is conducted. The authors identified that the diversity in defining small and medium-sized enterprises reflects the unique economic and social conditions of each country. The research shows how different concepts of small business and its role in the economy lead to the formation of specific criteria. The results can be useful for researchers and practitioners conducting cross-country comparisons of small and medium-sized business activities. Understanding these criteria is important for international cooperation and the development of policies to support small and medium-sized businesses (Pletnev et al., 2017).

In the article by Korotaeva N.V. titled “Government support measures for small and medium-sized enterprises”, published in “Socio-economic phenomena and processes” in 2018, the authors analyze the development indicators and the regulatory framework for state support of small and medium-sized business entities in various countries (Korotaeva, 2018).

They conclude that in Russia, state support for small and medium-sized enterprises (SMEs) is not as actively implemented as necessary. The authors propose priority measures within the framework of state stimulation of SMEs activities and improvement of the investment climate amidst economic instability. These measures aim to enhance the effectiveness of government support for SMEs, recognizing their pivotal role in economic development and stability (Yadollahi et al., 2014).

Methods

The research methodology is based on the use of systematization, analysis and synthesis, criterion analysis and comparative evaluation methods. The information base of the research consists of monographs, scientific articles on the research topic published in abstracted journals, and information obtained from the official Internet resources of the countries under study. The methods used in writing a scientific work include the following: statistical method: consists of data from the website of the National Bureau of Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan; method of generalization in which inductive and analytical conclusions are made on the basis of collected material, etc.

Results

“Creation of a developed and inclusive economy” is one of the aspects of the state's development that President Kassym-Jomart Tokayev mentioned in his address to the people of Kazakhstan on September 2, 2019. In this context, the President noted that the growth of labor productivity, the promotion of innovations and the introduction of artificial intelligence play an important role in world progress.

Despite the pandemic, investments in research and development and other areas that contribute to innovation activity continue to grow. However, their long-term sustainability remains uncertain as the world fac-

es new challenges. In the context of limited financial resources and increasing competition for them, there is a need to establish a link between innovation and productivity.

Kazakhstan's level of innovation and technological development has some momentum, but is still unstable and limited in scope. In 2021, compared to 2020, the share of innovatively active enterprises decreased from 11.5% to 10.5%, and the number of such enterprises decreased by 276 units and reached 2,960 units (Table 1).

Table 1. Primary metrics of enterprises' innovative activity

	2017	2018	2019	2020	2021
Number of enterprises, units	30854	30 501	28 411	28 087	28 203
from which:					
All kinds of innovations, unity	2 974	3 230	3 206	3 236	2 960
the level of activity in the field of innovation by all types of innovation, in percent	9,6	10 ,6	11,3	11,5	10,5
unit with productivity and process innovation	1 770	2 019	2 131	2 402	1 808
the level of activity in the field of innovation in terms of productivity and process innovations, in percent	5,7	6,6	7,5	8,6	6,4
Percentage of innovative products (goods, services) in GDP	1,55	1,72	1,60	2,43	1,71
The share of innovative products (goods, services) in industrial enterprises in the volume of total industrial production, in percent	3,21	3,41	3,26	5,83	3,51
Note – compiled with the data source stat.gov.kz					

In 2021, the volume of innovative products of goods, works and services decreased from 1.7 trillion tenge to 1.4 trillion tenge compared to 2020. It should be noted that in 2019 this figure was 1.1 trillion tenge.

The highest level of innovative activity by sector is observed in wholesale and retail trade (24.2%), manufacturing industry (18.2%) and healthcare (16.8%). In addition, enterprises located in large cities of Kazakhstan, such as Almaty and Astana, show a high level of innovative activity compared to the regions of the country.

The share of innovative products in GDP remains at a low level. In 2021, its share was 1.71% and decreased by 0.72% compared to last year (Fig. 1).

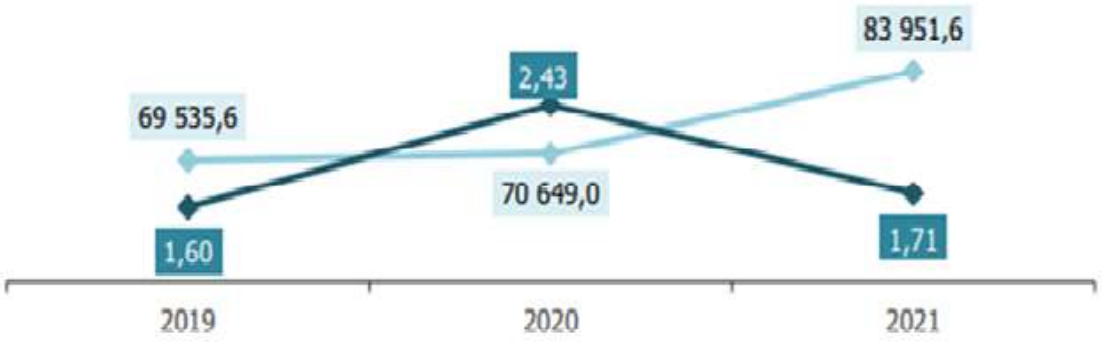

Figure 1. The share of innovative products in relation to GDP in 2019–2021

Note – compiled with the data source of the author.

Investments in research and development (R&D) lay the foundation for future innovation. Worldwide R&D spending is 1.93% of gross domestic product (GDP) (as of 2020).

If we consider the distribution of these expenses by country, the highest level of investments in R&D is more than 5% of GDP. For example, Israel spends 5.44% of its GDP on R&D, South Korea — 4.81%, Sweden — 3.53%, Finland — 2.94%, Japan — 3.26%, China — 2.40 %, Estonia invests 1.79%.

However, despite annual growth, R&D spending in Kazakhstan is only 0.13% of GDP. remains at a very low level (Fig. 2).

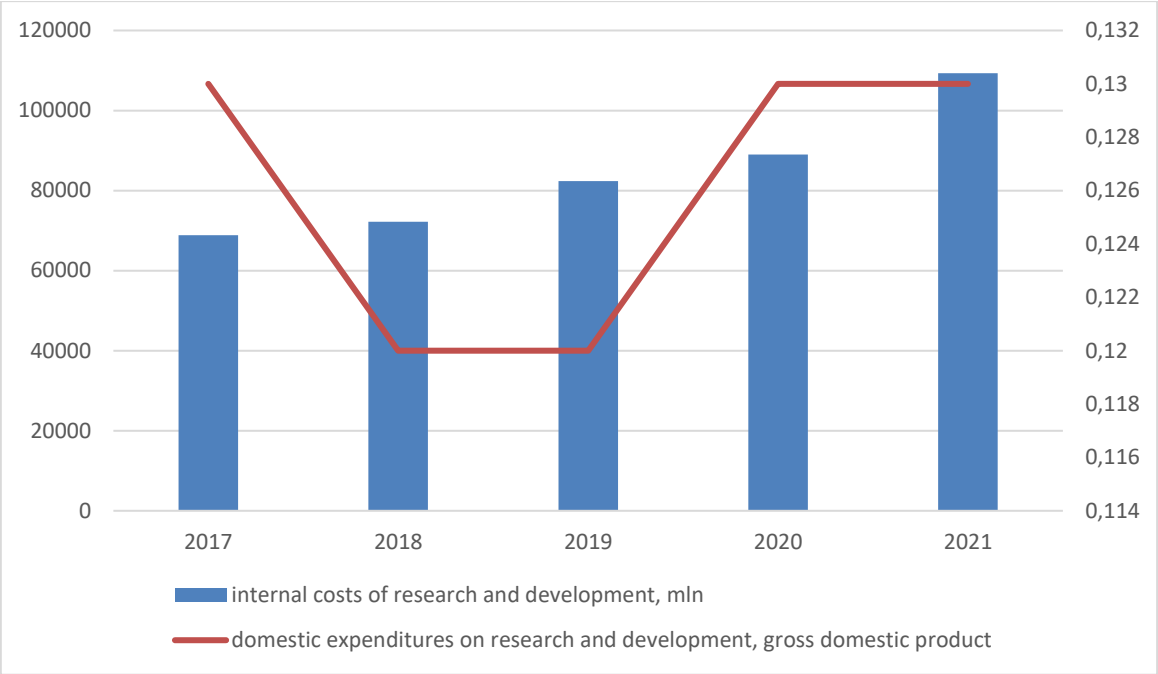

Figure 2. Domestic spending on R&D

Note – compiled with the data source of the author

The main share is taken by internal expenses, on which positive dynamics are observed in the last three years: in 2021, compared to the level of 2020, it increased by 22.8% and amounted to 109.3 billion tenge.

In the division of industries, the main share of internal expenditures on R&D belongs to engineering developments and technologies (40.0%), natural sciences (29%). The least expenses are spent on social sciences (2.8%) and humanities (6.7%), which amount to 3,037.1 million tenge and 7,300 million tenge, respectively (Table 2).

Table 2. The main indicators of innovative activity of enterprises for 2021 are by types of economic activities

	Number of enterprises, units	From	activity level in the field of innovation, in percent
		those with innovation	
Everything	28 203	2 960	10,5
Agriculture, forestry and fisheries	1 825	182	10,0
Mining industry and quarrying	790	113	14,3
Manufacturing industry	4 179	538	12,9
Electricity supply, gas, steam supply and air conditioning	408	55	13,5
Water supply; sewage system, waste collection and distribution control	529	33	6,2
Construction	5 384	204	3,8
Wholesale and retail trade; repair of cars and motorcycles	7 896	718	9,1
Transport and storage	2 030	155	7,6
Information and communication	1 185	178	15,0
Financial and insurance services	17	1	5,9
Professional, scientific and technical service	1695	208	12,3
Education	125	77	61,6
Health and social services	2 140	498	23,3
Note – compiled with the data source stat.gov.kz			

It should be noted that in 2021, compared to last year, the number of employees in the field of R&D will decrease from 22,665 to 21,617 people, including 17,092 research specialists and 2,824 technical personnel. In addition, 53.6% of workers are women. The main part of these employees is involved in the higher professional education sector (Table 3).

Table 3. Quantity of staff engaged in research and development activities, in terms of individuals.

	2019	2020	2021	2022	2023
Republic of Kazakhstan	446687	461983	481732	507 238	526 290
Abay	7218	7459	7739	8029	8 281
Akmola	13940	14273	14694	15022	14 863
Aktobe	17984	18263	18904	19 769	19 731
Almaty	15462	16191	16167	18803	19 795
Atyrau	12828	13398	13756	14 163	14 626
West Kazakhstan	11056	11408	11588	12 345	12 514
Zhambyl	12597	13578	14425	15 032	15 077
Zhetisu	7388	7514	8958	7981	8 188
Karaganda	27421	28372	28855	28441	28 737
Kostanay	14254	14255	14264	14 675	14 830
Kyzylorda	10524	10795	11005	11 270	10 619
Mangystau	15762	15610	15866	16 407	16 812
Pavlodar	16007	16582	17032	17 562	17 688
North Kazakhstan	10303	10294	10557	11 176	11 431
Turkestan	15067	15452	16057	16825	17 674
Ulytau	2 697	2 747	2766	2 907	2 969
East Kazakhstan	13805	14344	14488	14996	14 987
Nur-Sultan city	73704	78008	84426	94 407	100 990
Almaty city	125554	129297	133552	140 424	148 244
Shymkent city	23116	24143	26633	27004	28 234
Note – compiled with the data source stat.gov.kz					

In addition, the quantity of staff engaged in research and development activities, on the contrary, increased by 19052 units (in 2023 — 19052 units). A significant number of organizations are concentrated in the cities of Almaty (7820) and Astana (6583).

In recent years, small and medium-sized enterprises in the regions of the Republic of Kazakhstan have undergone significant changes. These changes are related to more or less permanent regional specialization, as well as types of work, composition of participants and external environment. Small businesses have taken a leading position in economic activities focused on regional and local needs. They are successfully developing the production of goods and services that were previously overshadowed by large-scale industry, especially during the Soviet period. There is a significant increase in the volume of production, turnover and services, as well as an increase in state support and, as a result, an increase in investment activity.

Small businesses in Kazakhstan have shown a high degree of “stress resilience” during the pandemic. Despite the economic crisis caused by the pandemic, the number of enterprises in the small and medium business sector has remained stable and has not decreased. The structure of small and medium business entities also reflects the growth of the number of small and medium enterprises.

According to the data of the National Bureau of Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, the number of small business enterprises operating at the end of 2023 was 526,290 units (Table 4).

Table 4. Number of operating small business enterprises, units

	2019	2020	2021	2022	2023
Republic of Kazakhstan	299 662	321 936	344 130	390 316	412 186
Abay	5 075	5 242	5 599	6 248	6 464
Akmola	10 216	10 670	11 088	11 913	11 930
Aktobe	12 783	13 411	13 922	15 470	14 985
Almaty	10 020	10 859	11 227	13 543	16 242
Atyrau	9 077	9 393	9 644	10 359	10 684
West Kazakhstan	8 131	8 121	8 541	9 443	9 792

Zhambyl	8 713	9 478	10 568	11 504	11 692
Zhetisu	4 958	5 118	6 103	6 967	6 263
Karaganda	19 202	20 049	20 878	22 188	22 142
Kostanay	10 502	10 902	11 358	12 477	12 605
Kyzylorda	7 672	7 842	8 079	8 736	8 390
Mangystau	10 285	11 015	11 857	12 830	13 508
Pavlodar	12 062	12 834	13 300	13 788	14 219
North Kazakhstan	7 592	7 931	8 435	9 304	9 397
Turkestan	10 994	11 721	13 140	14 582	15 318
Ulytau	2 078	2 187	2 183	2 466	2 571
East Kazakhstan	9 731	10 125	10 522	11 140	11 264
Nur-Sultan city	50 739	55 849	62 194	72 941	78 306
Almaty city	74 424	82 127	85 754	103 266	113 514
Shymkent city	15 408	17 062	19 738	21 151	22 900
Note – compiled with the data source stat.gov.kz					

In the year 2020, the worldwide economy as well as that of Kazakhstan experienced significant downturns due to the adverse effects of the coronavirus pandemic. The corporate sector and small to medium-sized enterprises (SMEs) were particularly hard-hit by the repercussions of the pandemic.

The adverse impacts of the pandemic have resulted in a reduction of economic activity within the country. By January 2021, the business activity index had plummeted to 48.4 points. It's noteworthy that this index fell below the critical threshold of 50, indicating a negative shift. This negative trend persisted throughout the year. Additionally, the prevailing business environment deteriorated, further impacting the value of this indicator. According to the monitoring agency Finprom, it decreased from -1.9 to -2.6.

The largest number of active small enterprises was registered in Kazakhstan in July 2020 and reached 164.3 thousand units. However, after this point, the indicators began to decline. At the beginning of 2023, there was an increase in the number of works small enterprises, their total number was 412,186, which is 5.3% more than last year. 379,000 of them are active trading enterprises (Fig. 3).

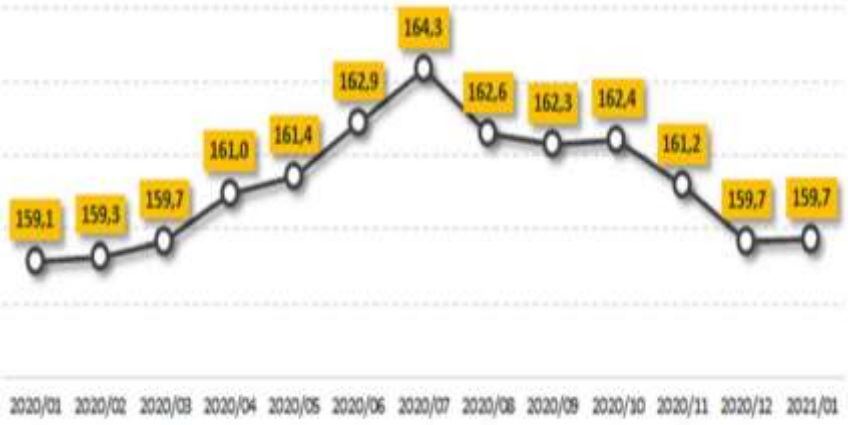

Figure 3. Statistics of small business entities of the Republic of Kazakhstan by activity indicator

Note – compiled with the data source of the author.

As a result of various challenges stemming from the crisis, numerous small businesses were compelled to cease operations. The peak level of active small enterprises was recorded in July 2020, totaling 164.3 thousand units. However, since then, this metric has exhibited a declining trend, with 159.7 thousand active enterprises registered in the country by January 2021, representing a decrease of 2.8% compared to July 2020. Consequently, the number of active small enterprises decreased by 5 thousand over the span of six months.

Furthermore, there has been a notable uptick in the number of temporarily inactive enterprises within the country. Over the course of a year, this figure surged by 23.3%, reaching 120.5 thousand units (Fig. 4).

Figure 4. Statistics of temporarily inactive small business entities

Note – compiled with the data source of the author.

Almost half of the working small enterprises in Kazakhstan are located in three regions — Almaty (47,000), Astana (30,900) and Karaganda region (9,800). There are only 1,000 enterprises in Ulytau Oblast, a region with a small number of operating small firms.

At the beginning of January 2022, 411,819 active small businesses selling and repairing cars and motorcycles were registered, which is 13.8% higher than last year. It is also worth paying attention to the number of enterprises in the education sector, which constituted more than 17,100 companies. In addition, the sectors of construction (with 39,615 companies) and professional, scientific and technical services (with 30,028 companies) should be mentioned. All three of these sectors make up a significant portion of business activity in the country.

Compared to the previous year, the total number of active small enterprises increased significantly, especially in the trade and auto repair sector, where an increase of 5,500 enterprises was registered. This is in sharp contrast to the construction sector, where the number of such enterprises decreased by 287 organizations.

The share of investments directed to small enterprises will increase in 2021 and will be 48% of all investments. made up, and according to the results of 2020, this indicator is 41% formed. Since the share of small business investments is almost half of all investments and more than 7% of GDP (by 2021), they play an important role in economic indicators, especially against the background of the decline in investments of medium and large enterprises (Fig. 5).

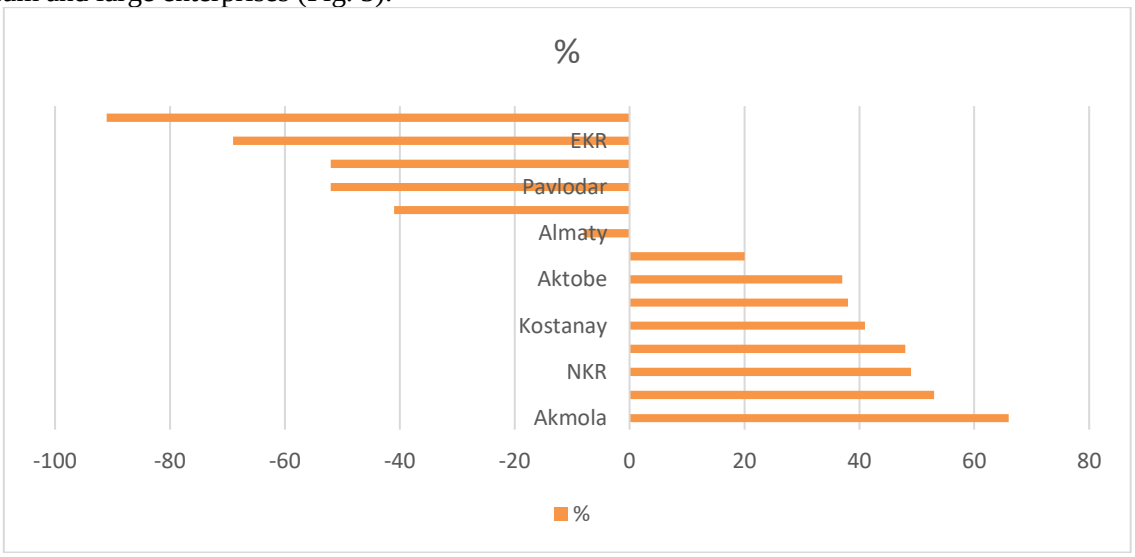

Figure 5. 2021. benefits of small enterprises in the division of regions

Note – compiled with the data source of the author.

Small business abroad is very active, as many countries provide significant support to entrepreneurs in the field of business development. In addition, there are organizations with developed credit systems that offer attractive opportunities for investment. All this contributes to rapid development in various segments of small business.

Discussions

Digitization and science have great potential to improve productivity and improve lives.

Although private investments in high-tech companies and projects remain insignificant due to the lack of a developed business incubation system and the lack of commercially attractive projects, the success of incubators in the world practice is determined by their ability to attract funding from residents in the next stages.

Ensuring macroeconomic stability is a necessary condition for economic growth, ensuring stability of prices, national currency and acceptable budget deficit. Sustainability as the basis of a country's competitiveness helps investors to identify future advantages.

In recent years, the economic development of countries has faced various challenges. After the pandemic, countries faced geopolitical risks, which led to food crises, supply disruptions and rising inflation.

In recent years, small and medium-sized enterprises in the regions of the Republic of Kazakhstan have undergone significant changes. These changes are related to more or less permanent regional specialization, as well as types of work, composition of participants and external environment. Small businesses have taken a leading position in economic activities focused on regional and local needs. They are successfully developing the production of goods and services that were previously overshadowed by large-scale industry, especially during the Soviet period. There is a significant increase in the volume of production, turnover and services, as well as an increase in state support and, as a result, an increase in investment activity.

The figure below shows the change in small business pre-tax income. Thus, the largest decline in income was observed in large regions, while growth in income was recorded in regions with smaller economies. This led to an overall decline in profit margins across the country. In particular, in the first half of the year in Almaty region, the profit decreased by 91%, the income of companies in West Kazakhstan and Atyrau regions decreased by about 70%, which may be related to the oil and gas sector and the decrease in raw material prices. However, there are regions where profits have even increased, for example, Akmola region with a 66% increase, as well as Kyzylorda, Turkestan and North Kazakhstan regions with a 50% increase.

Innovative projects often appear in small businesses, and foreign investors in most cases prefer to invest in new projects of electrical engineering and electronics (in more than 20% of cases). Business incubators also actively invest in small businesses, especially unique and non-standard ideas (in 70% of cases). Despite this, foreign investors can be somewhat skeptical of small businesses. Statistics in the USA show that small businesses provide more than 50% of innovative goods and materials for export, while similar indicators in Europe reach 40%.

In Western nations, the advancement of small businesses progresses rapidly due to substantial attention and federal-level support from national authorities. Small businesses are regarded as the cornerstone of sustainable economic progress in developed countries and serve as the backbone of the middle class. Formerly developing countries such as Taiwan, Singapore, Indonesia, and others have also experienced remarkable economic expansion through the cultivation of small and medium-sized enterprises (SMEs). The growth of small businesses in these nations is intricately intertwined with the overall economic development trajectory.

Conclusions

The advancement of small-scale innovative entrepreneurship contributes significantly to key socio-economic objectives. This is evident in the rise in the number of small business establishments, the employment figures within the small sector of the economy, the average monthly income, the expansion of production (goods, services) within small enterprises, and the heightened investment activity in such ventures.

Typically, the annual average workforce in these enterprises does not exceed 15 individuals, and income is assessed as of January 1st of each year in line with the requirements of the national budget. According to available data, micro-entrepreneurs operate as proprietors of private enterprises, with an allocation of 30,000 MCIs (Minimum Calculation Index) designated for them.

Small innovative enterprise is an enterprise or design group engaged in the development, implementation or improvement of market products, services or technologies using the results of completed scientific research, scientific and technical achievements and technical improvements. It also complies with the legal requirements related to the classification of small business entities.

A small innovative enterprise, often called a science-intensive enterprise, usually specializes in high technologies and produces goods or services that are competitive in the technical innovation market.

As an additional criterion, a small innovative enterprise is more than three years old and has a production share of no more than 10% in the total volume of production.

Public-private partnership stands out as the primary driver of economic modernization. It necessitates collaboration between all sectors of the economy — both private and public — transitioning from disjointed plans and efforts to unified, coordinated actions.

Based on research findings, meeting the demands for fostering innovative potential within small businesses in the present Kazakh economy may pose significant challenges. However, it remains entirely feasible. It can be inferred that such efforts will enhance the efficacy of small and medium-sized businesses' involvement in the country's economic modernization endeavors.

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Шағын инновациялық кәсіпкерліктің дамуы және оның Қазақстан Республикасының ұлттық экономикасындағы тиімділігі

Аңдатпа:

Мақсаты: Шағын инновациялық кәсіпкерлікті дамыту маңызды әлеуметтік және экономикалық мақсаттарға қол жеткізуге ықпал етеді. Бұл тұрғыда шағын бизнестің дамуын бағалау үшін бірқатар маңызды көрсеткіштерді қолдануға болады. Мұндай көрсеткіштерге экономиканың шағын секторында жұмыс істейтін шағын кәсіпорындардың саны, жалақының орташа деңгейі, шағын бизнес өндірісінің өсуі, шағын бизнес секторына инвестициялардың өсуі жатады. Бұл шағын бизнес секторына инвестициялардың тиімділігін бағалауға көмектеседі.

Қазіргі экономикалық әдебиеттерде «инновация» термині өзекті және кеңінен қолданылатын ұғымдарды атап өту үшін пайдаланылуы мүмкін. Ол инновациялық және ғылыми білім беру арқылы экономикалық дамудың жаңа парадигмаларын құру процестерін көрсететіндігімен маңызды. Шағын инновациялық кәсіпкерлік инновациялық инфрақұрылымды құруда маңызды рөл атқарады және ғылыми білім мен технология трансферті арқылы ғылыми өндірістің экономикаға интеграциялануына ықпал етеді.

Қазақстанның экономикалық дамуының қазіргі кезеңінде елдің қаржылық тұрақтылығы шағын кәсіпорындардың экономикалық әлеуетін, оларды қаржылық қолдаудың мүмкіндіктері мен шарттарын іске асырумен тікелей байланысты екені түсінікті, бұл шағын бизнестің маңыздылығын көрсетеді.

Әдісі: Қазақстандағы шағын инновациялық кәсіпкерлікті дамыту және оның ұлттық экономикадағы тиімділігі туралы мақалаға кешенді әдістемелік тәсілді қолдану ұсынылады. Біріншіден, сектордың ағымдағы жағдайы мен динамикасын бағалау үшін зерттеулер мен әдебиеттер қажет, ал оның ауқымы мен ел экономикасына қосқан үлесін түсіну үшін статистикалық деректерді талдау керек. Алынған нәтижелер негізінде шағын инновациялық кәсіпкерлік саласындағы жағдайды жақсарту бойынша мақсатты ұсыныстарды тұжырымдауға, сол арқылы еліміздің тұрақты экономикалық дамуына ықпал етуге болады.

Қорытынды: Зерттеуде шағын инновациялық кәсіпкерліктің Қазақстанның экономикалық дамуына қосқан елеулі үлесі, оның жұмыс орындарын құрудағы және инновацияларды ынталандырудағы рөлі атап өтілді. Дегенмен, әлеуетті толық іске асыру үшін мемлекеттік қолдауды күшейту және бар кедергілерді жою қажет, бұл шағын бизнестің ұлттық экономикаға интеграциялануын жақсартады.

Тұжырымдама: Мақалада шағын инновациялық кәсіпкерліктің Қазақстан экономикасына әсері зерттеліп, мемлекеттік қолдау шаралары мен олардың тиімділігі талданған. Негізгі назар өсу жолындағы кедергілерді анықтауға және шағын бизнестің ұлттық экономикалық дамуға қосқан үлесін арттыру стратегияларын ұсынуға бағытталған.

Кілт сөздер: шағын инновациялық кәсіпкерлік, ұлттық экономика, инновация, әлеуметтік экономика, инвестиция, шағын бизнес, инновациялық инфрақұрылым, технология, экономикалық өсу.

А.Ә. Аманкелді, Б.С. Саубетова, Г.Ж. Нигметова, Г.Т. Ахметова, А.Б. Мыржыкбаева

Развитие малого инновационного предпринимательства и его эффективность в национальной экономике Республики Казахстан

Аннотация:

Цель: Развитие малого инновационного предпринимательства способствует достижению важных социальных и экономических целей. В этом контексте для оценки развития малого бизнеса можно использовать ряд важных показателей. К ним относятся количество малых предприятий, работающих в малом секторе экономики; средний уровень заработной платы; рост производства малого бизнеса; рост инвестиций в сектор малого бизнеса. Это помогает оценить эффективность инвестиций в сектор малого бизнеса.

В современной экономической литературе термин «инновация» может использоваться для подчеркивания актуальных и широко используемых понятий. Он важен, поскольку показывает процессы создания новых парадигм экономического развития посредством инноваций и научного образования. Малое инновационное предпринимательство играет важную роль в создании инновационной инфраструктуры и способствует интеграции научного производства в экономику посредством трансфера научных знаний и технологий.

Понятно, что на современном этапе экономического развития Казахстана финансовая устойчивость страны напрямую связана с реализацией экономического потенциала малых предприятий, возможностей и условий их финансовой поддержки, что показывает значимость малого бизнеса.

Методы: Для статьи о развитии малого инновационного предпринимательства в Казахстане и его эффективности в национальной экономике предлагается использовать комплексный методический подход. Во-первых, исследования и литературу, чтобы оценить текущее состояние и динамику сектора, а также требуется анализ статистических данных, чтобы понять его масштабы и вклад в экономику страны. На основе полученных результатов можно сформулировать адресные рекомендации по улучшению ситуации в сфере малого инновационного предпринимательства, способствуя тем самым устойчивому экономическому развитию страны.

Результаты: В статье исследуется влияние малого инновационного предпринимательства на экономику Казахстана, анализируются меры государственной поддержки и их эффективность. Основное внимание уделяется выявлению барьеров на пути роста и предложения стратегий по увеличению вклада малого бизнеса в национальное экономическое развитие.

Выводы: В исследовании отмечен значительный вклад малого инновационного предпринимательства в экономическое развитие Казахстана, подчеркнута его роль в создании рабочих мест и стимулировании инноваций. Однако для полной реализации потенциала необходимо усилить государственную поддержку и устранить существующие барьеры, что улучшит интеграцию малого бизнеса в национальную экономику.

Ключевые слова: малое инновационное предпринимательство, национальная экономика, инновации, социальная экономика, инвестиции, малый бизнес, инновационная инфраструктура, технологии, экономический рост.

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Cluster Model for Establishing Special Economic Zones in Ukraine under Modern Conditions (Global Experience)

Abstract

Object: Clusters are a relatively new form of organization, risk and profit sharing, and competitiveness enhancement for both the global and Ukrainian economies. The potential of the cluster development model is significant, and, most importantly, it has been justified in developed countries worldwide. In particular, global practice confirms that the functioning of the most prosperous economies is supported by advantages in modern production technologies and management. Therefore, successful development of any level is possible through the comprehensive application of modern strategic management concepts. Thus, the object of the study is to reveal and substantiate the effectiveness of cluster model in establishing special economic zones in Ukraine.

Methods: The paper uses general scientific and special methods, that are: the dialectical method of understanding cluster model for establishing special economic zones; comparative analysis methods; methods of empirical research, methods of statistical and structural analysis; methods of historical and logical analysis; identifying individual parts of an object, methods of system approach, identifying cause-and-effect relationships.

Findings: Custers are established on the base of a unique internal environment and infrastructure specific to a particular region. This allows leveraging the competitive advantages of enterprises in a specific area through integration. A cluster serves as a stimulus for economic development, and regionalism forms the basis for its sustainable growth. Regionalism is of great significance in selecting priority investment areas, as it can influence the level of uncertainty risk during the assessment of regional investment projects. Its effectiveness is confirmed by cluster development of the child nutrition project presented in the paper (Ivano-Frankivsk region, Ukraine).

Conclusions: Cluster approach makes it possible to use available resources more efficiently. The cluster approach is connected with the policy of capacity-building as well as increasing competition profitability of national economies. There are also some cluster formations on the territory of Ukraine. Cluster is a convenient form of organizing a free economic zone. At the same time, each government develops its own approaches to the creation of clusters and regulation of their activities, accordingly, organizes the activities of those responsible for the implementation of the national strategy of sustainable competitive development.

Keywords: cluster, cluster model of the economy, policy, strategy, free economic zone.

Introduction

The post-industrial era is marked by the reinforcement of market dynamics. The fundamental concept within the economic theory of market dynamics is competition. Competition is evident across all tiers of a capitalist economy, spanning from the micro-level (individual firms) to the global economic framework. Competition emerges when a plethora of goods possessing similar consumer attributes vie for market share. The crux of competitive rivalry lies in enhancing or upholding the market positions of economic entities. This is accomplished through the differentiation of goods offered by economic entities from those of their competitors, both in terms of addressing specific customer needs and in terms of cost efficiency, leveraging their competitive advantage.

In a broader context, economic competitiveness entails the capacity to compete with similar entities within a specific market, utilizing competitive advantages to attain predefined objectives. Successful busi-

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ness entities emerge triumphant in this competitive landscape. Consequently, governments implement diverse measures aimed at bolstering the competitiveness of businesses and manufactured products.

The important principle of a market economy should be taking into account. Special economic zones as the factor for sustainable development generally provide increasing of competitiveness of the national economy. Clusters should be a key factor to establish SEZ. Thus, the object of the study is to reveal and substantiate the effectiveness of cluster model in establishing special economic zones in Ukraine.

Literature Review

The development of clusters has been researched by numerous foreign scholars in their scientific works. The issues related to clusters and cluster policies, in particular, are highly relevant since cluster formations represent one of the foundations of economic development worldwide.

The interpretation of the concept of an industrial cluster varies among researchers. Economists G. Ellison and L. Glaeser (Ellison et al., 2010) define a cluster as a geographic concentration of interconnected companies and organizations within a specific area, encompassing related industrial sectors and groups of individuals in competition. Business clusters denote a geographic region endowed with ample resources and skilled professionals, affording it a pivotal position within a particular economic sector, thereby contributing to sustainable competitive advantage vis-à-vis other areas or even global regions.

Michael Porter's cluster concept (Porter, 2000) has wielded significant influence in business, government, and scientific circles in recent decades. Porter contends that the spatial proximity of rivals, customers, and suppliers tends to augment the innovative potential and competitiveness of the cluster even further.

Paul Krugman's work on economic geography garnered attention with the notion of "increasing returns" of proximity embodied in clusters (Krugman, 1991). Krugman posits that regional agglomeration involves two primary concepts: firstly, the notion that regional specialization arises for arbitrary reasons, and secondly, when these regions emerge, they are sustained by the external effect of scale.

In the Concise Oxford Dictionary (1982), a "cluster" is defined as "closed group of things". According to Michael Porter's theory (Porter, Stern, Delgado, 2014), clusters are geographically concentrated assemblies of interconnected companies, specialized suppliers, service providers, firms in related industries, and organizations linked to their activities in specific areas, engaging in both competition and collaboration.

Methods

This research is maintained by as general scientific, as special methods: the dialectical method of understanding cluster model to establish the special economic zones (to understand how clusters operate within SEZs by examining the interactions between various factors such as geographical concentration, industry specialization, resource allocation, government policies, and socioeconomic dynamics); methods of historical and logical analysis (when analyzing the processes of establishing special economic zones); comparative analysis methods (when studying the processes of formation of preconditions for uniting entrepreneurs into cluster); methods of statistical and structural analysis (in determining trends in the development of clusters); methods of system approach; methods of empirical research (comparison, analysis, synthesis), identifying individual parts of an object, identifying cause-and-effect relationships.

Results

The appeal of a free economic zone lies in its simplicity when it comes to addressing infrastructure and management issues within a confined geographical area, as opposed to tackling them on a national scale. However, it's essential to recognize that such economic zones cannot exist in isolation from the broader institutional and economic conditions within the country. They are inherently interconnected with the overall national economy and cannot be considered as separate entities.

An examination of the theoretical foundations of special economic zones (SEZs) reveals that they are integrated parts of the national economy. Their success is contingent upon improvements in the investment climate at the national level, ensuring sustained prosperity in the long term. Therefore, they should not be seen as substitutes for the comprehensive model of developing the national economy, but rather as complementary components (Min Wu et al., 2021).

The establishment of Special Economic Zones (SEZs) aims to tackle a range of challenges such as infrastructure deficiencies, procedural complexities, bureaucratic hurdles, and various barriers stemming from monetary, credit, trade, financial, tax, tariff, and labor policies. These structural issues often hinder the investment climate, but the creation of SEZs helps alleviate them to some extent by boosting production and

reducing transaction costs. However, addressing these issues on a nationwide scale, including developing road infrastructure and implementing structural reforms, takes time.

Given the multifaceted nature of socio-economic and political challenges, the establishment of industrial enclaves (SEZs) is viewed as a strategic tool to expedite the industrialization process in developing countries. These zones offer several advantages, such as tax incentives, low lease fees, provision of infrastructure and utilities, simplified procedures, and exemptions from various constraints prevalent in the domestic economy (Konstantinos, 2014).

These advantages play a significant role in attracting both domestic and foreign investments, without which the establishment of Special Economic Zones (SEZs) would be challenging. A key aspect of forming SEZs is their competitive advantage, which is often explained within the framework of the "cluster approach" (Jin, 2013). Clusters contribute to increased productivity through various factors, such as access to specialized factors of production and a skilled labor force; complementarity among industries within the cluster, leading to synergies and efficiencies; access to essential organizations and public goods, facilitating business operations; access to valuable information and knowledge networks; incentives provided by the SEZs and mechanisms for determining productivity levels. Many developing countries view these zones as engines of growth and catalysts for industrialization, supporting them with high expectations for economic development and job creation.

Clusters derive efficiency from various factors, including external economies of scale, convenient access to material supplies, a skilled labor force, essential services, and up-to-date information on technology and market trends. Additionally, they benefit from a dynamic advantage fostered by the competitive environment they create. Industrial clusters play a vital role in stimulating the establishment of new enterprises, thereby generating employment opportunities. Furthermore, they are not only advantageous for individual businesses but also enhance the overall competitiveness of the industry (Durongkaveroj, 2023).

Moreover, industrial clusters are typically interconnected through geographic and spatial proximity, which fosters social interaction and facilitates interfirm cooperation, serving as essential functions defining the dynamics of cluster firms (Rakhmetova et al., 2022). Within industrial clusters, firms heavily depend on key competencies and knowledge exchanges among existing cluster participants. Consequently, the cluster approach proves effective in enhancing the competitiveness of the region.

Discussions

Therefore, the formation of SEZs based on the cluster approach will be competitive and create conditions for an export-oriented model of economic development in Ukraine.

Creation and Development of Clusters in the Ivano-Frankivsk Region

As global experience indicates, clusters are recognized as one of the effective specialized forms of organizing innovative activities (Koibichuk, Drozd, 2022). In Ukraine, clusters should be viewed as a qualitatively new form of management and an important prerequisite for implementing an innovative model of economic development at the regional level, taking into account the specifics of the Ukrainian economic system, regulatory and legal support, and management systems.

The territory of the Ivano-Frankivsk region stands out among other regions of Ukraine with a favorable environment for the development of small and medium-sized businesses. It boasts available free land plots and production areas suitable for creating industrial technological and innovative clusters. Its proximity to the borders of the EU, investment attractiveness, developed education system, existing scientific and personnel potential, and location in the western part of the country in close proximity to active and prospective international railway and road corridors, such as "Kritsky 5", "Europe-Asia", "North-South", contribute to its potential.

Indeed, within the Ivano-Frankivsk region, the "Suzir'ya" cluster operates, uniting 19 craftsmen from the village of Yavoriv and 16 from the city of Kosiv, along with other clusters (Tkachuk et al., 2020).

One of the important issues in the post-war revival of Ukraine's economy is the establishment of national corporations in the food industry, primarily for children's nutrition based on clusters. Clusters are a modern form of enterprise integration capable of enhancing the competitive advantages of each cluster participant. International experience attests to their high level of efficiency, with each country having its own peculiarities of cluster development. The distinctive feature of a cluster is the synergistic effect, manifested in increased competitiveness, and its innovation-oriented nature.

The financing of cluster creation and development is concentrated on budgetary resources or investor funds. Regulatory acts serve as instruments to support cluster development, updating during the creation and implementation of projects for advanced clusters.

During the period 2008–2011, under the Program for the Development of Scientific, Technical, and Innovative Activities of the Ivano-Frankivsk region until 2020, the Carpathian Scientific Analytical Center developed a cluster program for the production of children's food based on environmentally friendly cow's milk.

The program adopts a project model focused on environmentally friendly animal husbandry and agriculture. It entails a comprehensive approach involving the analysis of the raw material base, evaluation of the material and technical infrastructure within the designated zone, identification of a range of children's milk food products utilizing contemporary production methods, selection of appropriate technological equipment, and the establishment of an organizational structure in the form of a cluster.

Accordingly, within the cluster program, a pilot project "Children's Milk Nutrition" has been developed, the implementation of which will take place in the territory of the Bukachivska territorial community of the Ivano-Frankivsk district, Ivano-Frankivsk region.

The cluster model for organizing and managing the production of children's milk nutrition integrates various stakeholders including milk producers (farm enterprises), milk processing enterprises offering a specified range of products, retail networks, universities, standardization bodies, research centers, and associations responsible for personnel training, as well as providing information and technical support.

From a practical point of view, balancing the mutual interests of cluster participants is ensured by the mechanism of internal financial and credit relations. The financial and credit mechanism provides for the free movement of financial resources within the cluster, operates a transfer pricing mechanism, concessional lending to the production of children's nutrition, and preferential taxation of profits for participating banks directing funds to the agricultural sector. The formation of the price for children's milk nutrition products is influenced by supply and demand, with technological chain entities focusing on the final market price. The income obtained is distributed proportionally to the expenses among participants: agriculture – milk – production – trade. Such an approach to forming financial relations within the cluster stimulates the reduction of production costs, the implementation of innovations in production, and the approximation of these costs to the level of expenses of enterprises in economically developed countries (Tkachuk, Melnychuk, 2019).

"Children's Milk Nutrition" Project

The cluster project "Children's Milk Nutrition" embodies a comprehensive approach to the development of territorial structures as highly effective innovative systems. In practical terms, the target program is oriented towards the activities of the territorial community, identifying the main organizational and economic components of the ecosystem that will attract "technology idea generators". These, in turn, will attract financial capital, related and service enterprises, stimulating further concentration of competencies.

For the Bukachivska territorial community, the priority is agricultural development. This vector should serve as an impetus for implementing a territorial-spatial approach to the development of agriculture – raw material processing – food production and industrial-commercial activities. The cluster program can be a key tool in realizing this task, allowing the formation of the basis for regulating the food and consumer market in Ukraine. This is particularly relevant as Ukraine lacks a developed market for functional products.

On the global market, there is an increasing concentration of production of children's dairy food among a few leaders (Nestle, Bristol-Myers, Abbott Laboratories, Novartis, Numico, Heinr, Wyeth, Danone). Therefore, at the state level, a market for children's nutrition products must be created as a necessary condition to promote the development of food industry enterprises. The government, in this direction, mobilizes available resources, attracts investments and credits, and stimulates the activities of enterprises and private investors in creating integration structures for capital concentration. Consequently, it becomes a guarantor to private investors at the initial stage of investment (Smerichevska, 2020).

For state-developed enterprises, it is necessary to address issues such as innovative preferential financing, targeted loans, the identification of several authorized banks, or the creation of territorial investment banks that will provide business financing on preferential terms. Recognizing Ukrainian banks as important and priority participants in shaping Ukraine's modern economic system is essential.

The conceptually outlined model of integrating state and private business resources, the interaction of banks and enterprises in a specific preferential regime, aligns with the goals of industrial clusters. The devel-

opment of the industrial strategy of the Bukachivska territorial community is guided by the State Strategy for Regional Development for the period 2021–2027.

Creation and Development of Clusters in Ivano-Frankivsk Region

Worldwide experience indicates that one of the effective ways to enhance business activities is the creation of specialized forms of organizing innovative activities, among which clusters play a significant role.

A substantial number of clusters operate globally, such as 380 in the United States, 206 in Italy, 176 in Hungary, 168 in the United Kingdom, 161 in Poland, 106 in India, 96 in France, 74 in the Czech Republic, 51 in Romania, over 50 in Ukraine, 34 in Denmark, 32 in Germany, 25 in Lithuania, 20 in the Netherlands, 15 in Latvia, and 11 in Slovakia. In Ukraine, clusters should be considered as a qualitatively new form of management and an important prerequisite for implementing an innovative model of economic development at the regional level. This should take into account the specifics of the Ukrainian economic and management systems, ensuring appropriate legal support. The experience of building a cluster network in leading countries that have achieved significant success in the high-paced development of national/regional/local economies is of particular importance (Tkachuk, Melnychuk, 2019).

In Ivano-Frankivsk Region, there is a cluster named “Blanket-making and Other Folk Crafts in the Carpathians”, specializing in the production of products from sheep’s wool. In accordance with the order of the regional state administration dated July 22, 2002, No. 525, “On the development and implementation of the cluster model system of regional development”, and with the aim of supporting the development of small entrepreneurial structures in the region, a project program (third stage) of the cluster model of organization of production “Blanket-making and other folk crafts in the Carpathians” was developed (Order of the regional state administration dated May 6, 2005, No. 176 “On the project program (third stage) of the cluster model of organization of production “Blanket-making and other folk crafts in the Carpathians”). The document envisages the creation of a cluster that would contribute to the revival, preservation, protection, and development of folk crafts, the creation of favorable economic conditions and a legal framework for the entrepreneurial activity of masters of folk crafts, the organization of individual producers – masters of folk crafts, with the aim of eliminating shadow production, creating official jobs, ensuring a stable income, social protection, and social insurance for workers. It also aims to empower territorial communities for local self-government in the formation of revenues for local budgets from entrepreneurial activities carried out in the respective territory and their optimization for the socio-economic development of such communities.

The creation of cluster initiatives within Ivano-Frankivsk Region actively involved the Precarpathian National University, entrepreneurs, representatives of district and regional state administrations. The chosen form of development for folk crafts was the association on a voluntary basis of individual producers, entrepreneurs, research institutions, state and local authorities, financial and intermediary organizations within a certain territorially formed community for highly effective cooperation, which fully corresponds to the essence of a cluster.

In addition to the mentioned clusters, the Tysmenytsia Fur Cluster (PJSC “Fur Farm Tysmenytsia”, LLC SP “Tykaferlux”) operates successfully within the Ivano-Frankivsk Region. The high level of expertise among the workforce in the fur cluster contributes to the functioning of small enterprises engaged in the procurement and processing of leather, the production of headgear and fur clothing, and their trade.

It is worthwhile to consider the creation of a cluster of garment manufacturers based on joint-stock companies such as VTSHP “Halychyna” and “Kolomyiska Shveyna Fabryka”, which actively operate in foreign markets, along with 39 other large and medium-sized enterprises in the industry producing finished clothing, lingerie, textile products, and curtains. Small enterprises in the industry could also become participants in such a cluster, allowing each of them not only to consistently improve the conditions for the development of new high-quality products that align with fashion trends and consumer needs but also to increase exports. Moreover, it enables them to economically compete with the supplier schemes typically associated with “large-scale” production.

The creation of a forest industry cluster is also of interest, with potential participation from the majority of region-based enterprises (timber companies, wood processing factories, and furniture manufacturing). The timber industry, a priority in the regio’s economy, has seen an increase in the production of timber products, construction components, wood-based panels, veneers, paper, and cardboard over the past three years. Private companies like “Joint Venture Interplit” lead the Ukrainian timber industry, supplying a wide range of high-quality laminated and chipboard panels to both the domestic and international markets. “Promin-Halychyna” produces modern-design school furniture competitive in Ukraine and abroad.

The reconstruction and technological modernization of production, the adoption of modern wood processing technologies, and the development of new product lines have been observed at companies such as LLC “Uniplit”, LLC “Derevoobrobnyi Kombinat Vyhoda”, LLC “Inter’er”, PJSC “Ivano-Frankivskiy Lisokombinat”, LLC VKF “OlPas”, LLC “Vest-Vud”, and enterprises of the “Halychyna-Lis” corporation, Experimental Plant “Prut”, and PJSC “Ivano-Frankivska Mebleva Fabryka”.

In the context of wartime conditions in Ukraine, the reformation of hospital districts in the Ivano-Frankivsk Region has become a pertinent issue. Following a new approach, the healthcare network, consolidated into a single hospital district, is further divided into five medical clusters (Ivano-Frankivsk, Kalush, Kolomyia, Nadvirna, and Kosiv-Verkhovyna clusters). Based on the types of medical care provided in hospital cluster institutions, the network is divided into cluster, super-cluster, and general hospitals. A cluster institution is multifunctional, capable of providing medical services to the population within the hospital district, offering basic medical care, stabilizing the patient’s condition, and routing to cluster and super-cluster healthcare institutions. It will serve a population of up to 40,000 within a radius of 60 km. The main specialized areas include neurology, infectious diseases, therapy, surgery, and more. The primary goal of restructuring the sector is to ensure the functioning of an effective healthcare network, guaranteeing the population access to efficient and accessible medical services.

Post-war economic recovery in Ukraine, especially in the Ivano-Frankivsk Region, includes the creation of national corporations for the food industry to provide food for children based on clusters. Participants involved in the establishment and operation of the cluster encompass a diverse array of entities. These include enterprises specializing in priority economic activities, suppliers of goods and services tailored to the needs of profiled enterprises, providers of public infrastructure services (such as transport, energy, and environmental infrastructure), organizations facilitating market infrastructure (such as consulting firms, auditing firms, insurance companies, and credit institutions), as well as non-profit and public organizations, entrepreneur associations, trade and industrial chambers, research institutions, design firms, educational organizations, and innovation infrastructure entities.

Furthermore, the cluster may involve small and medium-sized business support infrastructure, including industrial parks, technoparks, business incubators, technology transfer centers, energy-saving centers, and subcontracting support centers. Additionally, entities supporting entrepreneurship development, regional and municipal development agencies, investment attraction agencies, export support agencies, state and municipal entrepreneurship support funds, and credit support funds may also be part of the cluster initiative.

The creation of a cluster can follow various scenarios, including the “bottom-up” approach, which involves individual projects and programs integrating potential cluster participants; the “top-down” approach, which entails the establishment of advisory and monitoring bodies and the development of strategies for cluster development; and a mixed approach, which combines elements of both the “bottom-up” and “top-down” approaches.The creation and development of clusters play a crucial role in shaping the economic environment of a region, as they contribute to:

- Activation of Innovation: Clusters accumulate commercial and production-oriented knowledge, fostering innovation through internal competition among cluster producers. The collaboration between producers and suppliers within the cluster accelerates the implementation of innovative solutions.
- Development of High-Tech Industries: Clusters promote the growth of high-tech industrial sectors, driving advancements in technology and expertise within the region.
- One of the primary benefits of clusters is the increase in Gross Domestic Product (GDP) and tax revenues. Clusters have a knack for drawing investments, including foreign investments, which subsequently boosts economic activity and output. This influx of investment leads to a tangible uptick in GDP, benefiting both local and national budgets through increased tax revenues. The enhanced financial resources can then be channeled into funding innovative projects, particularly in technology and infrastructure development. Public-private partnership projects and mutual financing among cluster participants further amplify the impact, fostering sustainable growth and development within the region.
- Stimulation of Small and Medium-sized Businesses in Traditional Industrial Regions: Clusters facilitate the revitalization of small and medium-sized enterprises in old industrial regions, fostering economic growth and development.
- Boost in Export Share: The collaborative nature of clusters enhances the competitiveness of the manufactured products, resulting in an increased share of exports.
- Creation of Unique Opportunities for Skill Development: Clusters offer distinctive avenues for the training and development of highly skilled professionals that extend beyond industry-specific education. One

such avenue involves fostering knowledge exchange among cluster participants, enabling individuals to learn from each other's expertise and experiences. Additionally, the establishment of cluster training centers represents another vital initiative aimed at skill development. These centers serve as hubs for specialized training programs, workshops, and seminars tailored to the needs of the cluster participants. By providing access to cutting-edge knowledge and training opportunities, clusters play a crucial role in nurturing a workforce equipped with the skills and expertise necessary to thrive in the evolving economic landscape.

- The development of clusters in Ukraine relies on a robust legal framework consisting of over 200 legislative acts, including the Constitution of Ukraine, the Land Code of Ukraine, the Tax Code of Ukraine, the Budget Code of Ukraine, and various laws related to innovation, land lease, urban planning, science, education, national security, transborder cooperation, regional development, and support for small and medium-sized enterprises.

To further support cluster development in Ukraine, several proposals can be considered:

Legislative Framework for Cluster Development:

- Develop a comprehensive legislative framework for the creation and functioning of clusters.
- Define key concepts related to clusters, cluster policy, and clusterization at the legislative level.
- Establish and implement a state program to support cluster development.
- Create a Cluster Registry in Ukraine to facilitate coordination and information sharing.

Promotion of High-Value Industrial Sectors:

- Identify priority sectors for industrial development at the regional level.
- Facilitate the creation of cluster associations and other organizational forms to promote innovation.
- Propose tax incentives for companies producing high-tech and innovative products through their own investments.

Increased Local Government Influence:

- Enhance the role and responsibility of local authorities in fostering cluster development amid decentralization.
- Implement effective cluster policies to significantly improve the investment climate in the region.

Effective Cluster Policy Implementation:

- Create models for utilizing public-private partnerships to attract non-governmental investment resources for cluster development.
- Develop and implement effective cluster policies in the context of measures to improve the investment climate.

Assessment of Consequences of Armed Conflicts:

- Assess the consequences of armed conflicts for cluster development in Ukrainian regions.
- Develop a phased action plan for restoring the functioning of industrial enterprises based on innovative principles in the short and medium post-war period.

Financial Support Mechanisms:

- Provide financial support for cluster development, including updating material and technical infrastructure.
- Utilize funding from the European Plan for Ukraine, assistance from the United States, bilateral aid in the form of grants, credit guarantees, and loans for the reconstruction of specific infrastructure objects.
- Attract international institutions such as the World Bank, EBRD, IMF, as well as special funding sources like the Ukrainian Solidarity Fund and the Ukrainian Fund for the Restoration of Property and Ruined Infrastructure.

Transborder Cluster Mechanism:

- Legislatively defining the mechanism for creating transborder clusters.
- Negotiating bilateral agreements between the governments of participating countries to establish transborder clusters.
- Coordinating development of strategies and plans to establish national parts of transborder clusters.

The proposals aim to create a favorable environment for the formation and development of clusters in Ukraine, leveraging both domestic and international resources for sustainable economic growth and innovation.

Conclusions

Thus, the cluster approach makes it possible to use available resources more efficiently, forming production potential as the basis for sustainable economic growth of all branches of the national economy. The

cluster approach is connected with the policy of capacity-building and, as a result, increasing competition profitability of national economies. There are also a large number of cluster formations on the territory of Ukraine. At the same time, each government develops its own approaches to the creation of clusters and regulation of their activities, accordingly, organizes the activities of those responsible for the implementation of the national strategy of sustainable competitive development.

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Қазіргі жағдайда Украинада арнайы экономикалық аймақтарды құрудың кластерлік моделі (әлемдік тәжірибе)

Аңдатпа:

Мақсаты: Кластерлер — бұл ұйымдастырудың, тәуекелдер мен пайданы бөлудің, әлемдік және украиналық экономиканың бәсекеге қабілеттілігін арттырудың салыстырмалы түрде жаңа түрі. Дамудың кластерлік моделінің әлеуеті айтарлықтай, ең бастысы, ол әлемнің дамыған елдерінде негізделген. Атап айтқанда, әлемдік тәжірибе ең табысты экономикалардың жұмыс істеуін қазіргі заманғы өндіріс пен басқару технологияларының артықшылықтарымен қолдау табатынын растайды. Сондықтан кез келген деңгейдің сәтті дамуы стратегиялық басқарудың заманауи тұжырымдамаларын кешенді қолдану арқылы мүмкін болады. Осылайша, зерттеудің мақсаты — Украинада арнайы экономикалық аймақтарды құру кезінде кластерлік модельдің тиімділігін анықтау және негіздеу.

Әдісі: Мақалада жалпы ғылыми және арнайы әдістер, атап айтқанда арнайы экономикалық аймақтарды құрудың кластерлік моделін түсінудің диалектикалық әдісі; тарихи-логикалық талдау әдістері; салыстырмалы талдау әдістері; статистикалық және құрылымдық талдау әдістері; объектінің жекелеген бөліктерін және себеп-салдарлық байланыстарды анықтайтын эмпирикалық зерттеу әдістері; жүйелік әдіс-тәсілдері қолданылған.

Қорытынды: Кластерлер белгілі бір аймаққа тән бірегей ішкі орта мен инфрақұрылым негізінде құрылады. Бұл интеграция арқылы белгілі бір саладағы кәсіпорындардың бәсекелестік артықшылықтарын барынша пайдалануға мүмкіндік береді. Кластер экономикалық дамудың ынталандырушысы қызметін атқарады, ал аймақшылдық оның тұрақты өсуінің негізін құрайды. Инвестициялардың басым бағыттарын таңдауда аймақшылдық үлкен маңызға ие, өйткені ол аймақтық инвестициялық жобаларды бағалау кезінде белгісіздік тәуекелінің деңгейіне әсер ете алады. Оның тиімділігі мақалада ұсынылған балалар тағамы жобасының кластерлік дамуымен расталады (Ивано-Франковск облысы, Украина).

Тұжырымдама: Кластерлік әдіс қолда бар ресурстарды тиімдірек пайдалануға мүмкіндік береді. Бұл тәсіл әлеуетті арттыру саясатымен, сондай-ақ ұлттық экономикалардың бәсекеге қабілетті табыстылығын арттырумен байланысты. Украина аумағында кластерлік құрылымдар да бар. Кластер — еркін экономикалық аймақты ұйымдастырудың ыңғайлы түрі. Бұл ретте әрбір үкімет кластерлерді құру және олардың қызметін реттеудің өзіндік тәсілдерін әзірлейді, сәйкесінше тұрақты бәсеке қабілетін дамытудың ұлттық стратегиясын іске асыруға жауапты тұлғалардың қызметін ұйымдастырады.

Кілт сөздер: кластер, экономиканың кластерлік моделі, саясат, стратегия, еркін экономикалық аймақ.

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Кластерная модель создания специальных экономических зон в Украине в современных условиях (мировой опыт)

Аннотация:

Цель: Кластеры — это относительно новая форма организации, разделения рисков и прибылей, повышения конкурентоспособности как мировой, так и украинской экономики. Потенциал кластерной модели развития значителен, и, что самое главное, он оправдан в развитых странах мира. В частности мировая практика подтверждает, что функционирование наиболее благополучных экономик поддерживается преимуществами в современных технологиях производства и управления. Поэтому успешное развитие любого уровня возможно за счет комплексного применения современных концепций стратегического управления. Таким образом, цель исследования — выявить и обосновать эффективность кластерной модели при создании особых экономических зон в Украине.

Методы: В статье использованы общенаучные и специальные методы, а именно диалектический метод понимания кластерной модели создания особых экономических зон; методы историко-логического анализа; методы сравнительного анализа; методы статистического и структурного анализа; методы эмпирического исследования, выявляющие отдельные части объекта и причинно-следственные связи; методы системного подхода.

Результаты: Кластеры создаются на базе уникальной внутренней среды и инфраструктуры, специфичной для конкретного региона. Это позволяет максимально использовать конкурентные преимущества предприятий конкретной сферы за счет интеграции. Кластер служит стимулом экономического развития, а регионализм формирует основу его устойчивого роста. Регионализм имеет большое значение при выборе приоритетных направлений инвестирования, поскольку может влиять на уровень риска неопределенности при оценке региональных инвестиционных проектов. Его эффективность подтверждается кластерным развитием проекта детского питания, представленного в статье (Ивано-Франковская область, Украина).

Выводы: Кластерный подход позволяет более эффективно использовать имеющиеся ресурсы. Данный подход связан с политикой наращивания потенциала, а также повышения конкурентной доходности национальных экономик. На территории Украины также существуют кластерные образования. Кластер — удобная форма организации свободной экономической зоны. При этом каждое правительство разрабатывает свои подходы к созданию кластеров и регулированию их деятельности, соответственно, организует деятельность ответственных за реализацию национальной стратегии устойчивого конкурентного развития.

Ключевые слова: кластер, кластерная модель экономики, политика, стратегия, свободная экономическая зона.

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Study of the influence of consumer trust factors and the marketing mix on consumer value and consumer loyalty

Abstract

Object: The aim of the study is to determine the importance of consumer trust in value creation and to study how consumer trust influences their purchase decision and consumer loyalty.

Methods: As it is shown in the scientific literature, several methods are used when writing a research paper, which are classified as field and desk, quantitative and qualitative. Typically, one or both of these may be used in a study. Depending on the purpose of our work in our study, at the first stage, we analyzed second-order information based on desk research. It was used to review scientific articles relevant to the topic of a previously published study. At the second stage of the study, we conducted an opinion poll using the method of quantitative research. The survey was conducted on the basis of a conceptual model and measuring scales of previous studies. To test the questionnaire developed for the survey, a pilot survey was organized for 40 respondents.

To get answers to questions about who was conducted in research, how many of them should be, and how to select them, we conducted a selection using sources of scientific literature.

Findings: The value of the study is specific, the significance of the work lies in the fact that our study considers the chain of consumer value creation in the production and sale of food products and involves the measurement of consumer value in this chain based on factors that form consumer beliefs. In this regard, it complements the studies carried out so far on the problem of creating customer value.

Conclusions: The results of the study can be considered when forming a chain of consumer value creation in the marketing activities of sausage manufacturers.

***Keywords*:** marketing mix, consumer trust, consumer value, consumer loyalty.

Introduction

Nowadays, consumers have high demands for goods and services, high awareness of goods and services related to access to information, as well as global competition and instability in the economies of countries day by day increase the importance of customer value. The concepts of customer value and customer value chain have not been scientifically defined in a sustainable manner. There is a prescription in academia that significant marketing activities in global markets should be aimed at creating customer value (Leroi-Werelds, 2019). In marketing, attention to the creation of value perceived by consumers appeared in the 1980s. Since then, marketing researchers have been searching for its definition and the answer to the question by which indicators it should be measured (Holbrook,1982; Dodds,1985; Zeithaml, 1988). Scientific research aimed at uncovering the concept of customer value creation in the period from the 1990s to the 2000s has been widely published in the management and marketing literature. The views on the concept of customer value and its dimension have led to many conclusions and complex issues (Zauner, 2015). According to some researchers, scholars' different views and definitions of customer value have made it difficult to understand the type, measure, and how customer value is realized (Sanchez-Fernandez, 2009).

Literature Review

Most academic studies examine the problem of customer value formation in relation to the service industry, while individual researchers prioritize customer value creation, realization and management

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(Sweeney, 2001; Heinonen, 2006; Chiu, 2014; Kelleher, 2019). Some studies claim that efforts to study customer value started about 10 years ago, others consider the business context, still others focus on the consumer context (Boksberger, 2011; Gallarza, 2011).

Much of the research on customer value and customer value formation, as we have already mentioned, considers the Service Industry or areas related to non-food products. Since our research area covers the food industry, priority has been given to examining the food policy debate in recent years. Most of the studies in this area address the loss of consumer trust in consumer value in the food production and distribution chain (Kjærnes, 2006; Sapp, 2009; Hobbs, 2015; Kaiser, 2017). It is worth noting that the food and beverage sector was one of the sectors that showed the greatest decline in consumer trust between 2017 and 2018.

The analysis of the food production and realization chain and a better understanding of the multidimensional aspects of the concept shows that further analysis should focus on the development of a methodological framework and objective indicators for measuring and evaluating the consumption value of food products.

For food manufacturing companies, customer value research and measurement is not something to be done once, it should be seen as an ongoing activity using quantitative and qualitative research methods aimed at establishing a long-term relationship with the consumer (Sanchez-Fernandez, 2007). In this regard, the results of our study can be considered in the formation of the chain of creation of consumer value of marketing activities of companies-producers of sausage products. In some literature the concept of "value" is considered as profitability in economic terms, efficiency of goods or services for the consumer. Nowadays, any business is based on attracting the attention of consumers and creating appropriate value. From this we can see that "value" and "customer value" in marketing can be considered as synonyms. In his definition of marketing, F. Kotler defines it as "defining, developing, promoting, presenting and supervising consumer value" (Kotler, 2004, 22). Many researchers have emphasized that the concept of value is crucial for strategic business management. For example, Wang and others argue that creating customer value in building and maintaining a company's competitive advantage has become a strategic imperative (Wang, 2004, 169–182). Other researchers emphasize that customer value is a key factor in strategic management (Mizik, 2003, 63–76). Slater, one of the proponents of value theory, says that "the reason why a firm operates and succeeds is to create customer value".

In the formation of consumer value, the main factor, in our opinion, is the consumer's trust in the manufacturer, product, its properties, price, information about it, the seller of the product or service. As evidence, in recent decades many scientific studies raise the issues of determining the level of consumer trust, developing its concept, determining indicators of its measurement (Shaughnessy, 1997; Slater, 1997). Some researchers have studied consumer trust as a determinant of consumer confidence in purchasing a product (Bartlett, 2001). They sought to show that the influence of consumer trust on confidence depends on the actors in the consumer value chain.

The next author in his study proved that consumers' trust in the producer and seller influences their trust in food products in general (Ringle, 2005).

Existing research currently focuses on particular aspects of trust, such as farmer-suppliers, food producers, regulators-government, retailers, etc. (Grunert, 2002, 275–285).

Research on whether customer value influences intention formation considers that it is complex, depends on emotional and cognitive criteria, etc.

Methods

Depending on the purpose of the study, we conducted an opinion survey with a survey instrument using quantitative research method.

Results

When studying customer value, the question of determining what factors shape it is particularly important. Based on the opinion of some researchers, there is currently no clear, specific list in marketing of through which factors customer value is formed. As a result of the conducted literature review, it was found that in the formation of the consumer value chain, it is relevant to find answers to the question of whether the marketing mix and consumer trust have an impact on consumer value and consumer purchase incentive, and whether they in turn form consumer loyalty.

Based on the theories of Porter M. and other scientists on the formation of customer value, the following conceptual models and research assumptions have been developed.

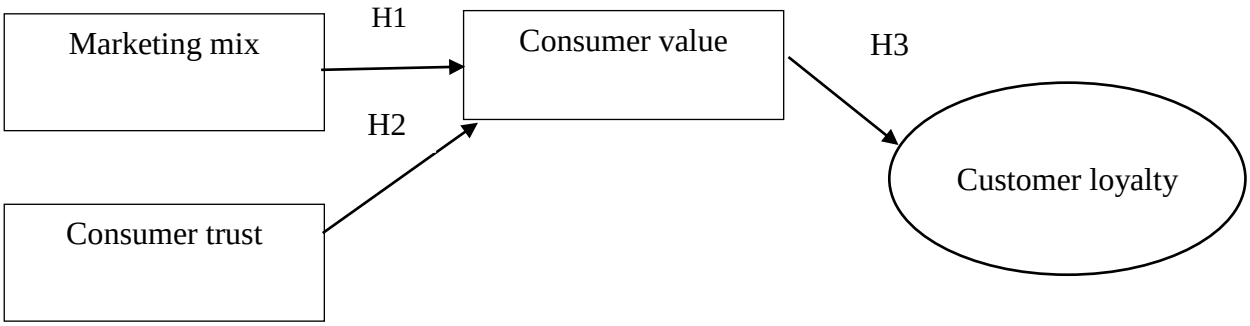

Figure 1. Conceptual model and hypothesis of the study.
Note - compiled by the authors as a result of the study

- Hypothesis 1: Marketing mix creates customer value.
- Hypothesis 2: Consumer trust in chain members increases customer value.
- Hypothesis 3: Customer value builds customer loyalty

Figure 1 presents the conceptual model of the study related to finding an answer to the question whether marketing mix and consumer trust have an impact on consumer value in the formation of the consumer value chain, and whether it, in turn, forms consumer loyalty. According to the research conceptualization, two independent variables such as elements of marketing mix of sausage manufacturing enterprises and consumer trust in value chain actors influence the increase of consumer loyalty to sausage consumption. But as shown in the figure, these two independent variables indirectly affect sausage products consumer loyalty through an intervening variable such as customer value.

The purpose of the research is to study and identify the factors affecting consumer loyalty in the formation of customer value chain.

The object of the study is the end consumers of the Republic of Kazakhstan sausage products market, the subject of the study is consumer behavior in assessing customer value.

The opinion questionnaire was developed based on the conceptual model shown in Figure 1 and is based on the use of measurement scales in the earlier studies mentioned above. As there are no measuring scales covering some points, the survey was conducted through interviews with experts in the field, adapting to ask the opinion of sausage consumers.

To test the questionnaire designed for opinion polling, we organized a pilot survey of 40 respondents among the visitors of the Magnum store located in Zhetysu 2 microdistrict in Almaty city.

We used literature sources (Taylor, 2005; Shaughnessy, 2011;) to get answers to the questions about who we conduct surveys to, how many there should be and how they should be selected. As a result, it turned out that the result of the opinion survey of 346 respondents is representative.

Table 1. List of indicator questions aimed at measuring variables

Indicator	Questions
Questions on the marketing mix	
Price (Pr)	How important is it that the price is affordable to you when buying sausage products?
Product 1(PR1)	How important is sausage safety to you?
Product 2(PR2)	How important is it to you that sausage products are not harmful to your health?
Product 3(PR3)	How important are sensory properties of sausage products (taste, smell) to you?
Methods of distribution (Pl)	How important is it to you to have sausage products in the mall you visit?
Incentive methods 1(PM1)	How important to you are the outer casings (natural, artificial) and the weight of the sausage products?
Incentive methods 2(PM2)	How important to you is the image, popularity of the sausage producer company?
Incentive methods 3(PM3)	How important to you is data on raw materials used in sausage production?
Consumption value (CV)	
CV1	The quality of domestic sausage products is better
CV2	Domestic sausages are not harmful to health
CV3	Domestic sausage products are environmentally safe

Consumer trust (CT)	
CT1	How confident are you about the quality of raw materials in sausage production?
CT2	How confident are you in sausage manufacturers?
CT3	How confident are you in sausage sellers?
Consumer loyalty(Loyal)	
Loyal	I recommend friends and acquaintances to consume domestic sausage products
Note — compiled by the authors as a result of the study	

In order to test the conceptual model of the study and prove the assumptions made, the information obtained in the study was processed and analyzed using SmartPLS 3 software application.

The figure below shows the result of the PLS algorithm calculation of the measurement of the relationship between variables.

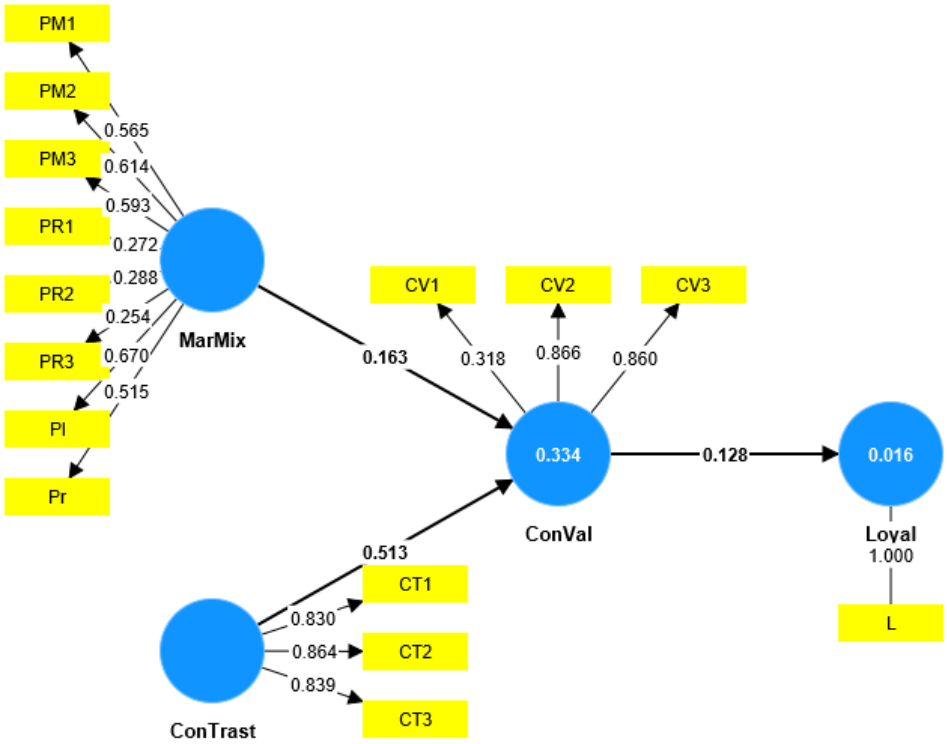

Figure 2. Calculation result of the PLS algorithm of variable coupling

Note — compiled by the authors as a result of the study

In this sample, we first check the confidential connection between the variables and the indicators of its measurement. It is better for the value of the reliability coefficient indicating this relationship to be above 0.7, but many studies have allowed values above 0.4 to be considered.

Table 2 presents the reliability coefficient of the individual indicators.

As shown in Table 2, we recalculate the PLS algorithm by removing indicators with low reliability coefficient, given in red, from the constructed sample.

Table 2. Reliability coefficient of individual indicators

	Consumer trust	Consumption value	Consumer loyalty	Marketing mix
CT1	0,830			
CT2	0,864			
CT3	0,839			
CV1		0,318		
CV2		0,866		
CV3		0,860		
L			1,000	
PM1				0,565

PM2				0,614
PM3				0,593
PR1				0,272
PR2				0,288
PR3				0,254
Pl				0,670
Pr				0,515
Note — compiled by the authors as a result of the study				

Again, the result of the calculation can be seen in Figure 3.

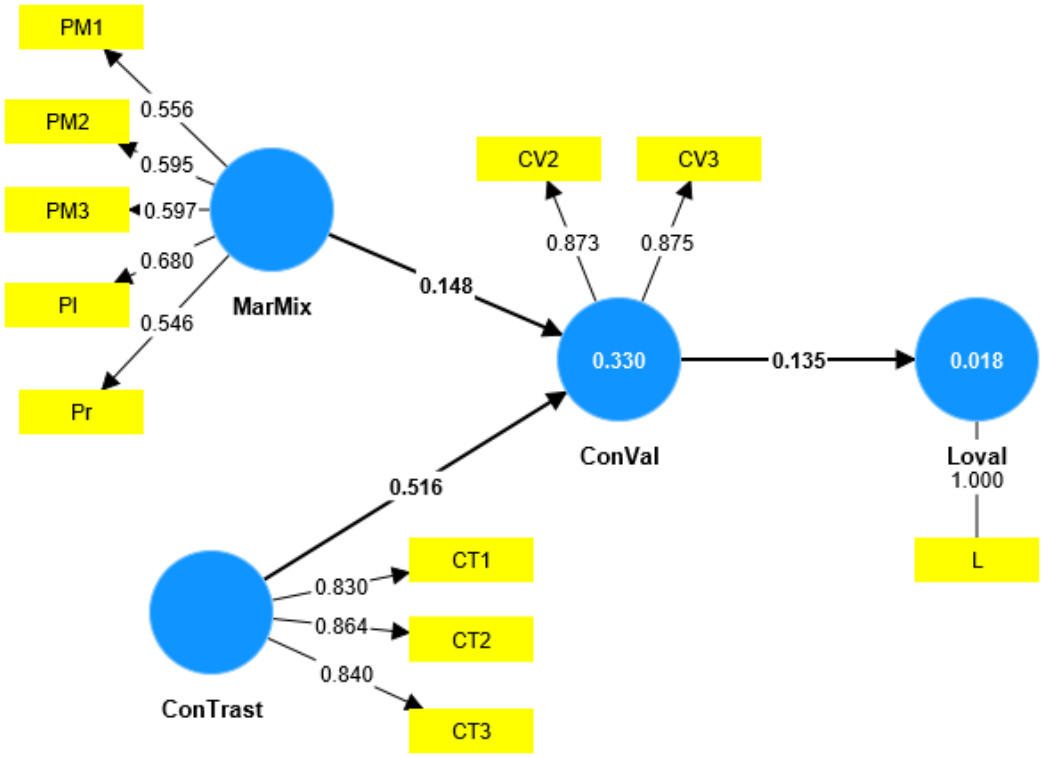

Figure 3. Example of the result of repeated PLS algorithm calculations minus low reliability indicators

Note — compiled by the authors as a result of the study

As can be seen in Figure 3, the Value of reliability coefficient of indicators was above 0.4. Therefore, we leave the readings of all variables to assess the importance of the sample. The value of reliability coefficients of individual indicators of each variable calculated by SmartPLS program can be seen in Table 3.

Table 3. Values of reliability coefficients calculated using the SmartPLS program

	Consumer trust	Consumption value	Consumer loyalty	Marketing mix
CT1	0,830			
CT2	0,864			
CT3	0,839			
CV2		0,866		
CV3		0,860		
L			1,000	
PM1				0,565
PM2				0,614
PM3				0,593
Pl				0,670
Pr				0,515
Note — compiled by the authors as a result of the study				

Now we determine the probabilistic dependence of the variables. We recognize it by the results of correlation analysis which shows the density of relationship between dependent and independent entities in the sample. We evaluate the strength of relationship using Chaddock scale the result of correlation relationship between variables is presented in Table 4. From analyzing the correlation relationship matrix, we can see that the density of the relationship between consumer trust and loyalty is low (0.048). In our opinion, consumer trust does not immediately cause his loyalty. Consumer trust forms consumer value (0.556). Because of this, the correlation between these two variables remains low.

Table 4. Correlation matrix between variables

	Consumer trust	Consumption value	Consumer loyalty	Marketing mix
Consumer trust	1,000	0,556	0,048	0,261
Consumption value	0,556	1,000	0,728	0,297
Consumer loyalty	0,048	0,728	1,000	-0,023
Marketing mix	0,261	0,297	-0,023	1,000
Note — compiled by the authors as a result of the study				

The correlation between consumer trust and marketing mix (0.261) and consumer value and marketing mix (0.297) is also low. After all, to build consumer trust, it is not enough just to be aware of producers or sellers of sausage products, their sausage products, their prices, it is necessary to consider other factors to fully gain consumer trust. The density of the relationship between consumer trust and consumer value has an above average value (0.556). This implies that as consumer trust increases, consumer value also increases. As consumer value increases, consumer loyalty also increases (0.728) and the density of the relationship between the two variables remains high.

When conducting correlation analysis, it is important to calculate the coefficient of determination. Because this coefficient reflects a qualitative assessment of the created model. The value of the coefficient of determination shows that the change in the dependent variable contributes to the change in the independent variable. Its value is estimated by the inequality: $0 \leq R\_yx^2 \leq 1$.

Table 5 shows the calculation of the value of the coefficients of determination of independent variables.

Table 5. Value of the coefficient of determination of independent variables given in the sample

	Consumer trust	Consumption value	Consumer loyalty	Marketing mix
Consumer trust		0,513		
Consumption value			0,128	
Consumer loyalty				
Marketing mix		0,163		
Note — compiled by the authors as a result of the study				

As we can see from the table, all values are above 0, below 1, from this we can see that the qualitative assessment of independent variables is suitable for testing the model.

Now we analyze the values of the coefficients of determination of the dependent variables in the sample constructed at this stage. The main dependent variable has a high coefficient of determination (0.334). All values above 0, below 1, so the qualitative assessment of dependent variables is suitable for assessing the significance of the model.

Table 6. Value of the coefficient of determination of dependent variables in the constructed sample

	R-square
Consumption value	0,334
Consumer loyalty	0,016
Note — compiled by the authors as a result of the study	

The coefficient of determination of the consumer value of the sample was (R^2) — 0.334. This value means that any change in the independent variable in the sample changes by 33.4 % of the consumer value.

Completing the testing of the constructed structural model requires testing the reliability and validity of the aggregate variables.

Table 7 shows the reliability and validity values of all aggregate variables.

Table 7. Coefficients of internal and mutual reliability of variables in the sample

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
1	2	3	4	5
Consumer trust	0,802	0,818	0,882	0,713
Consumption value	0,527	0,686	0,748	0,530
Marketing mix	0,632	0,558	0,703	0,248
Note — compiled by the authors as a result of the study				

The value of Cronbach's alpha coefficient should be higher than 0.7. This coefficient helped to determine the internal consistency and reliability of the survey questions. But in many surveys it is also acceptable for the value of Cronbach's alpha coefficient to be 0.6. The value of reliability scale obtained by using Cronbach's alpha coefficient of our study is presented in Table 7. Presenting the values of consumer confidence and marketing mix variables in the range of 0.632–0.802 indicates that these scales have sufficient level of reliability. The consumer value scale (0.527) is below 0.6.The reason was to provide 3 consumer value questions on the opinion survey sheet, such as the question about the quality of domestically produced sausages, the question that domestically produced sausages are not unhealthy, and that the results have many responses that domestically produced sausages have better quality but many negative responses that sausages are not unhealthy. Therefore, the analysis program considered this contradiction unreliable.

The next coefficient is the Composite Reliability coefficient, which shows the internal combination and reliability of all variables. The value of this coefficient should also be higher than 0.7. As shown in column 3 of the table, the value of the composite reliability coefficient of other variables other than marketing mix (0.558) is above 0.6. The value of the aggregate reliability coefficient of marketing mix is 0.558, which is a low level of reliability.

Column 5 of the table presents Average Variance Extracted (AVE) (the average value of deviation of the indicators of the independent variable and their indicators). With the help of this indicator it is possible to assess the reliability of the summarized validity. The value of this indicator ranges from 0–1. AVE should have a value higher than 0.5 for the summarized reliability to be correct. According to the data obtained in our study, it turned out that the values of mean deviation for variables other than marketing mix are above the acceptable limit, so we can say that reliability and validity are confirmed.

The next indicator needed to test the conceptual model is the Fornell-Larcker indicator.

From Table 8, we can see the result of Fornell-Larcker criteria.

Table 8. Matrix of Fornell-Larcker criteria of the variables under study

	Consumer trust	Consumption value	Consumer loyalty	Marketing mix
Consumer trust	0,845			
Consumption value	0,556	0,728		
Consumer loyalty	0,048	0,128	1,000	
Marketing mix	0,261	0,297	-0,023	0,498
Note — compiled by the authors as a result of the study				

The table shows that all indicators meet the required criteria.

According to the assumptions of the study, we have tested the conceptual model according to all criteria. The next step is to evaluate the significance of the conceptual model according to the conditions of PLS-SEM program.

The result of this evaluation is presented in Table 9.

Table 9. Assessment of the significance of the conceptual model

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
ConTrast -> ConVal	0,516	0,513	0,043	12,021	0,000
ConVal -> Loyal	0,135	0,135	0,062	2,192	0,028
MarMix -> ConVal	0,148	0,163	0,042	3,523	0,000
Note — compiled by the authors as a result of the study					

Discussions

According to the results of the criteria for assessing the significance of the conceptual model from Table 9, it can be seen that consumer confidence in the producers of sausage products, products form consumer value, consumer satisfaction with the quality, price of sausage products, availability at the points of sale forms consumer value, which, in turn, affects consumer loyalty to sausage products and sausage companies. It can also be seen that consumer satisfaction with the elements of the marketing mix also forms consumer value.

According to Hypothesis 1, marketing mix shapes customer value (β =0.148, T-value (3.523)> 1.96), significance level (0.000). From this we can see that Hypothesis 1 is proved, the effect of marketing mix on customer value is confirmed.

According to Hypothesis 2, consumer trust in chain members increases customer value (β =0.516, T-value (12.021)> 1.96), significance level (0.000). Hypothesis 2 is proven.

Hypothesis 3 shows that customer value shapes customer loyalty (β =0.135, T-value (2.192)> 1.96), significance level (0.028). Hypothesis 3 has been proved and we have seen that it is possible to increase consumer loyalty by increasing customer value.

Conclusion

It is fully proved that the variables of the conceptual model that we have analyzed and considered in our study are factors that need to be considered in the formation of customer value contributing to sausage buying behavior.

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А.К. Бураханова, Г.К. Байжақсынова, Э.Б. Оразгалиева, И.И. Скоробогатых

Тұтынушылар сенімі мен маркетинг кешені факторларының тұтынушылық құндылыққа және тұтынушылар ниеттестігіне ықпалын зерттеу

Аңдатпа:

Мақсаты: Тұтынушылық құндылықты қалыптастырудағы тұтынушылық сенімнің маңыздылығын анықтау және тұтынушылардың тізбек қатысушыларына деген сенімінде сатып алу туралы шешім мен оның адалдығына қалай әсер ететінін зерттеу.

Әдісі: Зерттеуде далалық және кабинеттік, сандық және сапалық зерттеу әдістері қолданылды. Жұмыстың мақсатына байланысты мақалада бірінші кезеңде біз кабинеттік зерттеу негізінде екінші ретті ақпаратты талдадық. Ол бұрын жарияланған зерттеу тақырыбына сәйкес келетін ғылыми мақалаларды шолу үшін пайдаланылды. Зерттеудің екінші кезеңінде біз сандық зерттеу әдісін қолдана отырып, сауалнама жүргіздік. Алынған деректерді талдау кезінде Smart PLUS 3 бағдарламалық қосымшасы қолданылды.

Қорытынды: Қарастырылып отырған құрылымдық модельдің айнымалылары шұжық сатып алушылардың мінез-құлқына ықпал ететін тұтынушылық құндылықты қалыптастыру кезінде ескеру қажет факторлар екендігі дәлелденді. Оны шұжық өндіретін компаниялардың маркетингтік қызметінің тұтынушылық құндылығын құру тізбегін қалыптастыруда қарастыруға болады.

Тұжырымдама: Зерттеуде азық-түлік өнімдерін өндіру және сату кезінде тұтынушылық құндылық тізбегі қарастырылды және осы тізбектегі тұтынушылық құндылық тұтынушылық сенімдерді қалыптастыратын факторлар негізінде өлшенді. Осыған байланысты тұтынушылық құндылықты құру мәселесіне қатысты осы уақытқа дейін жүргізілген зерттеулерді толықтырды.

Кілт сөздер: маркетинг кешені, тұтынушы сенімі, тұтынушылық құндылық, тұтынушы ниеттестігі.

А.К. Бураханова, Г.К. Байжаксынова, Э.Б. Оразгалиева, И.И. Скоробогатых

Исследование влияния факторов потребительского доверия и комплекса маркетинга на потребительскую ценность и лояльность

Аннотация:

Цель: Выявить значение потребительского доверия в формировании ценности и изучить, как потребительское доверие к участникам цепочки влияет на решение потребителя о покупке и на его лояльность.

Методы: Использовались полевые и кабинетные, количественные и качественные методы исследования. В зависимости от цели нашей работы в статье на первом этапе мы проанализировали информацию второго по-

рядка на основе кабинетного исследования. Он использовался для обзора научных статей, соответствующих теме ранее опубликованного исследования. На втором этапе исследования мы провели опрос мнений, используя метод количественного исследования. При анализе полученных данных применялось программное приложение SmartPLS3.

Результаты: Доказано, что переменные рассматриваемой структурной модели являются факторами, которые необходимо учитывать при формировании потребительской ценности, способствующей поведению покупателей колбасных изделий. Их можно рассматривать в формировании цепочки создания потребительской ценности маркетинговой деятельности компаний-производителей колбасных изделий.

Выводы: В исследовании рассматривалась цепочка создания потребительской ценности при производстве и реализации продуктов питания, и потребительская ценность измерялась на основе факторов, формирующих потребительские доверие. В связи с этим дополнили проведенные до сих пор исследования, касающиеся проблемы создания потребительской ценности.

Ключевые слова: маркетинговый комплекс, потребительское доверие, потребительская ценность, потребительская лояльность.

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Some aspects of digitalization on public administration

Abctract

Object: Public administration's digital transformation is examined in this paper.

The study's goal is to better understand how public administration organizations are changing in order to streamline administrative decision-making procedures.

Methods: This study examines the effects of digitization on public administration systems through an interdisciplinary approach that offers an evaluation of socio-economic processes. The organizational features of Kazakhstan's public administration's digitization are the study's focus.

Findings: The writers of the suggested scientific work provide the primary directions of public administration's digital transformation while concentrating on the key components of the concept of "digitalization of public administration" and analyzing the key indicators of this process in Kazakhstan.

Conclusions: In the contemporary digital era, the delivery of public services should remain centered on meeting the requirements of citizens and businesses. Simultaneously, digitalization introduces novel tools and procedures that streamline and enhance the convenience, accessibility, comprehensibility, and safety of traditional approaches.

Keywords: Public administration's digital transformation, the number of fixed Internet subscribers, the population's degreeof digital literacy, electronic public services.

Introduction

In the modern conditions of economic development of the Republic of Kazakhstan, one of the fundamental points is the awareness and construction of such new information and digital foundations, thanks to which it would be possible to reach the leading international positions. The information and digital breakthrough and accelerated economic development of Kazakhstan will allow for painless and compatible integration with the unified international information and digital economic space. In addition, the importance of laws and initiatives related to informatization, such as "Information Kazakhstan 2020" and "Digital 2025" become clear in this perspective (Sadykov, 2022). These laws and government initiatives represent the process for creating, utilizing, and safeguarding digital resources and information systems, as well as state regulation in the digitalization space.

Digital technologies are becoming necessary tools for performing everyday routine actions that allow a person to be freed to perform creative work, conduct consultations, create a new information product to improve the economic, political and cultural life of society (Tovma, 2021).

There is a number of options for transforming government structures to reduce administrative decision-making time and deliver public services while taking information security into account (Economy Profile, 2019):

1. E-Government capable of ensuring cybersecurity at both national and international levels;
2. E-Government that is able to take timely measures to prevent and address negative consequences;
3. E-Government able to integrate its functions with different sectors of society to bridge the digital divide.

In the new reality, countries face problems from the expansion of the digital economy and the digitalization of public administration.

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Interaction between citizens and government agencies is increasingly moving to electronic platforms. Many functions related to information, advisory, creative and managerial nature in manufacturing and trading enterprises are carried out using electronic document management and digital signature.

The progression of a nation is increasingly reliant on information and communication technologies, driven by the scale-related benefits in generating, processing, utilizing, and transmitting extensive data. Additionally, the network effect plays a crucial role, leading to a compounding enhancement in the utility of the network as its user base expands, creating an exponential impact.

Novel business models emerge as a result of the ubiquitous integration of information and communication technology across various spheres of life and the commercial operations of market participants. These models contribute to the integration of offline and online communications between different participants in economic relations, which requires the development of completely new management methods in enterprises, public organizations and government institutions.

The issue of this study is the process of digital transformation of public administration, as the global problems associated with the development of digital technologies are getting worse.

Literature Review

Despite being a relatively new area of study in economics, the idea of "digitalization" has been extensively studied by researchers from both domestic and international universities.

Prominent foreign scholars, including Margherio, L., Brynjolfsson, E., Kahin, B., and others, have extensively addressed the matters pertaining to the digitization of public administration in their foundational works. Reviewing materials and publications on this subject leads to the observation that current theories are focused on the identification and description of digitalization within the realm of public administration.

The contributions of Kazakhstani and Russian scholars to this issue are well-recognized, including the works of Sadykov T.U., Tovma N.A., Kostina N.B., Chizhov A.A., and others.

Although numerous publications exist on digitalization issues in both foreign and domestic economic literature, it is important to highlight that there are numerous new mechanisms requiring further exploration. The need for this research is further highlighted by the fact that the components of the digitization of public administration in the economy and the differentiation of its primary purposes at this time are still not fully investigated.

Methods

The research methodologies draw upon the collective advancements of neoclassical, institutional, and neo-institutional theories, as well as insights from the scholarly contributions of both domestic and foreign researchers in the realm of digitalization. The study employs abstract-logical, analytical, and economic-statistical methods.

This study intends to offer a thorough examination of how digitalization affects public administration, backed by empirical data from official sources and reports as well as a theoreticalfoundation.

The theoretical foundations of the study increase and enhance domestic expertise in the area of digital public administration. The recommendations discussed within this study are applicable on a national scale for the execution of digitalization programs.

Results

One of the factors fostering the country's socioeconomic progress and effective governmental administration in the contemporary era is the growth of a digital economy. Both the general public and the academic community are giving the terms "digital economy" and "digitalization of public administration" a lot of attention.

L. Margherio examines four primary factors that foster the advancement of the digital economy: the proliferation of the Internet, business-to-business electronic commerce, the digital provision of goods and services, and the retail sale of physical products (Margherio, 1999).

According to Brynjolfsson & Kahin (2000), the term "digital economy" specifically refers to the ongoing, largely unstudied shift that results from the computer-enabled digitization of information in every sector of the economy (Brynjolfsson, E. & Kahin, B, 2000).

The percentage of overall economic production derived from various comprehensive "digital" components is known as the "digital economy", according to Knickrehm et al. (2016). In addition to the skills and tools (hardware, software, and communication tools), these digital components also comprise the intermedi-

ate digital goods and services employed in the production process. These extensive measures constitute the fundamental elements of the digital economy (Skog, Wimelius, & Sandberg, 2018).

Simultaneously, scholars such as Ida Lindgrena, Sara Hofmannc, and Ulf Melina, focusing on the influence of digitalization on the state-citizen relationship, propose an understanding of digitalization as a "sociotechnical process involving the application of digital technologies within a comprehensive social and institutional framework" (Lindgrena et al., 2019).

Digitization is the transformation of physical, analog information (such as documents, photos, reports, invoices, contracts, etc.) into a format that can be stored and accessed from a computer, phone, tablet, USB stick, smart watch and other similar devices. Digitalization is the conversion of processes from manual to automatic. Digitalization takes many different shapes in practice, but basically it involves building databases with several files containing different documents, based on the typology, to which access can be controlled. Digital transformation is the process by which the content, form, and mode of processing and transmission of data and documents are changing in order to save time and material resources and thus increase efficiency (Balcerzak et al., 2022).

These could lead to significant and necessary adjustments that improve the transparency of government agencies, the governance process, and the content and caliber of programs and services can bring about the required and important changes that greatly enhance the services and content offered, as well as the governance, openness, and accessibility of government institutions (Kafel et al., 2021).

In public administration practice, the goal of digitalization is to give every citizen the same access to services, information, and knowledge (Larsson, 2021). This access will be provided through digital technologies. The proliferation of digital technology has enhanced the cost and quality of the tasks performed by individuals, governments, and communities. It has also increased their efficacy and efficiency.

The management of the interactions that take place between the state, regions, and localities, as well as the communication that takes place between public administration authorities and citizens, increasingly makes use of these technological advancements (Androniceanu et al., 2022).

Use of digital technology inspires consumer involvement in the creation of works of public value and raises public interest in such works (Cordella & Paletti, 2018; Luna-Reyes, 2017).

Digitalization in public administration, according to studies by A.V. Mehrentsev, E.N. Starikov, and E.S. Mezentsev, refers to the potential for enhancing administrative outcomes via the application of new digital technologies. This means fostering the growth and efficient functioning of state information systems in addition to developing digital platforms and infrastructures that permit sophisticated control over the operations of government institutions (Mehrentsev et al., 2018).

Digitalization areas include efficient decision-making, e-government advancement, enhanced information-based communication between the public and the government, electronic delivery of state and local services, electronic document management implementation, decreased corruption, and increased competitiveness in the international market (Sidorenko et al., 2019).

The digital revolution has a considerable impact on the efficiency and accessibility of public service. It also affects the way other tasks of public administration, such as policy making, legislation implementation, and enforcement, are carried out. At this early stage, the adoption of government-as-a- platform solutions is highly prioritized (O'Reilly, 2011).

The process of analyzing the digitalization of public administration can be guided by three aspects:

modernization of the process of providing public services based on technology automation, which reduces the human and material costs of routine operations;

implementing technologies, mobile applications, and online trading platforms entails a rise in the trade of goods and services, consequently boosting the income of enterprises. Additionally, this will result in efficient oversight of enterprise activities by governmental bodies.

the transfer of the maximum number of business operations and relationships into the digital space, into the digital transformation of the interaction of manufacturing enterprises, government agencies and the population.

So far, preliminary studies have been conducted regarding the social and economic factors that determine the distinctive features of digitalization within a certain region. The effects of regional digitalization are interrelated with both technological and socio-economic factors (Shaposhnik, 2017). However, access to the Internet is definitely a primary factor. Table 1 illustrates the count of fixed Internet subscribers across various regions in Kazakhstan.

Table 1 indicates that there was an overall gain in fixed Internet users in 2022, with a 5.3% increase over 2021 data and a total of 2,899.8 thousand units. A significant increase in subscribers was seen in Astana (by 8.4%), Shymkent (by 8.8%), and the West Kazakhstan areas (by 9.8%). The regions with the smallest increases were Turkestan (by 0.3%), and Aktobe (by 0.7%). 1.8% is the Akmola region.

However, several regions — Karaganda by 10.4%, East Kazakhstan by 30.6%, and Almaty by 33.7% — are seeing a decrease in fixed Internet subscribers. The expansive geography of Kazakhstan makes extending network coverage to rural areas potentially costly. This challenge is exacerbated by lower levels of prosperity in these regions, resulting in diminished revenue potential for operators aiming to broaden their coverage.

Table 1. The number of fixed Internet subscribers in the regions of Kazakhstan

(th. un)

Regions	2019 y.	2020 y.	2021 y.	2022 y.	2022/2021 yy.,%
Republic of Kazakhstan	2 511,6	2 620,5	2 753,6	2 899,8	105,3
Abai Region	-	-	-	83,4	-
Akmola	112,7	122,4	127,1	129,4	101,8
Aktobe	115,7	127,2	132,2	146,3	110,7
Almaty	178,9	209,7	217,9	144,4	66,3
Atyrau	94,2	95,9	99,0	102,0	103,0
West Kazakhstan	72,8	75,1	78,1	85,7	109,8
Zhambylskaya	85,5	89,5	92,2	96,1	104,2
The area of Zhetisu	-	-	-	80,6	-
Karaganda	265,0	262,2	276,3	247,6	89,6
Kostanay	166,2	168,8	173,7	181,6	104,5
Kyzylorda	62,2	69,6	73,6	76,2	103,5
Mangystau	86,3	96,0	102,4	116,1	113,4
Pavlodar	155,6	158,7	161,9	172,5	106,5
North Kazakhstan	109,8	111,5	112,9	115,5	102,3
Turkestan	61,5	66,7	69,5	69,7	100,3
Ulytau region	-	-	-	21,3	-
East Kazakhstan	206,5	218,3	228,1	158,2	69,4
Astana	261,4	266,8	293,7	318,3	108,4
Almaty	401,6	403,0	430,3	462,3	107,4
Shymkent	75,8	79,1	85,1	92,6	108,8

Note – compiled by the author based on (Bureau of national statistics of the Agency for strategic plannining and reforms of the Republic of Kazakhstan, 2023)

However, residents' proficiency with information and communication technologies varies, even within the same region. In the Karaganda area in 2022, 86.2% of people aged 6–74 possessed them, according to the Bureau of National Statistics of the Republic of Kazakhstan. This is 2.1% less people than in the entire country (Table 2).

Among individuals aged 6 years and older, the percentage of users possessing skills in utilizing personal computers, smartphones, tablets, and laptops, along with proficiency in standard programs and accessing services through the Internet, stands at 82.7%. This figure is 3.6% lower than the national average. In 2022, the overall digital literacy rate of the country's population was 88.3%, which is 1% higher compared to 2021.

The term “digital divide” refers to these disparities in the socio-economic impacts of the population's degree of digital literacy, which are mostly social in character and result in insufficient opportunities to use ICT. In addition, it is of a social nature, it manifests itself in differences in the status positions of subjects, which adds economic consequences, constituting a “digital inequality” (Kostina, Chizhov, 2022).

In Kazakhstan, it is noted that a significant part of users are engaged in various online activities. For example, 74.8% of people use the Internet to spread information and send instant messages. 59.5% view or download movies, images, music, as well as watching videos, listening to music, playing games or downloading movies. In addition, 28.1% of users use the Internet for emailing and receiving, while 33.5% use it to research products and services.

When examining the regions of Kazakhstan, the Akmola region accounts for the highest percentage of users who use the Internet for social networking, instant messaging, and information dissemination (95.5%

and 94.6%, respectively); users from the Karaganda region also receive the highest percentage of information about products and services (83.1%); users from the Karaganda region also send and receive the highest percentage of emails (45.9%).

Ensuring the protection of digital rights fosters trust and a willingness to embrace further advancements in implementing the digital governance model and transitioning to digital public administration. Conversely, challenges related to safeguarding citizens' personal data and the digital sovereignty of the state evoke apprehension and resistance.

Table 2. The level of digital literacy of the population of Kazakhstan

(% of the total population)

Regions	2020 y.		2021 y.		2022 y.	
	at the age of 6 years and older	aged 6-74	at the age of 6 years and older	aged 6-74	at the age of 6 years and older	aged 6-74
Republic of Kazakhstan	82,0	84,1	85,3	87,3	86,3	88,3
Abai Region					77,6	79,9
Akmola	72,3	74,9	78,9	81,5	80,7	83,1
Aktobe	79,1	81,0	85,3	86,8	88,2	89,6
Almaty					92,1	91,9
Atyrau	81,7	83,1	84,1	85,2	84,2	85,4
West Kazakhstan	76,1	78,8	76,8	79,2	80,0	82,0
Zhambylskaya	79,5	80,9	84,3	85,8	84,2	85,8
The area of Zhetisu					82,7	85,3
Karaganda					82,7	86,2
Kostanay	82,2	85,8	88,0	90,8	86,8	90,9
Kyzylorda	82,4	83,0	88,1	89,3	87,8	89,4
Mangystau	78,5	79,6	83,7	84,9	84,7	86,0
Pavlodar	80,5	83,5	81,7	85,1	81,5	85,1
North Kazakhstan	75,3	78,8	76,5	80,2	78,5	82,1
Turkestan	80,7	82,1	86,2	87,2	88,3	89,9
Ulytau region					91,3	91,8
East Kazakhstan					82,2	84,8
Astana	90,4	91,3	94,6	94,7	93,7	95,2
Almaty	88,7	91,4	88,9	91,5	91,0	93,8
Shymkent	80,9	82,3	86,1	87,5	86,1	87,5

Note – compiled by the author based on (Bureau of national statistics of the Agency for strategic plannining and reforms of the Republic of Kazakhstan, 2023)

In a context where internet platforms and social networks are seamlessly integrated into daily life, a growing array of human rights is now considered digital in nature. According to K. Becker, these include the freedom of expression, the right to privacy, and the ability to interact and express one's thoughts online. They also include the right to access an electronic network. These rights are increasingly championed by numerous organizations and movements globally (Becker, 2012).

Overall, the evaluation of the fundamental knowledge and skills of the population of Kazakhstan was conducted in the following categories:

1) Proficiency in utilizing personal computers, smartphones, tablets, and laptops;

2) Competence in using standard programs such as text and table editors;

3) Capability to access services and receive information through the Internet (Kireeva & Abylkair, 2021).

Discussions

Citizens increased desire to participate in government decision-making is one of the digitalization of public administration's most notable social effects. Technical opportunities for this are provided by specialized portals, which organize public discussions and, of course, social networks, where in 2022 — 70.1% of residents used to disseminate information.

With regard to the digitalization of public administration, there is a stratification of the population according to the criteria of accessibility of information about the activities of government agencies and access

to electronic public services. The system, which implies the possibility for citizens to receive public services and information about government activities through Internet technologies, is known as e- government.

The count of public services autonomously accessed by citizens through e-government in the self- service areas known as “Connection Point” witnessed a 9% increase in 2022 compared to the figures from 2021, reaching a total of 16,406,489 services in 2022. However, the electronic provision constituted only 0.4% of the overall public services delivered. The total quantity of services rendered is lower than it was in 2021 — a decrease of 894,275 units, or 5.1%. All regions have less public services, with the exception of branches in Almaty (+16.5 % because of special services) and the Turkestan region (+0.83% because of EDS issuance).

The most sought-after government servants in 2022, provided through front offices, were:

- Issuance and revocation of the registration certificate of the National Certifying Center of the Republic of Kazakhstan services through the Ministry of Internal Affairs of the Republic of Kazakhstan (state registration of vehicles, issuance of a driver's license, issuance of passports and identity cards to citizens of the Republic of Kazakhstan, registration of citizens of the Republic of Kazakhstan at the place of residence, issuance and extension of permits to labor immigrants).
- Registration of immovable property rights with the state.
- Generation and distribution of certificates for a parcel of land.
- Provision of a technical passport for a real estate entity.
- Issuance of duplicate certificates or certificates for the registration of civil status acts (NJSC “State Corporation “Government for Citizens”, 2022).

The proportion of goods sold through information and communication technologies has increased. Table 3 shows that the overall value of the domestic retail e-commerce business, including marketplaces, was 1963.5 billion tenge in 2022.

Table 3 indicates a growth in the volume of online retail trade. So, if in 2018 the volume of retail trade amounted to 144.6 billion tenge, then in 2022 there was an increase of 1818.9 billion tenge, which amounted to 1963.5 billion tenge. Simultaneously, electronic commerce accounted for 12.5% of the overall volume of retail trade.

Additionally, it's noteworthy that the turnover of retail trade conducted via electronic commercial platforms, or marketplaces, reached 1117.9 billion tenge, constituting 56.9% of the overall volume. Retailers who operated through their own online channels achieved a volume of 845.6 million tenge, representing 43.1%. Importantly, the proportion of e-commerce within retail, excluding marketplaces, stood at 5.4% in 2022. The total volume of e-commerce services in 2022, inclusive of marketplaces, reached 1186.5 billion tenge. Within this, services provided through proprietary internet resources amounted to 254.7 million tenge (21.5%), while services offered through e-commerce platforms (marketplaces) accounted for 931.8 million tenge (78.5%).

Table 3. Main indicators of e-commerce in the Republic of Kazakhstan for 2018–2022 yy.

Indicator	2018 y.	2019 y.	2020 y.	2021 y.	2022 y.
The volume of e-commerce (retail), million tenge	144606,0	206253,9	476651,5	481978,7	1963493,2
The share of e-commerce in the total volume of retail trade, as a percentage	1,4	1,8	4,1	3,6	12,5
The volume of e-commerce (services) million tenge	136123,0	121153,7	209164,7	349933,7	1186536,7
Note – compiled by the author based on (Bureau of national statistics of the Agency for strategic plannining and reforms of the Republic of Kazakhstan, 2023)					

Raising the bar for public services rendered to citizens and legal entities is the ultimate goal of digitizing public administration, which aims to create a work environment that supports a mobile, flexible, and efficient workflow. This entails delivering services in ample quantity, promptly, and in the most user-friendly manner possible. Leveraging artificial intelligence, conclusions are drawn from extensive data, current statistics, and real-time system comparisons. The data obtained on outcomes remains unaltered due to the characteristics of the distributed ledger, explaining the positive impacts of digitalization on the state. The

social repercussions are significant not only for citizens who are recipients of public services but also for professionals within the public administration system, encompassing local and regional civil servants.

One aspect of the country's ongoing development of its digital economy is the adoption of contemporary tools for economic entity interaction. This digital transformation has an impact not only on the daily lives of individuals but also on the operations of public authorities across all levels of government.

Conclusions

In general, Kazakhstan has made great strides toward becoming a digital state, but there is still much work to be done before the country reaches the maturity level of the ideal smart state. Taking this into consideration, the government has developed the Digital Transformation Concept, which lays out the growth path for ICTs and the cybersecurity sector through 2022. Based on this idea, the government presents the main paths for Kazakhstan's public administration to go digital by 2029, as shown in Figure.

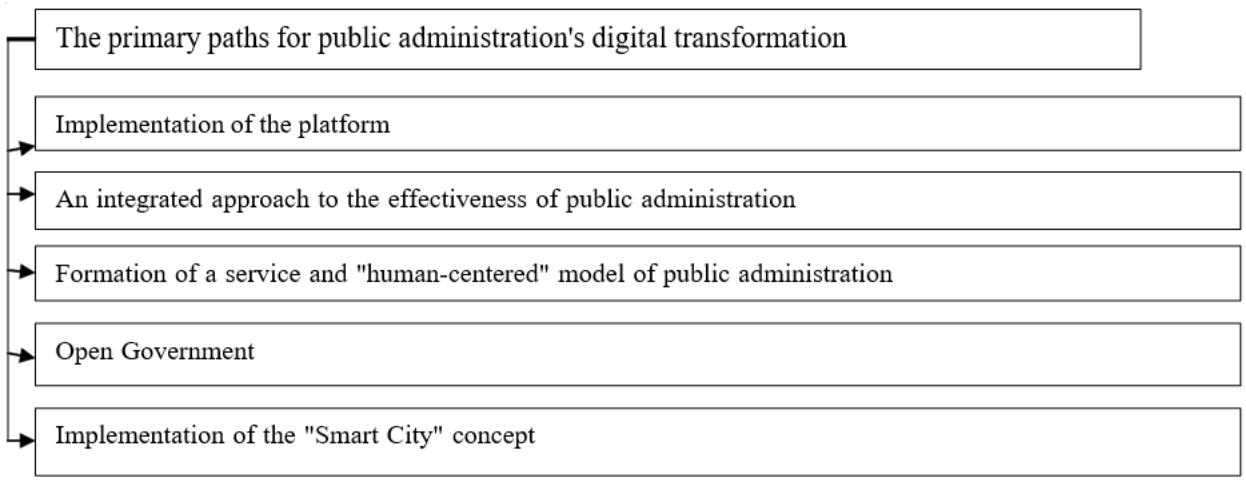

Figure. The primary paths for public administration's digital transformation

Note – compiled by the author based on (The concept of digital transformation, development of the informationand communication technologies and cybersecurity industry for 2023–2029)

It is strongly wanted to improve the quality of public administration, which includes prompt and excellent strategic decision-making, as well as the satisfaction of businesses and citizens with public services. Furthermore, the focus lies on safeguarding the country's human and technological capital while adapting to the challenges presented by a new era of technology and changing business environments.

The goal is to increase the country's competitiveness in global markets. Since they receive both governmental protection and benefits, Kazakhstani citizens are eager to broaden and improve the scope of public services. Reducing subjectivity in service delivery, lowering general administration and public service costs, reducing the amount of time spent engaging with the government, and enhancing the stability and security of the business and residential environments are all necessary to achieve this.

One of the key responsibilities in determining the direction of the nation's economic reforms and the execution of management structure operations is the development of digital infrastructure.

The following are some examples of how operating systems are being digitally transformed:

- Creation of “smart” technology-based production cycle management and control phases, where maintenance services are tracked and offered;
- Performance in compliance with a specified specification of principles for the operational, administrative, and organizational functioning of the public sector;
- Creating a social strategy for the digitization of civic and urban services tailored to the target audience, incorporating public assessments, and overseeing the monitoring and evaluation of the efficiency of digital technologies;
- Development of digital platforms for social and economic management based on the integration of several key data centers, including business services, electronic communications, information and analytics (Parviainen, 2017).

Reevaluating and reforming governmental organizations' responsibility to help entities in the economic sector should prioritize the transition of control and supervisory functions to digital engagement.

1) This entails digitizing risk assessments at the outset of a firm and during process monitoring utilizing digital data provided by companies;

2) creating both monetary and non-monetary rewards to promote the adoption of new ideas and technology.

Adopting the framework for data-driven government is the crucial adjustment. To do this, decisions made at the state level need to be supported by verified data, analyses, and educated projections. This method facilitates the implementation of evidence-based policies, encourages a comprehensive comprehension of the possible outcomes of novel undertakings, and supports informed decision-making.

The central emphasis on reshaping how services are provided and the connection between the government and citizens and businesses will revolve around adopting the principles of open architecture, particularly through Open API. This change aims to foster a much higher degree of cooperation with the private sector. It is anticipated that this shift will optimize resource utilization effectively, concentrating on digital infrastructure and extending the reach of public services to non-governmental organizations and the business sector, bridging the "last mile". Concurrently, external information resources from non-governmental entities will act as interfaces, integrating public services into their own systems. This enables citizens and entrepreneurs to effortlessly initiate and receive public services.

The Smart Cities Initiative aims to raise overall competitiveness, enhance the quality of life, and boost the efficiency of urban operations and services through the use of information and communication technologies (ICT) and other tools. In terms of economic, social, environmental, and cultural factors, it also seeks to be in line with the demands of present and future generations. Digital technology will be incorporated into many aspects of urban life, such as social services, city administration, healthcare, education, housing and utilities, economic growth, tourism, and environmental initiatives.

As a result, the adoption of digitization in the economy needs to be done carefully, taking into account the resources at hand, the population's and enterprises' readiness for the change, and a well-defined plan for the region's economic growth.

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Мемлекеттік басқаруды цифрландырудың кейбір аспектілері

Аңдатпа:

Мақсаты: Зерттеуде мемлекеттік басқаруды цифрландыру қарастырылған және әкімшілік шешімдер қабылдау процестерін оңтайландыру мақсатында мемлекеттік басқару ұйымдарының трансформациясы зерделенген.

Әдісі: Мақалада цифрландырудың мемлекеттік басқару жүйелеріне әсерін зерттеу үшін әлеуметтік-экономикалық процестерді бағалауды қамтамасыз ететін пәнаралық тәсіл қолданылған. Зерттеу пәні Қазақстандағы мемлекеттік басқаруды цифрландырудың ұйымдастырушылық аспектілері.

Қорытынды: Ұсынылған жұмыста авторлар «мемлекеттік басқаруды цифрландыру» ұғымының мәніне назар аударған, Қазақстандағы мемлекеттік басқаруды цифрландырудың негізгі көрсеткіштерін талдаған және мемлекеттік басқаруды цифрлық трансформациялаудың негізгі бағыттарын ұсынады.

Тұжырымдама: Қазіргі цифрлық дәуірде мемлекеттік қызметтерді ұсыну бірінші кезекте азаматтар мен бизнестің қажеттіліктеріне бағытталуы керек. Сонымен қатар, цифрландыру дәстүрлі тәсілдерді қолдануды жеңілдететін және оларды ыңғайлы, қолжетімді, түсінікті және қауіпсіз ететін жаңа құралдар мен процедуралардың көзі болып табылады.

Кілт сөздер: мемлекеттік басқаруды цифрландыру, тіркелген Интернет абоненттерінің саны, халықтың цифрлық сауаттылық деңгейі, электрондық мемлекеттік қызметтер.

А.М. Иманбекова, Г.М. Филюк, А.Е. Ставбуник

Некоторые аспекты цифровизации государственного управления

Аннотация:

Цель: Настоящее исследование рассматривает цифровизацию государственного управления и изучает трансформацию организаций государственного управления с целью оптимизации процессов принятия административных решений.

Методы: В статье используется междисциплинарный подход, который обеспечивает оценку социально-экономических процессов для изучения влияния цифровизации на системы государственного управления. Предметом исследования являются организационные аспекты цифровизации государственного управления в Казахстане.

Результаты: В представленной работе авторы обращают внимание на сущность понятия «цифровизация государственного управления», анализируют основные показатели цифровизации государственного управления в Казахстане и предлагают основные направления цифровой трансформации государственного управления.

Выводы: В современную цифровую эпоху предоставление государственных услуг должно быть сосредоточено, в первую очередь, на потребностях граждан и бизнеса. Кроме того, оцифровка является источником новых инструментов и процедур, которые упрощают использование традиционных подходов и делают их более удобными, доступными, понятными и безопасными.

Ключевые слова: цифровизация государственного управления, количество зарегистрированных абонентов Интернета, уровень цифровой грамотности населения, электронные государственные услуги.

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Analysis of the living standards of the population in Kazakhstan in the context of assessing the potential for inclusive growth and creative diversification of the economy

Abstract

Object: Determine trends in changes in living standards, the structure of household income and expenses in the Republic of Kazakhstan in recent years (2016–2022) to identify the potential for inclusive growth and creative diversification of the domestic economy.

Methods: The methods of statistical analysis, comparison and the method of tabular and graphical representation of data are used.

Findings: The conducted research revealed the following conclusions: steady increasing trends in the observed seven-years dynamics of income and expenses of the population of Kazakhstan (from 2016 to 2022) have been identified. The hypothesis of uneven growth of incomes and expenditures of the population of Kazakhstan has been confirmed, with the rate of income growth outstripping the rate of expenditure growth. The refractive dynamics of elements in the structure of household incomes in Kazakhstan was found, expressed in a reversal of their trends, which gave reason to distinguish two stages in the monitored period within the framework of the study: until 2020, first, the stage of reducing the share of income received from active activity in the labor market and increasing the share of social transfers received, then starting from 2021, the stage increasing the share of income from employment and reducing the share of social benefits from the state. In the structure of monetary expenditures, there was also a stage of increased growth in expenditures on food products (2016–2020), in the last two years these expenditures began to decrease again, but so far remain at a higher level than at the beginning of the period under review. There is a differentiation of incomes in the regional context and a significant gap in the monetary expenditures of urban and rural households. In addition, there are significant differences in the income structure by region and in the context of "city/village".

Conclusions: When pursuing a policy of regulating incomes and improving the well-being of the population, both nationally and at the regional level, it is necessary to focus on the peculiarities of the formation of household incomes and the specifics of the distribution of monetary expenses. In addition to macroeconomic parameters, it is necessary to understand in the "people-centric" model of public administration the influence of policy measures on the components of the well-being of the population, which will make it possible to develop more "targeted" support and incentive measures aimed at reducing inequality of income and opportunities, developing consumer demand, and creating conditions for the growth of human capital in the country, for the inclusion of the innovation and activity potential of youth and the reserves of economic activity of older people. Sustainable improvement of the well-being of the population and economic growth in the context of the widespread paradigm of inclusive growth is achievable under conditions of socio-economic diversification of creative industries and activation of civil society and social partnerships, which is associated with an increase in the overall socio-economic indicators of internal reproduction. Inclusive economic growth in the Republic of Kazakhstan needs to build an integration model for the development of creative industries, including institutional and economic elements for involving young people and the elderly in economically active activities in creative industries.

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***Keywords*:** standard of living, average per capita income of the population, average per capita expenditure of the population, creative economy, inclusive economic growth.

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Introduction

Kazakhstan's transition to a human-centered development model implies increased attention to monitoring demographic indicators, living standards, income inequality and quality of life of the population (Akorda.kz, 2023). Improving the well-being of the population and the quality of its life is the most important criterion for evaluating the effectiveness of socio-economic policy (Mukayev et al., 2023). Along with the analysis of the characteristics of the financial situation of the population, when assessing the parameters of well-being, statistical analysis of the sources of formation of monetary income and their use — monetary expenses play an important role.

To assess the quality of life of the population, the most significant parameter is the amount of income and expenditure of the population (households) per capita. The analysis of this parameter becomes the main one in forming a judgment about the socio-economic situation of various groups of the population in society and assessing the social policy of the state (Ilter, 2017).

Incomes are the basis for ensuring people's living needs, the main motivating factor of people's economic activity. Income refers to the totality of all material resources received by households as a result of economic activity, the sale of their factors of production, as well as redistributed income (social transfers, personal transfers as assistance from relatives). Wages take precedence in the structure of income of the population.

The income of the population is characterized by differentiation at the global, national and regional levels, which can be measured by indicators of the distribution of income per capita by decile, quintile groups, the Gini coefficient, the Tail index, the coefficient of funds, the division of the population by income according to interval criteria (Huchmazova, 2022).

Consumer spending accounts for the main share of household spending, in the structure of which expenses for the purchase of goods and payment for services are allocated. At the same time, household expenses include mandatory payments and taxes, as well as voluntary contributions. Research sometimes also highlights the costs of buying housing, currency, and money for making transfers (Costa, M.A.S. et al, 2022). There have been situations when the consumption of the population does not coincide with the models of traditional theories, which makes it difficult to develop a public policy strategy (Ibbih, 2018). The size of government expenditures and their structure largely determine the image and lifestyle of the population, which then determines the level of well-being and the amount of consumer spending on goods and services, as well as creates conditions for a decent standard and quality of life of the population (Buneeva et al., 2016).

With the positive dynamics of income and expenses of all households, the level and quality of life of the population will increase (Holopainen et al., 2023). But if positive dynamics are observed only in some population groups, while in others there will be a decrease, then the principle of inclusivity or “leave no one aside”, which is fundamental in the implementation of the Sustainable Development Goals (SDGs), may be violated here. Inclusive growth is economic growth accompanied by the creation of favorable conditions for improving the quality of life and ensuring equal opportunities for all groups of the country's population. At the same time, the development of a post-industrial economy into a creative one is determined precisely by the growing inclusiveness of the market environment in the context of an emerging stable pattern: the higher the degree of creativity of production, the stronger the trends of its inclusivity as an opportunity to realize the potential of all social groups, especially young people and older people, to maximize social, including intergenerational well-being (Kumah, 2013).

Literature Review

In socio-economic research, controversial issues often arise when considering data on monetary incomes and expenditures of the population. Such discrepancies are related to the difficulties of comparability of monetary income indicators in dynamics, the methodology for measuring the differentiation of the population by income and consumption, as well as the implementation of a comprehensive comparison across different regions (Tolmachev, 2019).

The comparison of the size and structure of household income and expenditure is widely used in the analysis by international organizations and government agencies in the development of socio-economic development measures (Tukhtabaev, 2022; Dabbicco, 2023).

A number of economists have devoted their research to the issues of income formation, their distribution and the study of the causes of inequality. G. Becker proved the existence of a direct link between the cost of human capital and household well-being, the most important factor of which is the level of income (Bekker, 1993).

Berhanu S. came to the conclusion: the use of a generally accepted methodology for measuring income inequality makes it possible to detect specific features in labor markets, but at the same time, the obtained indicators of income inequality cannot form complete data to characterize the distribution of wealth in society. The analysis based on the calculation of the Ginny coefficient in measuring household income inequality is based on the assumption of equal provision for households with equal income before taxation. The values of total expenses may not be equal to the values of total income. According to this author, consumption, rather than income, may be a better indicator of a household's actual economic well-being than its current income. Berhanu S. came to a conclusion in which he proves a more effective policy of developing a strategy for the differentiated regulation of incomes of various subgroups of the population on the basis of inequality that is created when spending changes in household budget components (Berhanu et al., 1999).

Edinak E. A., Sayapova A. R., Shirov A. A. in the study, they found that income growth in population groups with different income levels affects the structure of social production in different ways. Thus, the growth of income and consumption of low-income households has a stronger impact on the growth of production in the real sector, while the growth of income and consumption of high-income households has a stronger impact on the growth of production in the service sector (Edinak et al., 2022).

The study by L. Kurmangaliyeva, E. Aimagambetov, B. Spanova, A. Myrzykbayeva concluded that in the CIS countries, wage labor remains the main source of income, therefore, factors and employment opportunities have a serious impact on income inequality. Income inequality has deepened in recent years due to the effects of the global financial crisis and the coronavirus pandemic (Kurmangaliyeva et al.,2023). The basis for this is both technological progress and innovations, which, along with improving the organization of production and increasing labor productivity, lead to a decrease in demand in the labor market as a whole, and increase the requirements for job applicants.

According to Zheng, J. and Shen, C., at the regional level, citizens' incomes determine the capacity of the domestic market, which, provided with effective demand, acts as a powerful incentive for the development of domestic production (Zheng et al., 2019). Currently, this factor can be considered a fully unclaimed reserve that could be effectively used to improve the socio-economic situation of the country and its regions while implementing an effective import substitution policy.

Researchers Walelign, S.Z., Pouliot, M., Larsen, H.O. and Smith-Hall, C. in their work examined the sources of household income at the micro level, including labor income and income from investment activity. Household expenditure flows and the mechanism of formation of personal savings, investment objects of personal finance are also considered (Walelign et al., 2017). The functioning of household finances is also considered in the work of Akhunova Y. In her opinion, clarifying the actual model of the dynamics and structure of household spending is the basis for the formation of a mechanism for fiscal policy measures, the development of state programs of financial assistance to the population, and the construction of a system of financial instruments and services for targeted use by the population (Akhunova, 2022).

In the work of Hariyanto, W., Suhendrata, T. and Jauhari S., the influence of state regulation on incomes and expenditures of the population, the role of direct and indirect taxes, social transfers in income redistribution is considered (Hariyanto et al., 2021).

The World Economic Forum's Inclusive Growth and Development Report 2017 focuses on the problem of involving the entire population, including exclusive actors, in creating economic growth and distributing its achievements (The Inclusive Growth and Development Report, 2017). In this light, inclusivity becomes a yardstick in assessing all aspects of social production (CAFOD; Alfredsson, Wijkman, 2014), including the multi-vector development of the creative economy in the world economy (Kelly et al., 2016; Vial, 2019). The synergy of the effects of the creative economy provides additional GDP growth, enhances post-industrial dynamics and its inclusiveness, increasing the level and quality of life of the population.

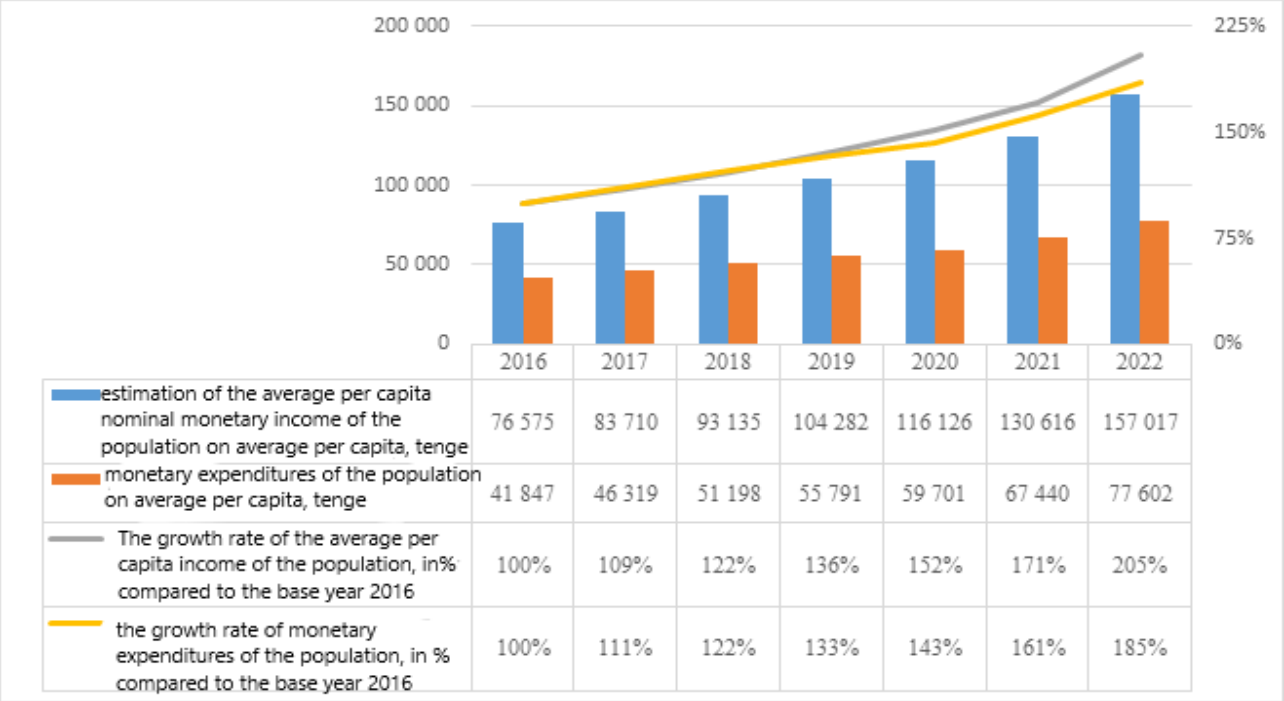
Methods

The methodological basis of the study was theoretical and practical developments and approaches used by experts to assess the current state of household income and expenditure, to identify trends in their dynamics, to describe income distribution and highlight issues of income and expenditure inequality. In studying the problematic issues of the formation and use of income of the population, a dialectical method of cognition and a systematic approach were used, revealing the possibilities of scientific research of socio-economic phenomena in the development of their interrelation and interdependence. The data sources for the analysis were the information resources of the Bureau of National Statistics of the Agency of the

Republic of Kazakhstan for Strategic Planning and Reforms, the National Bank of the Republic of Kazakhstan, as well as the Ministry of Finance of the Republic of Kazakhstan.

Results

According to the National Bureau of Statistics in the Republic of Kazakhstan, the average per capita monetary income of the population amounted to 157 thousand tenge in 2022, having increased by a little more than 2 times since 2016 (Fig. 1) from 76.6 thousand tenge. The average per capita monetary expenditures of the population as a whole for the period 2016–2022 under review were lower than monetary incomes, and at the same time this gap increased, since by 2022 the value of this indicator increased by less than 2 times (1.85 times).



	2016	2017	2018	2019	2020	2021	2022
estimation of the average per capita nominal monetary income of the population on average per capita, tenge	76 575	83 710	93 135	104 282	116 126	130 616	157 017
monetary expenditures of the population on average per capita, tenge	41 847	46 319	51 198	55 791	59 701	67 440	77 602
The growth rate of the average per capita income of the population, in% compared to the base year 2016	100%	109%	122%	136%	152%	171%	205%
the growth rate of monetary expenditures of the population, in % compared to the base year 2016	100%	111%	122%	133%	143%	161%	185%

Figure 1. Dynamics of growth of per capita monetary income and expenses of the population in the Republic of Kazakhstan in 2016–2022

Note – compiled by the authors based on the Bureau of national Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

In the structure of household incomes of the Republic of Kazakhstan in 2016–2022, there were the following trends: income from work fell from 78.3% in 2016 to 67% in 2020, then in 2021 it increased to 70% of all incomes, in 2022 it grew to 73.2%. At the same time, the share of income from employment decreased from 68% in 2016 to 57.9% in 2020, then in 2021 it increased to 60.7%, in 2022 to 64%. The share of self-employed income (including self-employment) increased from 10.3% in 2016 to 10.9% in 2018, but then fell to 9.1% by 2020. In 2021 and 2022, respectively, the share of income from self-employment increased slightly to 9.3 and 9.2% (Fig. 2). It should be concluded that the dynamics of income of the population of Kazakhstan was influenced in different ways by changes in their structural components.

In 2016–2020, the share of social transfers in the structure of monetary incomes of the population increased from 18.1% to 28.6%, decreased to 25.8% in 2021 and continued to decrease to 22.8% in 2022. In all likelihood, the increase in the share of social transfers is due to the fact that pensions and benefits were increased twice in 2020, and at the same time, wages fell amid the introduction of quarantine due to the coronavirus pandemic.

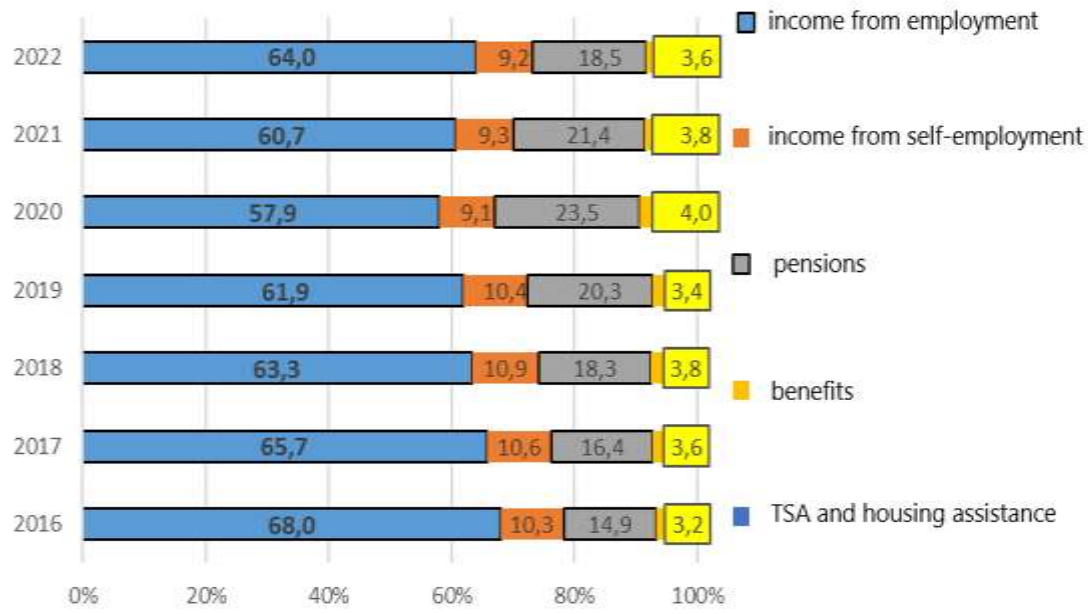


Figure 2. Structure of cash income of households in Kazakhstan

Note – compiled by the authors based on the Bureau of national Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

According to the data for 2021-2022, there is a significant differentiation in the size of the income of the population by region, the highest value is noted in the Atyrau region and amounts to 315.4 thousand tenge, the lowest is in the Turkestan region 82.9 thousand tenge, the gap between these values was 3.8 times (Fig. 3). Following the leader, the regions with the highest incomes of the population should include such cities as Astana, Almaty, Ulytau region, Mangystau region and Pavlodar region. The regions with the lowest incomes of the population, following the Turkestan region, included other regions located in the south of the country. As can be seen from Figure 3, higher incomes in regions with developed industrial production, low incomes in regions with agricultural specialization and high demographic burden.

Table 1 shows the rating of regions in terms of average per capita income in comparison with the ratings of regions in terms of gross regional product (GRP) per capita and average monthly salary (the higher the value of the indicators, the higher the place in the rating).

Thus, in all three indicators, the Atyrau region occupies a leading position (20 th place in the ratings) – high incomes of the population correlate with very high values of GRP per capita and average monthly wages. Although the Turkestan region is among the outsiders in terms of average per capita income and GRP per capita, it is in 5th place in terms of wages. This discrepancy is most likely due to the fact that in the income structure of the population in the Turkestan region, income from employment amounted to 48.5% of monetary income, and income from self-employment amounted to 26.4% of monetary income. Accordingly, the average monthly wage calculated by employees covers a relatively smaller part of income and has less influence on the amount of per capita income than in other regions. The low income in the city of Shymkent (2nd place “from below”) is influenced by both relatively low values of GRP per capita and wages (both ratings are 4th place “from below”), and similarly to the Turkestan region, a low share in the income structure of wages for employees (54.3% of monetary income) and a significant share self-employed wages (19.8%).

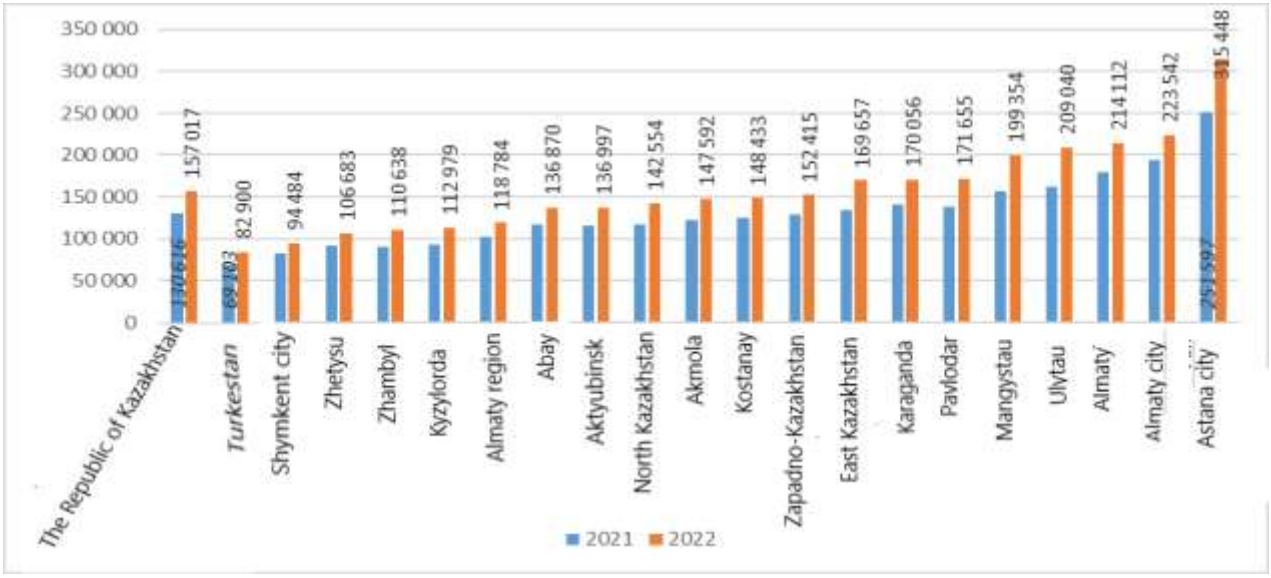


Figure 3. Regional differentiation of the per capita monetary income of the population in 2021-2022.

Note – compiled by the authors based on the Bureau of national Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

The North Kazakhstan region (North Kazakhstan region), despite the fact that it lags behind in terms of average monthly wages and has the lowest indicator by region, however, in the ratings on average per capita monetary income and GRP per capita, it is in the middle positions, taking 9th and 8th places. This can be explained by the fact that the income from employment in the named region is relatively low — 57.5%, therefore, the wage level has little effect on the level of average per capita income, besides, the low wage level is offset by the low demographic burden on the working-age population from children. The demographic burden on the part of the elderly in North Kazakhstan region is high, so the share of pensions in the monetary income of the population is 25.5%.

Table 1. Interrelation of regional income inequality with differentiation of GRP per capita and the level of wages in the regions (2022)

	2022						
	Rating of the region in terms of per capita monetary income	Rating of the region in terms of GRP per capita	Rating of the region in terms of the average monthly salary	Share of income from employment	The share of income from self-employment and entrepreneurship	Share in the monetary income of pensions	Share in the cash income of benefits
Turkestan	1	1	5	48,5	26,4	15,2	7,2
city of Shymkent	2	4	4	54,3	19,8	18,8	4,4
Zhetisu	3	2	2	58,4	10,3	22,9	3,6
Zhambylskaya	4	3	3	62,7	12,8	16,6	5,2
Kyzylorda	5	6	10	62,8	9,2	16,9	7,1
Almaty	6	5	7	62,3	12,7	19,3	3,2
Abai	7	7	8	57,5	6,8	24,6	3,9
Aktobe	8	10	12	70,7	7,5	13,7	4,1
North Kazakhstan	9	8	1	57,5	7,3	25,5	3,3
Akmola	10	9	6	61,4	7,9	21,6	3,5
Kostanay	11	11	7	63,0	7,3	21,4	2,4
West Kazakhstan	12	16	13	66,1	8,3	18,2	3,5
East Kazakhstan	13	12	15	61,6	3,8	28,2	2,4
Karaganda	14	15	14	66,3	6,5	14,9	4,3
Pavlodar	15	13	11	69,9	7,5	14,5	3,2
Mangystau	16	14	19	77,3	4,7	8,9	6,3
Ulytau	17	17	17	72,7	3,7	14,3	4,6

	2022						
	Rating of the region in terms of per capita monetary income	Rating of the region in terms of GRP per capita	Rating of the region in terms of the average monthly salary	Share of income from employment	The share of income from self-employment and entrepreneurship	Share in the monetary income of pensions	Share in the cash income of benefits
Almaty city	18	19	16	69,4	7,1	14,7	2,4
Astana city	19	18	18	65,9	4,9	23,0	1,5
Atyrau	20	20	20	74,0	4,7	15,5	3,8
Note – compiled by the authors based on the Bureau of national Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan							

In the structure of income of the population, the largest share of income from employment is in the Mangystau region (77.3% of all income), followed by Atyrau region (74%), Ulytau (72.7%), Aktobe region (70.7%).

As previously mentioned, in the Turkestan region, income from self-employment and entrepreneurship account for about 26.4% of all household income. This is probably a consequence of the fact that in the Turkestan region the largest number of self-employed is 364.8 thousand (46% of all employed). The same situation is with a high share of income from self-employment and entrepreneurial activity in the city of Shymkent, Zhambyl and Almaty regions.

At the regional level, the correlation between the level of monetary income and the median salary is about 79.2%, which exceeds 50%. In other words, the correlation analysis also reveals a significant relationship between wages and the level of income of the population.

Using the method of least squares (OLS), we obtain the following regression equation (Fig. 4):

$$Y=214\,980+3{,}63402*X,$$

where Y is cash income (cash_income);

X is the median salary (me).

According to the obtained equation, with an increase in the median wage index by 1%, the monetary income of households increases by 3.63 percentage points (Fig. 5).

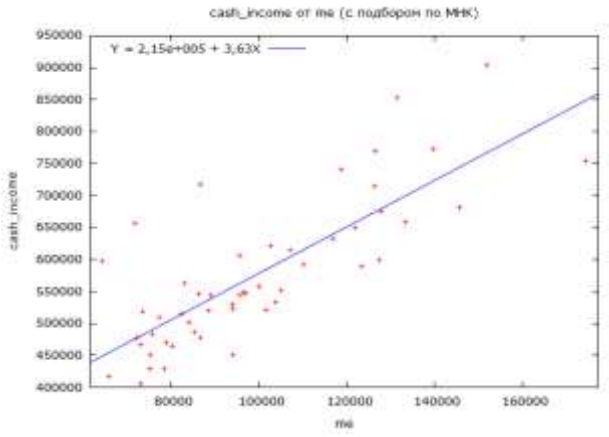


Figure 4. Correlation between the parameters of household monetary income and median wages (Multiple R) = 0.79157665

	coefficient	st.error	t-statistics	P-value	
const	214980	41020,2	5,241	<0,0001	***
me	3,63402	0,400762	9,068	<0,0001	***

The average head changes'	576160,7	Art. off. head of changes	113426,6
The sum of the square balances	2,40e+11	St. error of the model	70015,25
R-square	0,626594	Serviceable R-mode	0,618973
F(1, 49)	82,22432	P-value (F)	4,67e-12
Logical plausibility	-640,3256	Akaike criterion	1284,651
Schwartz Criteria	1288,515	Hannan-Quinn criterion	1286,128

Figure 5. Regression between the parameters of household monetary income and median wages

The State pays special attention to the issues of social security and support for the population by increasing the amount of pensions and benefits, which gives results in the form of providing more than 31 percent of the population's income through social contributions. The share of social transfers, including pensions, benefits, housing and targeted social assistance, increased from 18.1% in 2016 to 28.6% in 2020, decreasing to 22.8% by 2022. The share of financial assistance and alimony from relatives is also increasing.

Thus, the average income of the population in recent years has increased dependence on state support in the form of social transfers, and paternalism is strengthening. This leads to the spread of an unproductive reproduction model by suppressing private initiative, which forms the basis of market competition, and also forms dependent attitudes. As a result, household members prefer to apply for targeted social assistance and other types of benefits than to get low-paid jobs (taking into account the low qualifications of low-income segments of the population and the shortage of well-paid jobs in the regions).

There is also a problem of spatial inequality in the Republic of Kazakhstan: regions with agricultural specialization are characterized by a worse financial situation of households (Turkestan, Zhambyl, Kyzylorda, Almaty, North Kazakhstan, Akmola region) than regions with a developed industrial sector and a service economy. In addition, the weak income position of the population is due, on the one hand, to the low productivity of the region's economy, and on the other hand, to the high population density.

Let's turn to the analysis of the structure of household spending in Kazakhstan. As can be seen from Figure 6, during the study period, the largest part of the population's spending was directed to food, while this figure increased from 45.8% of spending in 2016 and reached its highest peak of 53.9% in 2020, then showed a decrease to 51.1% in 2022.

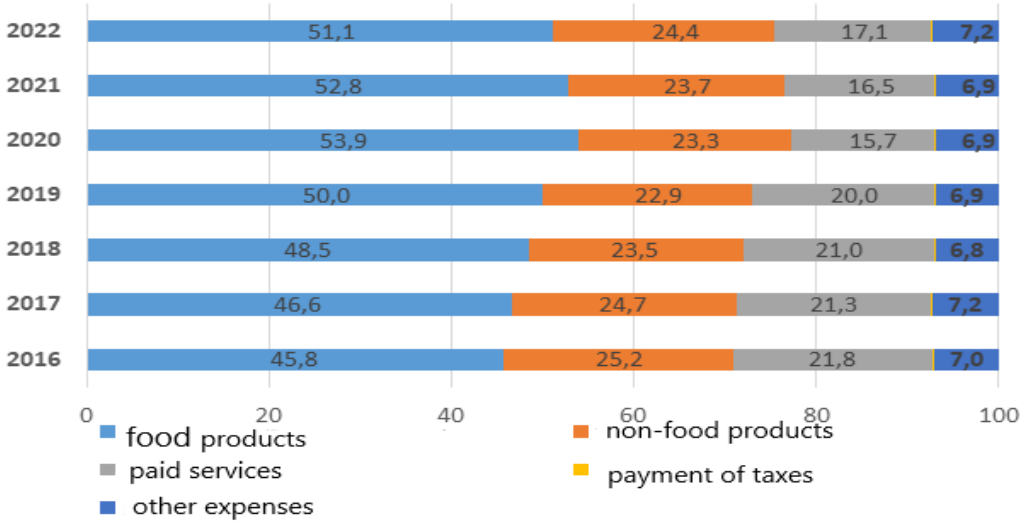


Figure 6. Structure of cash expenditures of households in Kazakhstan

Note – compiled by the authors based on the Bureau of national Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

The share of non-food products in household cash expenditures decreased from 25.2% in 2016 to 22.9% in 2019, and increased again in 2020-2022, reaching 24.4% in 2022 (Fig. 6). The share of paid services against the background of rising costs for non-food products decreased from 21.8% in 2016 to 15.7% of total household cash expenditures in 2020, increased again to 16.5% in 2021, and to 17.1% of cash expenditures in 2022. The share of other expenses was approximately the same — about 7% (within 6.8–7.4%) of the monetary expenses of Kazakhstani households.

A comparative analysis of the structure of expenditures in the city and in rural areas (Fig. 7 and 8) shows that the share of expenditures on food in rural areas is higher than in the city: in 2020, 52.3% in the city, 56.8% in rural areas — a difference of 4.5%; in 2021, 51.2% in the city, 56.2% in rural areas — the difference is 5%; in 2022, 49.3% in the city, 55.1% in the countryside — a difference of 4.8%.

Spending on non-food products accounted for a slightly different share in the structure of monetary expenditures of both urban and rural households — in the city it grew from 22.7 in 2020 to 24.1% in 2022; in rural areas it amounted to 24.6% in 2020, 24.3 in 2021 and 24.9% in 2022.

The cost of paid services was significantly higher in the city as a share of household monetary expenditures (increased from 17.4 in 2020 to 18.8% in 2022) than in rural areas — 12.3% in 2020, 12.9% in 2021 and 13.3% in 2022.

In 2020–2022, financial assistance to relatives in rural areas accounted for the same share of monetary expenses in the amount of 2.1%, in urban areas they differed less and showed a decrease from 1.9% to 1.7% in the period from 2020 to 2022.

Taxes, payments and other payments accounted for insignificant shares in both the budget of urban and rural households, but in the city they were higher than in rural areas (0.2% vs. 0.1%).

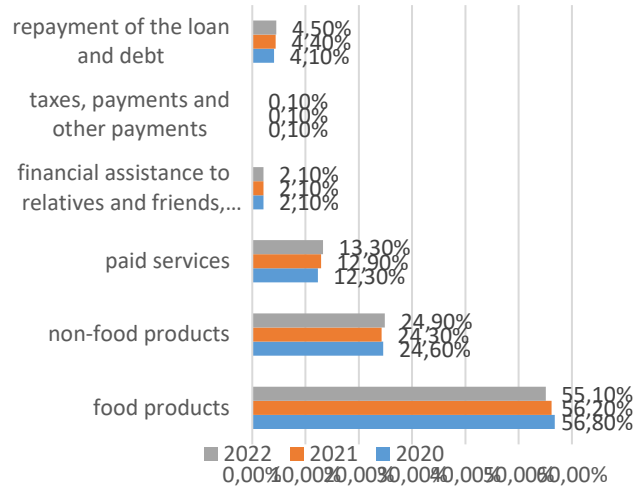


Figure 7. The structure of the average monetary expenditure of a household in the Republic of Kazakhstan by type of locality, city

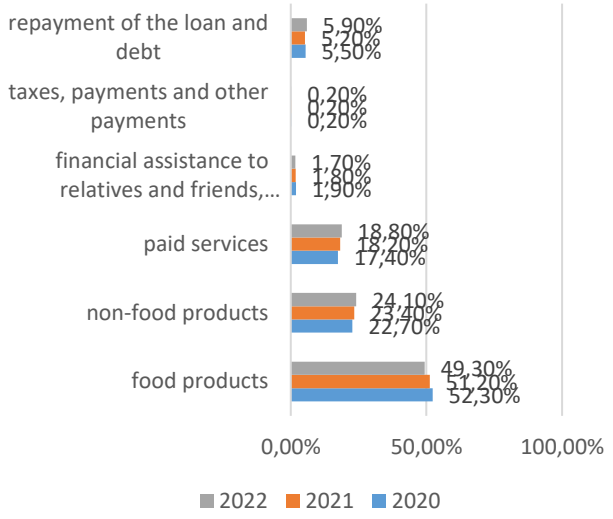


Figure 8. The structure of the average monetary expenditure of a household in the Republic of Kazakhstan by type of locality, village

Note – compiled by the authors based on the Bureau of national Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

Loan and debt repayment costs were higher in the city, where they rose from 5.5% in 2020 to 5.9% in 2022. In rural areas, they accounted for 4.1% in 2020 and grew to 4.4% in 2021 and 4.5% in 2022. Most likely, the population has a higher credit burden in the city, since they are more likely to have a loan approved by banks, since there are more employees in the city who can confirm their solvency in databases (mandatory pension contributions are made, which show a regular and fairly high income). In rural areas, there is a relatively high proportion of the self-employed population, which often does not make pension contributions, besides, the rural population has a low collateral base (low estimated value of property).

As we can see from Figure 9, the gap in the amount of monetary expenditures of households in the city and in the countryside is the smallest under the article "financial assistance to relatives and acquaintances": rural households spend only 87.3% of the expenditures under this article of urban households on it (lagging by 12.7%). There is also a less significant gap in the article "expenditures on food products": rural households spend 84% of urban household expenditures on it under this article (a lag of 16%).

The most significant gap in the amount of household monetary expenditures between urban and rural areas in Kazakhstan was noted in 2022 in terms of expenditures on paid services: rural households allocated slightly more than half — 53% of the amount of similar expenditures of urban households to paid services. This may be due to both a smaller range of services offered to rural households and low availability of services, as well as a lower price for paid services in rural settlements. Repayment of the loan and debt amounted to only 57.6% for rural households, taxes, payments and payments — only 54.5% of the amount of monetary expenditures of urban households in the relevant areas.

The lag in monetary expenditures in aggregate terms for rural households was 25%, that is, by ¼ of the monetary expenditures of urban households.

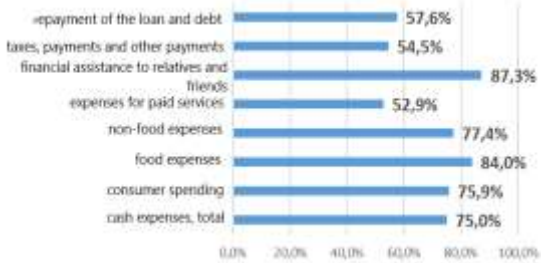


Figure 9. The ratio of cash expenditures of rural households and cash expenditures of urban households in 2022, in %

Note – compiled by the authors based on the Bureau of national Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

Rural households lagged behind urban households in terms of monetary income by the end of 2022 by only 6%. This suggests that, all other things being equal, rural households have a higher average propensity to save than urban households, since their per capita income is on average slightly lower than that of urban households, but their expenses lag by 25%, respectively, they spend less and have more opportunity to save for savings.

Discussions

The following table shows a summary of the parameters of the standard of living of the population for the period under review (2016–2022).

Table 2. Indicators of the standard of living of the population for the period from 2016 to 2022.

№	Indicators	2016	2017	2018	2019	2020	2021	2022
1	2	3	4	5	6	7	8	9
1	Share of the population with incomes below the subsistence level (poverty level), %	2,5[2)]	2,7[2)]	4,3[3)]	4,3	5,3	5,2	5,2
	city	1,2[2)]	1,2[2)]	2,5[3)]	2,7	3,7	3,8	4,0
	village	4,2[2)]	4,6[2)]	6,7[3)]	6,6	7,6	7,2	7,3
2	Share of the population with incomes below the cost of the food basket, %	0,1	0,1	0,1	0,1	0,2	0,1	0,1
	city	0,0	0,1	0,1	0,1	0,1	0,1	0,1
	village	0,1	0,3	0,2	0,2	0,2	0,2	0,1
3	Depth of poverty %	0,4	0,4	0,7	0,7	0,8	0,8	0,8
4	Poverty severity, %	0,1	0,1	0,2	0,2	0,2	0,2	0,2
5	Household income (used for consumption), average per capita, tenge	44 198	48 619	53 224	57 725	61 358	69 038	79 223
	city	49 023	54 659	60 034	66 207	67 591	76 024	86 252
	village	37 731	40 502	43 919	45 829	52 398	58 863	67 899
6	Ratio of income used for consumption to the cost of living, %	204,5	204,4	196,6	195,7	185,8	185,3	181,8
7	Average per capita nominal monetary income of the population, tenge	76 575	83 710	93 135	104 282	116 126	130 616	157 017
8	Real cash income index, %	99,3	101,8	105,0	106,4	104,3	104,0	104,5
9	Cash expenditures of the population on average per capita, tenge	41 847	46 319	51 198	55 791	59 701	67 440	77 602
	city	48 138	53 753	59 296	64 128	67 229	75 683	85 836
	Village	33 415	36 331	40 132	44 097	48 878	55 434	64 338
10	Ratio of 10% of the most and 10% of the least affluent population (funds ratio), times	5,6	5,9	6,0	6,0	5,9	6,0	5,7
11	Income concentration ratio (Gini index)	0,278	0,287	0,289	0,290	0,291	0,294	0,285
12	Average household size, persons	3,4	3,4	3,4	3,4	3,4	3,4	3,4
	city	3,1	3,1	3,1	3,1	3,1	3,1	3,2
	village	3,9	4,0	3,9	3,9	3,9	3,9	4,0
13	Share of the population with incomes below 60% of the median income level, %	9,5	10,1	10,0	9,7	9,9	8,7	8,7

Note – compiled by the authors based on the Bureau of national Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

Thus, an analysis of the dynamics and structure of monetary income and expenses of households (population) in Kazakhstan for the period 2016–2022 showed the following:

- the monetary incomes of the population grew faster than the monetary expenditures of the population, which had a favorable effect on the ability of the population to save;

- in general, real incomes of the population grew, although there was an inflationary jump in 2022 during the period under review;

- during the period under study, structural data on household incomes in terms of their sources had refractive trends in two stages: from 2016 to 2020, the importance of social transfers increased and the contri-

bution of income from employment decreased, then from 2021 to 2022, another trend began in the opposite direction — the share of social transfers decreased, the share of income from employment increased;

- Kazakhstan has a significant regional differentiation of monetary income per capita (the gap between the maximum and minimum values in 2022 was 3.8 times): the highest rates were observed in regions with developed industries, the lowest in regions in the south of the country, characterized by specialization in agriculture and a large demographic burden;

- as a result of the analysis of income distribution between different regions of the country, a high correlation of the level of monetary income with the amount of wages was found, which follows from a fairly high share of wages in the income structure by sources of their formation;

- the structure of household monetary expenditures shows the overwhelming share of food expenditures in them, which, according to the data for the studied period, increased significantly both in absolute terms and in relative terms — their share in the structure of consumer spending increased until 2020, then gradually began to decrease;

- there is a significant difference in the structure and amount of expenditures of urban and rural households, especially for food products and paid services.

In general, in 2016–2020, an increase in the share of social transfers and a decrease in income from work in the income structure and an increase in the share of food products in the structure of household monetary expenditures indicated a decrease in the level of well-being of the population in Kazakhstan and a deterioration in the stability of their socio-economic situation. But in 2021-2022, the dynamics of these indicators made a "U-turn", which indicates an improvement in nominal indicators of living standards and conditions. However, inflation, which accelerated by 2022, "ate up" most of the increased income and expenses.

In March 2023, the main statistical body of the state conducted a sociological survey on the topic "Quality of life of the population" in order to identify the values of the level and quality of life of the population based on the subjective assessments of respondents, which included 11,956 households aged from 15 years and older, living in the regions of the republic, the cities of Astana, Almaty and Shymkent. As an option to answer the questions, a satisfaction scale was used (from 1 to 10: scales 1–3 — "not satisfied", scales 4–7 — "partially satisfied" and scales 8–10 — "satisfied"), generally accepted in international statistical practice of Eurostat and OECD. Below we present the results of this survey by age group regarding respondents' assessments of satisfaction with their financial and economic situation, their assessments of their own level of material security (wealth), as well as the reasons for the low level of household security (Table 3).

Table 3. The results of the survey "Quality of life of the population" by age

	By age group					
	15–17	18–28	29–38	39–48	49–57 (62)	58 (63) and older
Respondents' opinions on satisfaction with their financial and economic situation						
Total respondents	100,0	100,0	100,0	100,0	100,0	100,0
including satisfaction with one's financial and economic situation						
satisfied	25,4	35,8	41,0	34,3	34,2	28,8
partially satisfied	46,2	57,1	58,3	64,8	64,9	70,0
not satisfied	0,4	0,6	0,4	0,5	0,5	0,2
Difficult to answer/not applicable	28,0	6,5	0,3	0,4	0,4	1,0
Respondents' assessment of their level of material security (wealth)						
Total respondents	100,0	100,0	100,0	100,0	100,0	100,0
including the level of material support:						
low level of wealth (low-income)	0,4	0,4	0,3	0,4	0,4	0,1
security below average	2,0	1,9	1,9	1,7	1,7	2,3
average level of wealth (middle class)	69,7	65,6	68,6	72,7	73,2	77,6
security is slightly above average	22,0	25,8	21,9	18,9	19,3	16,6
sufficient level of wealth (relatively wealthy)	5,0	5,4	5,5	5,2	4,4	3,0
Reasons for low and below-average levels of household wealth						
Total respondents	100,0	100,0	100,0	100,0	100,0	100,0
including for reasons:						
lack of any paid work	0,9	1,1	0,8	1,2	1,0	0,4

inability to find permanent paid work at the place of residence	0,9	0,6	0,8	1,3	0,9	0,2
insufficient level of qualifications and/or work experience	0,5	1,4	0,7	0,7	0,5	0,2
low wages	94,7	92,6	93,0	92,7	93,3	1,8
low pension	0,1	0,5	0,6	0,3	0,5	94,3
low social benefits	1,4	0,9	1,3	1,1	0,7	0,5
the presence of excess debt burden associated with the payment of loans and borrowings, including mortgages	0,2	0,8	0,9	1,4	1,0	0,6
insufficient level of education to obtain a suitable job	0,9	1,0	0,4	0,6	0,5	0,2
poor health	0,1	0,2	0,6	0,6	1,1	1,4
Note – compiled by the authors based on the Bureau of national Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan						

As can be seen from Table 3, in terms of the level of satisfaction with their financial and economic situation among respondents, representatives of the age group 29–38 years are in the lead (41% of them are satisfied with their financial and economic situation), in second place are representatives of the age group 18–28 years (35.8%), followed by the age groups 39–48 years (34.3%) and 49–57 (62) years (34.2%). The last places in terms of satisfaction with their financial and economic situation are occupied by representatives of the age groups 58 (63) years and older (28.8%), as well as 15–17 years (25.4%). At the same time, these same age groups take first place when assessing their wealth below the average level: in the group of 58 (63) years and older (2.3%), in the group of 15–17 years (2%). Respondents indicate low wages and low pensions as the main reason for low and below-average levels of security.

By Decree of the Government of the Republic of Kazakhstan dated April 14, 2022 No. 218, the Comprehensive Plan "Program for Increasing Population Incomes until 2025" was approved. At the same time, by Decree of the Government of the Republic of Kazakhstan dated March 28, 2023 No. 246, changes were made to it, including the title of the document was approved in the following new edition "On approval of the Comprehensive Plan "Program for Increasing Population Incomes until 2029"

This Comprehensive Plan covers activities in the following five areas:

1) creation of jobs in the real sector of the economy within the framework of regional employment cards;

2) increasing the income of the rural population as part of the implementation of the "Auyl Amanaty" project;

3) systemic measures to ensure increased income levels and government support measures;

4) obligations to increase wages from the budget;

5) state social support to the population.

Table 4. Directions and activities of the Comprehensive Plan "Program for increasing population incomes until 2029"

Directions	Events within the direction
1	2
1. Creation of jobs in the real sector of the economy within the framework of regional employment cards	1) Providing the population with employment within the framework of: national projects (including "Comfortable School", "Modernization of Rural Health Care"); free vacancies within the electronic labor exchange; creating jobs through private initiatives up to the city and district level; subsidized jobs. 2) Providing support for entrepreneurial initiatives (grants for socially vulnerable segments of the population, preferential microloans for youth at 2.5% per annum; loans in rural areas within the framework of the "Auyl Amanaty" project)
2. Increasing the income of the rural population as part of the implementation of the "Auyl Amanaty" project	Increasing labor income in rural areas as part of the implementation of the "Auyl Amanaty" project.
3. Systemic measures to ensure increased income levels and government support measures	1) Increasing the income of the population, the level of employment, and the social responsibility of business: - increase in the wage fund;

	- stimulating job creation. 2) Development of methodological approaches to determine the level of the minimum wage. 3) Development of proposals for revising the methodology for calculating the cost of living in an upward direction. 4) Creation of jobs in manufacturing enterprises by: - financial support for export-oriented manufacturing enterprises; - creating high-paying vacancies by stimulating innovation activity: industrial grants; commissioning of at least 100 projects in the manufacturing industry; implementation of social investment projects by large oil and gas companies. 5) Motivation of entrepreneurial activity of the population through: - provision of government support in the form of subsidies for repayment of part of the interest rate and loan guarantees; - development and implementation of instruments of state support for the development of creative industries.
4. Obligations to increase wages from the budget	1) Increase in the average salary of civil servants in accordance with strategic documents for the development of relevant industries. 2) Increase in the average salary of production personnel of natural monopolies in the public utilities sector.
5. State social support to the population	1) Development of a regulatory mechanism (including issues of social and health insurance, pensions, taxation) of new forms of employment, including those carried out on the basis of Internet platforms. 2) Proactive use of social support tools for families with incomes below the poverty line. 3) Introduction of a proactive format for providing and providing social support measures to the population by crediting them to the "social wallet" 4) Implementation of systemic measures of social partnership on the regulation of labor relations within the framework of industry and regional agreements in terms of fulfilling the obligations of the parties to take measures aimed at ensuring employment, as well as establishing: - minimum tariff rates (salaries) in the industry; - limit values of inter-digit coefficients; - a unified procedure for establishing additional payments to employees engaged in heavy work, work with harmful and (or) dangerous working conditions. 5) Increasing the incomes of the employed population by increasing the level of education and professional competencies through: - implementation of a nationwide project on industry certification in the context of various professions, in cooperation with educational organizations, certification agencies, participation in massive open online courses, silver age programs (Walelign, 2022); - training of specialists commissioned by enterprises of the real sector of the economy, dual education; - professional development of practitioners at enterprises in other countries, exchange of experience.
Note – compiled by the author on the basis of the Comprehensive Plan "Program for Increasing Population Incomes until 2029"	

As can be seen from Table 4, a special place in the activities of the Comprehensive Plan "Program for increasing population incomes until 2029" is occupied by the development of creative industries.

The creative economy has significant opportunities to improve the level and quality of life of the population, especially young people and older people. Thus, youth business activity, due to the socio-psychological characteristics of youth as the most active, creative, reflective part of society, contributes to the realization of the innovative potential of the economy. In this regard, the possibility of realizing and converging the innovative activity potential of youth in the development of creative industries and their clustering requires further methodological research with further applied implementation. As for the elderly population, whose age limit according to the WHO classification is 60–75 years, their effective socio-economic inclusion is currently an urgent task, especially in developed countries, due to the increase in life expectancy and the number of representatives of the "silver generation". The significant socio-economic potential that

older people have can be realized on several levels in the creative economy. First, the accumulated social and intellectual capital of the elderly, as well as their residual labor reserves, can be realized through direct participation in creative production, in particular in cultural and creative industries. Secondly, older people have economic potential as key consumers of creative industries, especially those related to leisure activities, cultural institutions, and recreational services. Creative industries and creative practices of social partnership can be considered as "rapper points" for reducing the "social distance" between the young and "silver" generations.

The above highlights the need for further research in the field of diversifying the use of the socio-economic potential of older people in the development of creative industries. At the same time, creative clusters can be built through the use of participatory practices based on social partnership between the young and the "silver" generation as producers and consumers of creative goods through building their intersubjective communications, taking into account the creative capabilities of both groups.

Conclusions

Summarizing the results of the analysis, it can be concluded that the problem of financial instability of households in the Republic of Kazakhstan in recent years is associated with a low level of income sufficiency to ensure consumer spending, which is proved by an increase in loans to the population (respectively, an increase in the cost of paying loans and debts) and a decrease in opportunities for the formation of savings among the population. The differentiation of expenditures and incomes of the population in the regional context is connected, on the one hand, with differences in the level of average wages by region, and these differences, in turn, with the sectoral specialization of the regions and with different levels of wages in industries and types of economic activity. In addition, the structure of income and expenses and their differences both by region and in the context of "city-village" are also influenced by demographic characteristics in the regions (gender and age composition, aging processes, the level of demographic burden, etc.).

When pursuing a policy of regulating incomes and improving the well-being of the population, both nationally and at the regional level, it is necessary to focus on the peculiarities of the formation of household incomes and the specifics of the distribution of monetary expenses. In addition to macroeconomic parameters, it is necessary to understand in the "people-centric" model of public administration the impact of policy measures on the components of the well-being of the population — on the elements of the structure of income and expenses. This will make it possible to develop more "targeted" support and incentive measures aimed at reducing inequality of income and opportunities, developing consumer demand, creating conditions for the growth of human capital in the country, and including the innovation and activity potential of young people and the reserves of economic activity of older people. In addition, it is necessary to develop an integration model for the development of creative industries in the Republic of Kazakhstan with the implementation of institutional and economic elements of inclusion of the activity of youth and older people, which will increase the overall socio-economic performance of domestic reproduction, will contribute to the socio-economic diversification of creative industries and the activation of civil society and social partnerships in the context of inclusive growth. From a macroeconomic perspective, this project will help to improve the level and quality of life of the population, reduce youth unemployment, involve older people in the post-industrial environment, sustainable development and expansion of the creative sector, increase public welfare and socialization of the Kazakh economy as a whole.

Complementary Data

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Инклюзивті өсу және экономиканы шығармашылық әртараптандыру әлеуетін бағалау тұрғысында Қазақстан халқының өмір сүру деңгейін талдау

Аңдатпа:

Мақсаты: Отандық экономиканың инклюзивті өсу және шығармашылық әртараптандыру әлеуетін анықтау үшін Қазақстан Республикасындағы соңғы жылдардағы (2016-2022 жж.) үй шаруашылықтарының өмір сүру деңгейінің, кірістер мен шығыстар құрылымының өзгеру үрдістерін айқындау.

Әдісі: Жұмыста статистикалық, эконометрикалық талдау, салыстыру әдістері және деректерді кестелік және графикалық ұсыну әдісі қолданылды.

Нәтижесі: Зерттеу нәтижелері негізгі тұжырымдарға келіп тіреледі: Қазақстандағы халықтың кірістері мен шығыстары соңғы жылдары (2016-2022 жж.) едәуір өсті, ал кірістер озық қарқынмен өсті. Қарастырылып отырған кезеңдегі кірістер құрылымында жалданудан түскен кірістер үлесін төмендету және әлеуметтік трансферттер үлесін ұлғайту кезеңі (2016-2020 жж.) және жалданған кірістер үлесін ұлғайту және трансферттер үлесін төмендету кезеңі (2021-2022 жж.) болды. Ақшалай шығыстар құрылымында азық-түлік тауарларына (2016-2020 жж.) арналған шығыстардың күшейтілген өсу кезеңі де атап өтілді, соңғы екі жылда бұл шығыстар қайтадан төмендей бастады, бірақ әзірге қарастырылып отырған кезеңнің басына қарағанда жоғары деңгейде қалып отыр. Аймақтық бөліністе кірістердің сарапануы, қалалық және ауылдық үй шаруашылықтарының ақшалай шығыстарында елеулі алшақтық байқалады. Бұдан басқа, аймақтарда, «қала/ауыл» бөлінісінде, сондай-ақ халықтың жас топтары бөлінісінде өмір сүру деңгейі мен сапасында айтарлықтай айырмашылықтар бар.

Қорытынды: Елдің ауқымында да, өңірлік деңгейде де кірістерді реттеу және халықтың әл-ауқатын арттыру саясатын жүргізу кезінде халықтың кірістерін қалыптастыру ерекшеліктеріне және ақшалай шығыстарды бөлу ерекшелігіне бағдарлану қажет. Макроэкономикалық параметрлерден басқа, мемлекеттік басқарудың «адамға бағытталған» моделінде және саясат шараларының халықтың әл-ауқатының құрамдас бөліктеріне әсерін түсіну қажет, бұл кірістер мен мүмкіндіктердің теңсіздігін төмендетуге, тұтынушылық сұранысты дамытуға, елдегі адами капиталдың өсуіне жағдай жасауға, инклюзияға бағытталған қолдаудың, ынталандырудың неғұрлым «нүктелік» атаулы шараларын әзірлеуге және жастардың инновациялық-белсенді әлеуеті мен карттардың экономикалық белсенділігінің резервтеріне мүмкіндік береді.

Бұдан басқа, отандық ұдайы өндірістің жалпы әлеуметтік-экономикалық тиімділігін арттыратын, шығармашылық индустрияларды әлеуметтік-экономикалық әртараптандыруға және инклюзивті өсу контексінде азаматтық қоғам мен әлеуметтік әріптестікті жандандыруға ықпал ететін жастар мен карт адамдардың белсенділігін инклюзиялаудың институционалдық-экономикалық элементтерін имплементациялай отырып, Қазақстан Республикасында шығармашылық индустрияларды дамытудың интеграциялық моделін әзірлеу қажет.

Кілт сөздер: өмір сүру деңгейі, халықтың жан басына шаққандағы орташа табысы, халықтың жан басына шаққандағы орташа шығысы, креативті экономика, инклюзивті экономикалық өсу.

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Анализ параметров уровня жизни населения в Казахстане в контексте оценки потенциала инклюзивного роста и креативной диверсификации экономики

Аннотация:

Цель: Определить тенденции в изменении уровня жизни, структуры доходов и расходов домохозяйств в Республике Казахстан в последние годы (2016–2022 гг.) для выявления потенциала инклюзивного роста и креативной диверсификации отечественной экономики.

Методы: В работе использованы методы статистического, эконометрического анализа, сопоставления и метод табличного и графического представления данных.

Результаты: Результаты исследования сводятся к основным выводам: доходы и расходы населения в Казахстане значительно выросли в последние годы (2016–2022 гг.), причем доходы росли опережающими темпами. В структуре доходов в рассматриваемый период наблюдались этапы снижения доли доходов от найма и увеличения доли социальных трансфертов (2016–2020 гг.) и увеличения доли доходов от найма и снижения доли трансфертов (2021–2022 гг.). В структуре денежных расходов также отмечался этап усиленного роста расходов на продовольственные товары (2016–2020 гг.), в последние два года вновь данные расходы начали снижаться, однако они остаются на более высоком уровне, чем на начало рассматриваемого периода. Наблюдаются дифференциация доходов в региональном разрезе и существенный разрыв в денежных расходах городских и сельских домохозяйств. Кроме того, есть существенные различия в уровне и качестве жизни по регионам, в разрезе «город/село», а также в разрезе возрастных групп населения.

Выводы: При проведении политики регулирования доходов и повышения благосостояния населения как в масштабе страны, так и на региональном уровне необходимо ориентироваться на особенности формирования доходов населения и специфику распределения денежных расходов. Помимо макроэкономических параметров, необходимо понимать в «человекоцентричной» модели государственного управления и влияние мер политики на составляющие благосостояния населения, что позволит вырабатывать более «точечные» адресные меры поддержки, стимулирования, направленные на снижение неравенства доходов и возможностей, развитие потребительского спроса, формирование условий для роста человеческого капитала в стране, на инклюзию инновационно-деятельностного потенциала молодежи и резервов экономической активности пожилых людей. Кроме того, необходима разработка интеграционной модели развития креативных индустрий в Республике Казахстан с имплементацией институционально-экономических элементов инклюзии активности молодежи и пожилых людей, которая повысит общую социально-экономическую результативность отечественного воспроизводства, будет способствовать социально-экономической диверсификации кретивных индустрий и активизации гражданского общества и социального партнерства в контексте инклюзивного роста.

Ключевые слова: уровень жизни, среднедушевые доходы населения, среднедушевые расходы населения, креативная экономика, инклюзивный экономический рост.

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The study of some issues of the application of cryptocurrency mining technology in Kazakhstan

Abstract

Object: Analyze the use of cryptocurrency mining technology in Kazakhstan and develop recommendations for improving its effective operation.

Methods: We have used scientific methodological and research approaches, such as comparison, grouping, analysis, classification, statistical data, induction, deduction, economic-mathematical methods, and modeling.

Findings: The study's practical significance is that these principles and approaches can be used to form a mining farm development strategy. The proposals presented will improve the digital efficiency of the company and stabilize and improve its financial and economic situation by making appropriate management decisions. The study results make it possible to solve problems related to the ability of enterprises to provide a medium and long-term stable position in the market and flexibly adapt to the environment.

Conclusions: Based on the study, the concept of "cryptocurrency", "mining", and "mining farm" was clarified as a particular form of a new information economy and society that combines its input stages of the technological chain or stages of its release in order to achieve significant competitive advantages compared to specialized types of digital money. The features of digital money, such as cryptocurrencies and their mining, which include various platforms, objects, and types but have common elements, technologies, development management, and risks, were identified. A methodology for analyzing the IT architecture of cryptocurrency and the volatility of the digital currency is proposed, which allows one to find out quantitative and qualitative indicators, assess the extensiveness, intensity, and efficiency of the use of cryptocurrency, and determine the reserves for its full use.

Keywords: information economy, digitalization, cryptocurrency, mining, digital tenge, bitcoin, electronic money.

Introduction

The global economy undergoes constant transformation: technological structures, material values, and regulatory mechanisms evolve. The emergence of new factors could accelerate this process and alter the fundamental principles of modern market economics.

One such factor is global digitalization, which has influenced the development of all economic sectors. Consequently, new markets, communication methods, and production management approaches have emerged. Active digitization has created a digital profile for individuals, encompassing various aspects of their lives, and also leads to specific ideological shifts as digital values, alongside material ones, have emerged.

These digital goods and services are produced, bought, and sold in a global digital market, which operates without geographical limitations. Notably, most transactions and product usage occur in the digital realm, facilitating faster communication between buyers and sellers and the delivery of digital products.

However, this digital environment has also introduced challenges such as slower and costlier transactions and the risk of compromised digital property and funds due to fraudulent activities. These challenges coincided with the global financial crisis of 2007–2009 and the subsequent destabilization of international economic relations.

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In response to these challenges, there has been a growing demand for alternative accumulation instruments that are independent of traditional financial markets and meet the requirements of the digital economy. Cryptocurrencies emerged as a technological response to these issues (Carstens, 2018).

Understanding the significance and popularity of cryptocurrencies requires examining the factors that led to their emergence and the motivations of economic actors who adopted them.

After the emergence of Bitcoin in 2009, the world's first cryptocurrency, the cryptocurrency market expanded rapidly, now offering various instruments based on distributed ledger technology. These instruments, collectively known as crypto assets, exist in digital form or represent other assets digitally (Qin, 2018).

As stated in Satoshi Nakamoto's article "Bitcoin: Peer-to-Peer Electronic Cash System", the purpose of creating cryptocurrency is to provide an alternative to fiat currency (Nakamoto, 2008). The meaning of cryptocurrency as a virtual currency or asset is still different, although there are many definitions often found on the websites of international or national financial institutions.

Cryptocurrency is a set of concepts and technologies that form the backbone of the digital money system. Monetary units such as bitcoins are used to store and transfer value between network members. There are several remarkable differences to consider (Sichinava, 2019):

1) Digital currency is entirely virtual and lacks backing, unlike the dollar initially tied to gold. Some experts argue that the cryptocurrencies' value is determined by the energy expended in mining them;

2) All operations are entirely hidden when the system is completely transparent. A third-party user can see a sequence of transactions with a coin at any time, but the people who make them are hidden behind secret public keys;

3) The payment cannot be reversed. This property of cryptocurrency is one of the keys. In this regard, S. Nakamoto wrote: "the absence of irreversible transactions increases the cost of services, the information of which cannot be canceled. Since the payment can be canceled, the seller must be careful when asking the buyer for more information than necessary";

4) The most important difference is that everything started and there is no regulatory authority for cryptocurrencies. This was done by transferring the main responsibility for managing records from the central financial institution to the personal computer network and excluding the installers' semi-commissions. Cryptocurrencies allow us to reduce the cost of doing business and prevent dishonest actions of intermediaries. The system supports the development of the infrastructure where foreigners can do business by eliminating the need for intermediaries.

Literature Review

The theoretical and methodological framework of the study is built upon the works of various authors in the field of cryptocurrencies, mining, and digital economics, as well as methodological guidelines outlined in legislative acts, government resolutions, and regulatory documents of the Republic of Kazakhstan. Additionally, insights from domestic and foreign authors on the topics under examination, along with program documents of Kazakhstan, inform the research. Among the notable foreign scholars contributing to developing the digital economy, blockchain, and cryptocurrency are S. Nakamoto, D. Sichinawa, N.T. Thuy, F. Calvao, A.A. Aljabr, A.D. Lee, S. Ghimire, D.K. Sharma, and Y.K. Tomov.

It is worth noting that the concept of "Bitcoin" was the first to appear. A few years after its appearance, Forbes magazine published an article in which the term "Cryptocurrency", already familiar to society, was strengthened. Because Bitcoin and cryptocurrencies are often classified with each other, Bitcoin is the first failed cryptocurrency. The history of the emergence of the cryptocurrency phenomenon is considered from the moment of the creation of the electronic coin (Thuy, 2020).

As per F. Calvao (2019), there exist various methods for acquiring cryptocurrencies:

1. Mining: This involves the issuance of cryptocurrencies through resource-intensive computations, often as a reward for validating transactions.

2. Purchase on cryptocurrency exchanges: Cryptocurrencies can be bought and sold on specialized trading platforms known as cryptocurrency exchanges.

3. Direct Acquisition: Acquiring cryptocurrencies directly from the owner, bypassing intermediaries, is feasible. These digital assets can be procured via ATMs and online platforms providing services for exchanging fiat currency.

4. Capital investment: Another strategy involves investing in finance-related cryptocurrency. More importantly, there has been an increase in the number of commercial entities entering the cryptocurrency space, leading to the creation of digital assets-related products.

Users who generate cryptocurrency are called integrity. They provide the hardware to validate transactions, embed them in the blockchain, and maintain it online. Blockchain is a distributed ledger that records all transactions in a cryptocurrency such as Bitcoin. Blockchain data is the history of all transactions, partially or entirely, loaded on every device connected to the network. Therefore, the collection of all information about transactions and blocks takes place on many computers and is constantly synchronized. This process ensures system security, prevents tampering of individual devices, and ensures that transactions are immutable and non-transferable (you cannot send the same bitcoins twice). If your Bitcoin payment passes, it will be written to the blockchain and remain there forever. It would help if you did this simultaneously on all connected devices to change information about it somehow. Each computer on which a copy of the blockchain is stored is called a node. The code may be complete or incomplete, depending on the data uploaded. Incomplete codes are associated with full years since they do not include all the data of the blockchain; they save only block headers and confirm transactions only on them. The miners in this system act as a complete code — they download the entire blockchain to their computer. Additionally, Master Codes are comprehensive codes capable of distributing rewards obtained by miners for transactions. However, to activate such a code, a specific amount of cryptocurrency must be present in the account (Aljabr, 2019).

Lee A.D.'s research highlights that blockchain technology forms the foundation of every cryptocurrency, constituting a series of interconnected blocks. According to his findings, each block contains transaction details such as sender and recipient addresses, transaction amounts, and supplementary remarks. Miners are tasked with validating transactions, which is achieved through solving intricate algorithmic challenges (Lee, 2020).

Sharma D.K., in a research paper, outlined the basics of cryptocurrencies using blockchain technology and discussed existing conversations about the potential of this technology to simplify effective financial transaction mechanisms. The leading followers of technology are discussed in detail, as well as potential problems and conflicts related to technology (Sharma, 2020).

Blockchain technologies have garnered significant attention in academics and business in recent years. The emergence of the Bitcoin blockchain, mainly, has sparked numerous scientific inquiries into the technology's intricacies, security, and dependability. At its zenith, it catalyzed the formation of a novel economic landscape, boasting a market capitalization of roughly $300 billion. In his scholarly work, Tomov Y.K. extensively delved into the evolution of blockchain technologies, addressing fundamental challenges and proposing diverse solutions (Tomov, 2019).

Methods

The methodological basis of the research is based on the general scientific principles of the systematic research approach. In addition, this paper uses theoretical research methods, including the analysis and synthesis of information provided by the periodic business and scientific publications on cryptocurrencies and Blockchain technologies. At the same time, historical, logical, technical, comparative, and legal research methods were applied. Consequently, it became possible to classify cryptocurrency by substance and purpose and obtain the necessary information about the legal regulation of cryptocurrency. In turn, along with theoretical research, empirical research methods were used, the basis of which was statistical and analytical data published by rating agencies in the global information network Internet, the analysis of which allowed to identify the main trends and directions of development of the cryptocurrency market based on blockchain technologies.

Results

The current level of economic change is associated with the growth of virtual work, which is part of the global economy based on interactive business and information technology. Developing new forms of money is associated with activating and deepening the information sphere and society. Due to such conditions and the impact of technological innovations, the economy acquires a new meaning; significant changes occur in all spheres of economic activity, including the financial sector. The manifestation of such changes is the transfer of transactions into electronic format, the emergence of new means of payment, and the latest payment means and systems.

One of the first payment systems that primarily used cryptography to protect the privacy of payments was an equivalent version of the Bitcoin system. This system was developed in 2009 by a team of programmers under the pseudonym Satoshi Nakamoto. The primary purpose of creating cryptocurrency was to decentralize payments, that is, to avoid currency controls by financial institutions and avoid unnecessary fees.

The initial value of the cryptocurrency was the cost of electricity consumed, and the secondary value was the demand for the cryptocurrency.

Cryptocurrency is a new type of electronic money or financial obligations exchanged through information technology systems, and the confidentiality of their transactions is protected by complex mathematical calculations of encryption algorithms based on cryptography. The main distinction of cryptocurrency to electronic money is the lack of control, limited circulation, and the principle of complete anonymity (Li, 2017).

Cryptocurrency inflation protection can help to reduce the number of virtual currencies in circulation, reduce the limited number of bitcoins, increase the likelihood of reclaiming or spending that bitcoin, and increase the transparency and anonymity of the system, securely protecting electronic wallets. The first purchase of an actual Bitcoin cryptocurrency product was made by a US citizen in 2010. About a thousand cryptocurrencies are worldwide, but the most popular is Bitcoin. Its capitalization occupies almost 50% of the entire cryptocurrency market, and as of 13 April 2018, it is worth $136.7 billion.

In the second place by capitalization, cryptocurrency, Ethereum stands at a crypto value — of 50.4 billion. In third place is the cryptocurrency Ripple; its capitalization level is 25.14 billion dollars. The value and capitalization of the 20 largest cryptocurrencies are presented in Table 1.

Table 1. The value and capitalization of cryptocurrencies for 2021 (the 100 best by market capitalization).

№	Name	Market capitalization	Price	Sale price, for 24 hours	Number of revolutions
1	Bitcoin	$136, 726, 137, 857	$8 054.66	$9,501,840,000	16,974,787 BTC
2	Ethereum	$50,403,452,227	$510,21	$2,716,320,000	98,789,233 ETH
4	Bitcoin Cash	$12,887,467,922	$754,95	$437,130,000	17,070,738 BCH
5	Litecoin	$7,304,587,766	$130,30	$640,637,000	56,059,338 LTC
6	EOS	$7,234,809,131	$9,15	$1,312,070,000	790,689,523 EOS*
8	Stellar	$4,507,018,283	$0,242841	$90,295,200	18,559,554,243 XLM
9	NEO	$4,332,373,500	$66,65	$243,161,000	65,000,000 NEO*
13	TRON	$2,596,268,007	$0,039488	$419,802,000	65,748,111,645 TRX*
14	Tetcher	$2,556,594,000	$0,284066	$49,235,700	8,999,999,999 XEM*
15	NEM	$2,280,949,523	$0,997293	$3,846,750,000	2,287,140,814 USDT*
16	VeChain	$1,773,692,821	$3,38	$81,267,800	524,770,505 VEN*
17	Ethereum Classic	$1,637,901,917	$16,20	$238,199,000	101,135,647 ETC
18	Binance Coin	$1,529,107,496	$13,15	$137,054,000	116,261,604 BNB*
Note – based on the author's calculations					

Regarding Kazakhstan, the National Bank of the Republic of Kazakhstan has recently determined that the sole legal tender within the country is the tenge. Consequently, cryptocurrencies are not recognized as valid means of payment. The rationale behind these restrictions and potential uniformity in managing the virtual currency market stems from efforts to mitigate associated risks:

1) the potential misuse of virtual currencies for illicit activities like drug trafficking, arms trade, and other prohibited transactions;

2) concerns regarding the infiltration of foreign financial entities into the domestic market, leading to heightened competition and potential market share erosion for local financial institutions;

3) the risk of relinquishing the state's monopoly over currency issuance;

4) decline in central bank income;

5) a decrease in demand for the national currency, which causes its depreciation (or even refusal in favor of foreign currency) and a change in the velocity of circulation, which, in turn, complicates the process of determining the velocity of circulation of money and carrying out monetary regulation;

6) the impossibility of conducting an effective monetary policy since a large share of the money supply is beyond the control of the monetary regulator;

7) reducing the level of impact or eliminating financial intermediaries, etcetera.

All this is an essential basis for making decisions on the monopoly issue of cryptocurrencies only by central banks. Control over the development of virtual currencies, their circulation, regulation, and development of national payment systems under the auspices and control of the regulator confirms the previously stated hypothesis.

In conclusion, according to many analysts, the rate of Bitcoin and most cryptocurrencies is very high, and their cost increases only with the demand and interest of miners. Any negative information related to the cryptocurrency system, bitcoin, and other electronic currencies will immediately affect their value.

Officials in many countries around the world view the Bitcoin network as an enabling environment for illegal transactions and tax exemptions and, therefore, avoid the use of Bitcoin and other digital currencies, making it difficult to exchange them with other traditional currencies.

In addition, the advantages of Bitcoin and other cryptocurrency systems are the high speed of electronic currency transfer, high transaction security due to the high complexity of the Bitcoin network calculation, the emission process programmed to reduce the number of virtual currencies in circulation, the ability to bypass unallocated Bitcoins, limited number of Bitcoins, no commission in the payment system, the ability to return or spend the same bitcoin a second time, systems of transparency and anonymity, reliable protection of electronic wallets.

Thus, the use of cryptocurrency is only feasible for preventing the emergence of cryptocurrency pyramid investment schemes, enhancing the digital and financial literacy of the population, and tightening legislation in this area.

The electronic tenge, for which the National Bank of Kazakhstan is responsible, gets distributed in electronic format jointly with market participants within the framework of a two-tier financial structure. It is technically possible to present electronic tenge in the form of banknotes or tokens.

The primary objectives of the 2021 pilot initiative include assessing the feasibility of the digital tenge concept through a pilot test of the technological execution of a retail platform using distributed ledger technology. Additionally, the project aims to determine the key parameters of the digital currency model of the National Bank of Kazakhstan in collaboration with all relevant stakeholders.

The Central Bank of the Republic creates and develops payment systems in the region to provide fast, easy and secure payment solutions to everyone doing business across the country. The digital tenge system will serve as an additional tool for financial market participants to improve financial inclusion by supporting the creation of new services and expanding the adoption of electricity payments across the region.

In the long term, the introduction of digital tenge will improve the outcomes of international payments. The Digital Tenge platform enables transactions at the level of national currency tokens, offering many ways to increase the value, speed and transparency of country-related transactions. Digital KZT can help promote personal and large businesses. The electronic presentation of Tenge for the private sector was tested within the scope of a pilot project in 2021.

Central bank digital currencies serve digital payments and central bank reporting. A digital currency governed by central bank tokens that acts as a store of wealth and a medium of exchange represents a third vision of national money. It combines many of the properties of physical and digital currencies, providing new opportunities for businesses and government agencies. According to the Bank for International Settlements' Quarterly Thematic Review published in April 2021, central banks around the world have 65 ongoing research activities on digital currencies. An updated version of the survey conducted in October of the same year identified 84 projects, increasing the number of pilot projects from 9 to 26, as shown in Table 2.

Table 2. Examples of potential uses (pay-per-use, pay-as-you-go) payments in the supply chain

Targeted use	Payment-per-use (pay-per-use, pay-as-you-go)	Payments with government participation	Micropayments and debits on an ongoing basis	IoT and M2M payments	Payments in the supply chain
Watercolour special-purpose tokens allow you to control their use.	Through Smart Contracts, the central bank's digital currency enables payment for actual, actually consumed quantities of products, resources, and services, providing the necessary flexibility, savings, and control over spending.	Reducing the risks of error, abuse, and fraud, the ability to monitor intended use, and making quick changes to social care settings.	The payment properties of the Central Bank's digital currency allow additional payments in payment models with low growth, reducing the associated time costs.	Due to their autonomy and programmability, central bank digital currencies can become a convenient tool for making direct (without intermediaries) payments between Internet of Things devices.	Targeted Programmes and traceability of the Central Bank's digital currency enable automatic and transparent settlements for supply chain participants, reduce risks and costs, and increase the level of trust of chain participants.
Note – it is based on the author's calculation					

Prerequisites for launching the Digital Tenge Initiative. To ensure the success of the Digital Tenge initiative, several key factors need to be met: a wide range of modern digital payment options for individuals and businesses who do not have access to traditional payment services.

Improving payment performance: expanding offline payments through technological advancements, improving privacy and anonymity of transactions, allowing public access to digital currencies issued directly by central banks, and improving payment facilities in the country.

Optimize government payments: Improve the payment process with the cooperation of the government and recognize the important role in the development of the national economy and important work obligations in society.

Digitalization of payment systems: Adapting payment systems to the growth of personal cryptocurrencies and stable coins in the financial sector, strengthening the technological integration of payment infrastructure and intensifying international competition in the development of public funds.

These events led to a surge in the cryptocurrency market; It increased from $190 billion in 2019 to $570 billion in 2020 at the end of the same year.

Credit cards increased significantly from 232 million transactions in 2017 to 2.88 billion transactions in 2020. In the same period, the value of these transactions increased from 3 to 35.3 trillion. Despite the growth, the average transaction value decreased slightly from 13,100 manats in 2017 to 12,300 manats in 2020, showing that payment cards have increased due to the impact of economic growth.

According to data from COINSHARES, an online website that tracks investments in Bitcoin and other cryptocurrencies, total cryptocurrency assets managed by ETHEREUM reached $63 billion in December 2021. This is an increase from $37.6 billion recorded at the beginning of 2021. Of these assets, $40.1 billion was cryptocurrency insurance and $17.2 billion was Bitcoin-related insurance. GAYSCALE INVESTMENTS is a popular asset management company specializing in cryptocurrency investments, leading the industry with a total crypto asset value of $43.7 billion under management as of December 2021.

Based on data from the Cambridge Alternative Finance Centre's online platform, which tracks current electricity consumption associated with bitcoin operations, the United States (35.4%), Kazakhstan (18.1%), and Russia (11.23%) lead in terms of the most significant computing power allocated to bitcoin mining as of August 2021. The landscape underwent significant changes following China's ban on cryptocurrency mining and the export of mining equipment to other countries. China's share in cryptocurrency mining, which previously held the top spot with approximately 53% of the computing power, has now dropped to zero. As a result, Russia has risen to the fourth position, as depicted in Figure.

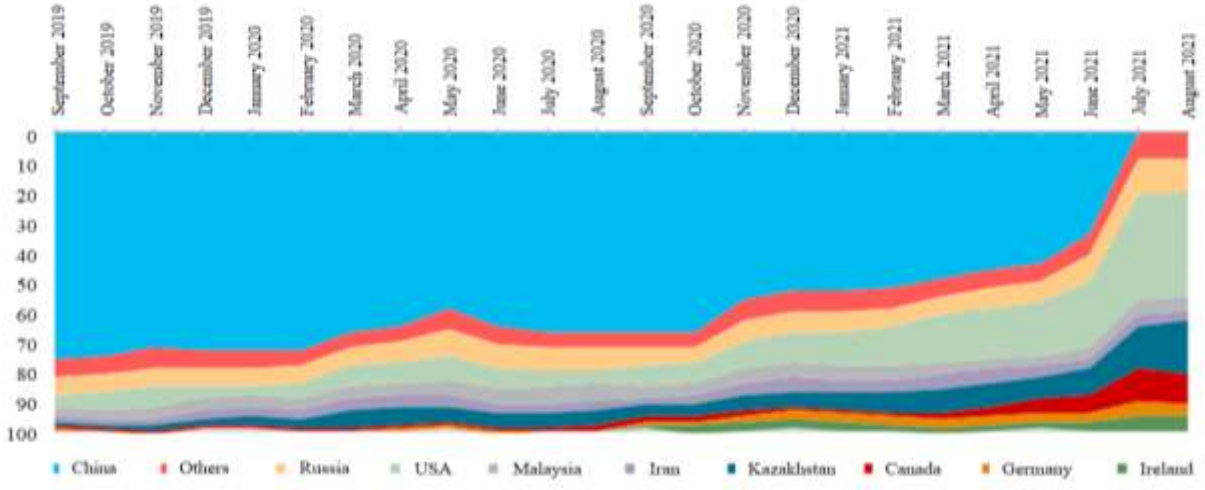

Figure. Share of countries in total computing power used for Bitcoin mining (%).

Note – based on the author's calculations

Cryptocurrency has high quality of use of anti-manipulation devices with high anonymity of participants, which allows deliberate manipulation of the market. In particular, it affects cultural concentration: a measly 0.1% of cultural power controls about 50% of cultural power, and 10% controls about 90% of power. This type of concentration poses a risk to the functioning of the Bitcoin blockchain, and it gives people exposure to the Bitcoin-value of the network.

Table 3 Kazakh closed banking network registration. The volume and speed of non-cash transactions on local machines have increased recently, rising from 27 billion tenge and 30,000 transactions in 2017 to 25.6 trillion tenge and 1.98 billion transactions in 2020. International card programs will double. In 2020 alone, the city bank processed 1.98 billion transactions and 25.6 trillion tenge on international cards, with a total value of 9.7 trillion tenge and 899 million transactions.

Table 3. Comparison of transaction volumes for international and local payment systems

		2019	2020	2021
Number of transactions, billion transactions	Through international payment systems	0,85	0,90	0,94
	Through local payment systems	0,35	1,98	4,1
The volume of transactions, trillion tenge	Through international payment systems	9,1	9,7	11,9
	Through local payment systems	4,9	25,6	45,8
Note – based on the author's calculations				

Creating a model with specific tools will provide insight into the potential use of distributed information technology for central bank accounts. The model will help to resolve important questions about future technology:

1) Transparency: Exchange participants can verify the validity of received tokens as transaction history associated with each token. This will help prevent token competition and comply with anti-money laundering (AML) and anti-financial crime (CFT) regulations.

2) Increase business confidence: Unlike traditional financial systems that store information centrally, distributed ledger systems provide distribution services. Each participant in the transaction keeps a copy of the transaction and the entire transaction history for a digital token (i.e. coin). This decentralized method reduces the risk of data loss or unauthorized access.

3) Programmable functionality: Distributed ledger supports the creation of smart contracts to facilitate transactions by applying specific payment methods and transactions. This feature increases the speed and efficiency of the operation.

Discussions

During this study, a comparative analysis of cryptocurrencies and traditional forms of money was conducted. There is currently no universally accepted definition of cryptocurrency; Some see it as a currency, while others see it as an asset. The analysis suggests that cryptocurrencies should be defined based on their similarities to paper money and their specific characteristics.

The real question is: Can cryptocurrencies function as a new form of money? This study shows that there are no theoretical limits to considering cryptocurrencies as a new form of currency. In order to evaluate the financial performance of crypto currencies, their effectiveness in the operation of the fund was evaluated. Using this approach the following conclusions were reached:

- Bitcoin works well in the economic and international market as a medium of exchange.
- However, due to the radical change it is experiencing, Bitcoin must evolve two important roles as it struggles to function effectively as a stable account and store of value.
- Investing in Bitcoin carries significant risk due to its volatility.
- Bitcoin operates autonomously, without the support of a central authority and therefore does not have any control.

These results suggest that Bitcoin is not currently doing all the work of traditional currencies, but this could change if its volatility is low. This change occurs when research identifies possible causes of differences and has the potential to cause less change. Therefore, when we witness the evolution of money, humans are moving from direct barter to the integration of technology in business transactions. If cryptocurrencies are fully accepted as currency by many countries, the development of these currencies is worth watching.

Conclusions

The blockchain system is the center of cryptocurrencies based on all their work. Even though this technology is currently used only in the financial sector, its nature is universal and can be implemented in any area of human activity.

In order to take advantage of the opportunities offered by globalization, it is necessary to establish solid foundations for building the capacity to acquire and shape knowledge and technology. Otherwise, the simple use of existing intelligence will lead to an inevitable lag in the country's economy without increasing it and developing past years' scientific, technical, and technological potential.

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А. Сабыржан, Е.Д. Орынбасарова, А.А. Жакупов, Д.М. Хамитова, Н.Н. Гелашвили

Қазақстанда криптавалюта майнингі технологиясын қолданудың кейбір мәселелерін зерттеу

Аңдатпа:

Мақсаты: Қазақстанда криптавалюта майнингі технологиясын қолдануды талдау және оның тиімді қызметін жетілдіру бойынша ұсынымдар әзірлеу.

Әдісі: Салыстыру, топтастыру, талдау, жіктеу, статистикалық әдістер, индукция, дедукция, экономикалық-математикалық әдістер және модельдеу сияқты ғылыми әдістемелік тәсілдер мен зерттеу әдістері алынды.

Қорытынды: Зерттеудің тәжірибелік маңыздылығы көрсетілген қағидалар мен тәсілдерді майнинг фермаларын дамыту стратегиясын қалыптастыруда қолдануға болатындығында. Ұсынылған ұсыныстар компанияның цифрлық тиімділігін арттыруға, тиісті басқару шешімдерін қабылдау арқылы олардың қаржылық-экономикалық жағдайын тұрақтандыруға және жақсартуға мүмкіндік береді. Зерттеу нәтижелері кәсіпорындардың нарықтағы орта мерзімді және ұзақ мерзімді орнықты позициясын қамтамасыз етуге және сыртқы орта жағдайларына икемді бейімделу қабілетіне байланысты мәселелерді шешуге мүмкіндік береді.

Тұжырымдама: Зерттеу негізінде цифрлық ақшаның мамандандырылған түрлерімен салыстырғанда айтарлықтай бәсекелестік артықшылықтарға қол жеткізу мақсатында технологиялық тізбектің өзіндік кіріс кезеңдерін немесе оның шығу кезеңдерін біріктіретін жаңа ақпараттық экономика мен қоғамның ерекше нысаны ретінде «криптовалюта», «майнинг», «майнинг фермасы» ұғымы нақтыланды. Сандық ақшаның криптовалюта және оларды өндіру сияқты ерекшеліктері анықталды, олар әртүрлі платформаларды, объектілерді және түрлерін қамтиды, бірақ жалпы элементтері, технологиялары, дамуды басқару және тәуекелдер бар. Сандық және сапалық көрсеткіштерді анықтауға, криптовалютаны пайдаланудың экстенсивтілігін, қарқындылығын және тиімділігін бағалауға және оны толық пайдалану резервтерін анықтауға мүмкіндік беретін криптовалютаның IT архитектурасын және цифрлық валютаның құбылмалылығын талдау әдістемесі ұсынылған.

Кілт сөздер: ақпараттық экономика, цифрландыру, криптовалюта, майнинг, цифрлық теңге, биткоин, электронды ақша.

А. Сабыржан, Е.Д. Орынбасарова, А.А. Жакупов, Д.М. Хамитова, Н.Н. Гелашвили

Исследование некоторых вопросов применения технологии майнинга криптовалюты в Казахстане

Аннотация:

Цель: Анализ применения технологии майнинга криптовалюты в Казахстане и выработка рекомендаций по совершенствованию ее эффективной деятельности.

Методы: Получены научные методологические подходы и методы исследования, такие как сравнение, группировка, анализ, классификация, статистические методы, индукция, дедукция, экономико-математические методы и моделирование**.**

Результаты: Практическая значимость исследования заключается в том, что указанные принципы и подходы могут быть использованы при формировании стратегии развития майнинговых ферм. Представленные предложения позволят повысить цифровую эффективность компании, стабилизировать и улучшить ее финансово-экономическое положение путем принятия соответствующих управленческих решений. Результаты исследования позволяют решать проблемы, связанные со способностью предприятий обеспечивать среднесрочную и долгосрочную устойчивую позицию на рынке и гибко адаптироваться к условиям внешней среды.

Выводы: На основе исследования были уточнены понятия «криптовалюта», «майнинг», «майнинговая ферма» как особые формы новой информационной экономики и общества, объединяющие собственные входные этапы технологической цепочки, или этапы ее выхода с целью достижения существенных конкурентных преимуществ, по сравнению со специализированными видами цифровых денег. Выявлены особенности цифровых денег, такие как криптовалюты и их майнинг, которые включают в себя различные платформы, объекты и типы, но имеют общие элементы, технологии, управление развитием, риски. Предложена методика анализа IT-архитектуры криптовалюты и волатильности цифровой валюты, позволяющая узнать количественные и качественные показатели, оценить экстенсивность, интенсивность и эффективность использования криптовалюты и определить резервы ее полного использования.

Ключевые слова: информационная экономика, цифровизация, криптовалюта, майнинг, цифровой тенге, биткойн, электронные деньги.

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From Lockdowns to Publications: The Evolution of COVID-19 Research in the Face of Travel Restrictions

Abstract

Object: This study aims to conduct a bibliometric analysis of the scholarly literature on COVID-19 and travel restrictions, using VOSviewer and Scopus data sets, to understand the evolution, key trends, and impact of this research area since the onset of the pandemic.

Methods: Utilizing a combination of publication-related metrics, citation-related metrics, and citation-and-publication-related metrics, this analysis encompasses 1,484 documents sourced from the Scopus database. The study focuses on the identification of major contributing countries, institutions, and keywords, as well as patterns in co-authorship and citations.

Findings: The research highlights a significant increase in academic output related to COVID-19 and travel restrictions, particularly in 2021 and 2022. The United States, the United Kingdom, and China emerge as leading contributors. Key themes include the efficacy of travel restrictions in managing the pandemic and the socio-economic implications of these measures. Additionally, the study reveals prominent collaboration networks and influential publications in this field.

Conclusions: The bibliometric analysis provides a comprehensive overview of the global research landscape on COVID-19 and travel restrictions. It underscores the critical role of international collaboration and multidisciplinary approaches in addressing the pandemic. Furthermore, the insights gained can inform future research directions and policy decisions in managing global health emergencies.

***Keywords**:* COVID-19, Travel Restrictions, Bibliometric Analysis, VOSviewer, Scopus Database, Academic Output, International Collaboration, Pandemic Management, Socio-Economic Impact, Public Health Policy.

Introduction

December 2019 marks the beginning of COVID-19 and 11th of March 2020 World Health Organization declares it a pandemic (WHO). The severe acute respiratory syndrome coronavirus (SARS-CoV-2) that causes COVID-19 has become a major worldwide health emergency. Researchers and scientists from all around the world have carried out in-depth investigations to learn more about the disease's symptoms, management, and transmission. Around the world, the COVID-19 epidemic has had a huge socioeconomic impact. To stop the virus from spreading, public health measures including lockdowns, travel restrictions, and testing techniques were put in place. The effectiveness of non-pharmaceutical therapies, such as physical separation and stay-at-home orders, was examined in a research that was published in The Lancet (Flaxman et al., 2020). Research findings on COVID-19 were widely disseminated thanks in large part to recognized scientific journals. Researchers have made a significant contribution to our understanding of the disease's transmission, clinical presentation, preventative strategies, immunization attempts, long-term impacts, and worldwide impact through in-depth studies and analysis.

Because travel restrictions affected many other aspects, lots of studies have been conducted on this topic. The effect of travel restrictions on the early transmission of COVID-19 was examined in a study that was published in The Lancet in June 2020. The results of the study revealed that early application of travel restrictions during the pandemic's initial phase was crucial in preventing the spread of the virus to new places and lowering transmission rates generally (Chinazzi et al., 2020). A different investigation into the efficiency of international travel restrictions in halting the spread of COVID-19 was published in Nature Communications in November 2020. According to the study, limiting foreign travel helped to reduce the incidence of COVID-19 importations and the extent of local outbreaks when paired with other public health initiatives including social isolation and testing (Bertuzzo et al., 2020). It is important to remember that travel limitations might not be enough to totally stop the spread of COVID-19. An analysis of the effects of travel re-

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strictions on the COVID-19 worldwide transmission that was published in PLOS Medicine in February 2021 underlined the necessity for further control measures. According to the study, sustained local transmission and community-based interventions were crucial for the long-term management of the virus, even while travel restrictions might postpone epidemics (Haug et al., 2021). The economy and the world's health are also impacted by the enactment of travel restrictions. In September 2020, a piece on the possible effects of travel restrictions on global trade, healthcare access, and social unrest was published in Science. In spite of the fact that travel restrictions could be successful in reducing the spread of COVID-19, the authors stated that they might also have a detrimental influence on the transportation of necessities, upset supply chains, and restrict access to healthcare services, particularly in environments with limited resources (Hsiang et al., 2020).

Technique used in this bibliometric analysis is performance analysis using Publication-related metrics, citation-related metrics and citation-and-publication-related metrics using literature in travel restrictions and COVID-19 with VOSviewer, another technique is an analysis of metrics of Scopus data sets. Main contribution of this paper can be divided into two: 1) In order to understand the main issues in the research discussing main trends including authors, countries, institutions, etc.; 2) Scopus data sets used to highlight the main actors in metrics like number of documents, authors, institutions, etc.

First section is an introduction including information on COVID-19 in pair with travel restrictions. Section 2 is methodology which includes data selection strategy and study approach. Overall bibliometric analysis results are presented in Section 3. Section 5 and 6 shows discussion and conclusion in which highlight main points.

Literature Review

Understanding and evaluating the substantial volume of scholarly literature linked to COVID-19 has benefited greatly from bibliometric analysis. The use of quantitative approaches to assess citation networks, publishing patterns, and research trends has allowed bibliometric analysis to offer insightful information about the state of COVID-19 research worldwide.

The bibliometric study of COVID-19 papers using Scopus and VOSviewer was done by Zyoud & Al-Jabi in the early stages of the outbreak. It draws attention to the total number of publications, the distribution of publication types, the top countries and institutions, and the most popular study areas. This report throws light on the scientific community's attempts to comprehend and treat the condition and provides insightful information about the global COVID-19 research landscape over a given time period (2020).

Researchers can visually examine and study scientific literature using the effective bibliometric analysis tool VOSviewer. In bibliometric studies, including those devoted to COVID-19 research, it is frequently utilized to find co-citation patterns, keywords connections, and collaboration networks.

The visualization of researcher collaboration networks is one of the primary uses of VOSviewer in COVID-19 bibliometric analysis. For instance, Yu et al. used VOSviewer to examine the collaboration trends in COVID-19 research (2020). To extract publication details and co-authorship connections, the authors used Web of Science data. They used VOSviewer to generate a network diagram that showed how field researchers worked together. This analysis contributed to a better understanding of the collaborative environment in COVID-19 research by identifying important research groups and their connections.

Methods

Data collection strategy. According to the World Health Organization, the name of the coronavirus can be divided into it`s disease name and virus name, which are coronavirus disease (COVID-19) and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (WHO).

According to Li et al. Scopus has better coverage of the medical publications than the Web of Science, even though Web of Science has a coverage of articles back to 1990 (2010). Another author highlights the tools of Scopus that can make searching for the relevant content easier. Author also says evaluation of journals by Scopus are more accurate statistically.

In the fields of scientometrics and bibliometrics, VOSviewer is a commonly used piece of software that provides sophisticated display and analysis capabilities for bibliographic data. Van Eck and Waltman claim that VOSviewer gives researchers the ability to create and study bibliometric networks, create co-authorship and co-citation maps, and spot research trends and clusters (2009). The tool's capability to manage enormous datasets and provide aesthetically pleasing visualizations that help grasp the intricate connections between scientific papers and authors is emphasized by the authors.

In order to have a full picture four types of names of the virus were used: “coronavirus”, “COVID-19”, “severe acute respiratory syndrome”, “SARS-CoV-2”, they were searched in the Scopus database. Filtering

the search from the start of COVID-19 in 2019 results were 535,795 documents. In connection with "travel restrictions" results were lowered to 1,484 documents restricted to only "Articles" as a type of documents to search. All the results were then exported as a CSV document in order to be used in VOSviewer to visualize the data. Other data used in this analysis were Scopus data analytics.

Results

Bibliometric analysis of publication outputs. Starting from 2019 to 2024 overall number of publications on the topic of COVID-19 and travel restrictions were 1,484 documents marking the years of 2021 and 2022 with the most number of publications as 547 and 575. The United States has been the biggest producer of publications having 373 publications, the United Kingdom in second place with 212 publications and China takes third place with 193 publications. Visual presentation of overall countries can be seen in Figure 1. As for the subject area of documents, it is important to mention that one document can have several subject areas. Medicine takes 30,1 % of the overall number, Social Science 13,5% and Environmental Science with 9,3% which with all the other subject areas can be seen in Figure 2.

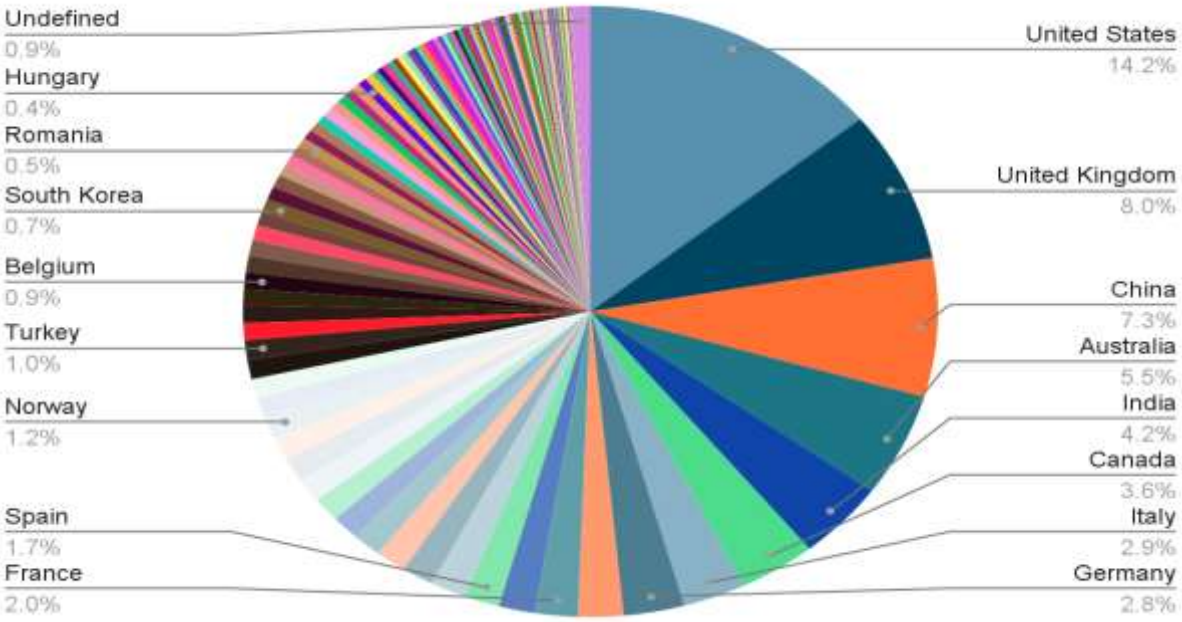

Figure 1. Documents by country or territory.

Note – compiled by authors based on Scopus database

The Figure 1 illustrates the distribution of publications by country or territory related to the research topic of COVID-19 and travel restrictions. The chart details the percentage share of publications from various countries, providing a visual representation of each country's contribution to the research field. The United States leads with the highest percentage of publications, accounting for 14.2% of the total, indicating a significant contribution to the research on COVID-19 and travel restrictions. The United Kingdom follows with an 8.0% share, which suggests it is also a key contributor in this area of study. China is depicted with a 7.3% share, positioning it as another major contributor, reflective of its extensive research efforts in response to the pandemic. Australia (5.5%) and India (4.2%) are shown as other notable contributors, together accounting for nearly a tenth of the research output. Canada, Italy, and Germany are represented with moderate contributions, having 3.6%, 2.9%, and 2.8% shares respectively, demonstrating their active roles in the research community. Contributions from Spain (1.7%) and France (2.0%) are slightly lower, yet still significant within the context of the global research effort. Other countries such as Norway, Turkey, Belgium, South Korea, Romania, and Hungary, each represent smaller fractions ranging from 0.4% to 1.2%, indicating a more distributed and international effort in researching the impacts of travel restrictions due to COVID-19. A small portion (0.9%) is labeled as "Undefined", which could indicate publications where the country of origin was not specified or was not part of the dataset analyzed. Overall, the chart provides an insightful quantitative analysis of the global research landscape, showcasing the diverse international contributions to

the literature on COVID-19 and travel restrictions. This distribution can be reflective of the countries' research priorities, capabilities, and the impact of COVID-19 within their borders.

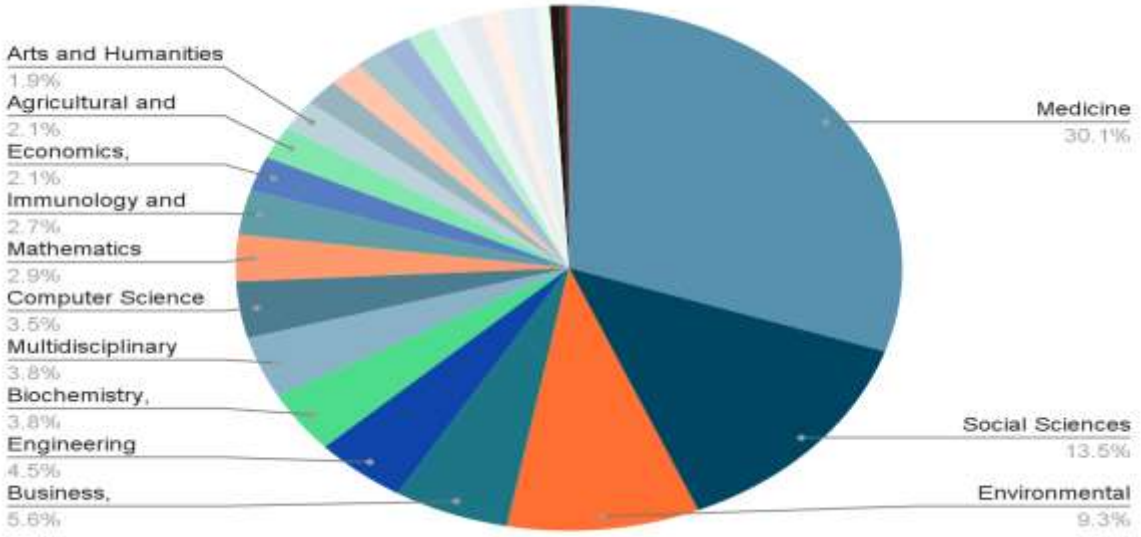

Figure 2. Documents by Subject Area.

Note – compiled by authors based on Scopus database

Figure 2 displays the distribution of scholarly publications on COVID-19 and travel restrictions across different academic disciplines. The largest segment of the chart is occupied by the field of Medicine, which accounts for 30.1% of the publications, underscoring the central role that medical research has played in the global response to the pandemic. The Social Sciences follow with a substantial 13.5% share, reflecting interdisciplinary interest and the socio-economic implications of the pandemic and associated travel restrictions. Environmental Science represents 9.3% of the publications, indicating a significant research interest in the environmental impact and considerations of the pandemic.

Other fields with notable contributions include Business (5.6%) and Engineering (4.5%), highlighting the cross-sectoral effect of COVID-19 and the wide range of strategies explored to mitigate its impact. Additionally, the chart shows meaningful contributions from more specialized fields such as Multidisciplinary (3.8%), Biochemistry (3.8%), Computer Science (3.5%), and Engineering, as well as from the fundamental sciences like Mathematics (2.9%) and Immunology (2.7%). The inclusion of Arts and Humanities (1.9%) and Agricultural Economics (2.1%) reflects the pandemic's broad impact across various facets of human activity. The diverse spread of research interests illustrates the multifaceted challenges posed by COVID-19, requiring a comprehensive and collaborative research approach from various academic fronts.

Bibliometric analysis of the keywords. Keywords with minimum occurrence of 5 times of Scopus database were taken into consideration, out of 9,246 keywords 998 met the threshold. Most appeared keywords are “COVID-19” with 774 total occurrences and total link strength 937. Second word “pandemic” occurred 112 times and total link strength was 221. The third and fourth words being “sars-cov-2” and “coronavirus” with 90 and 67 occurrences with approximately 150 link strength. All of them having the strongest link to each other can be seen in Figure 3, along with visual presentation of the first hundred words can be seen in Figure 4. Also a word cloud was made from the most cited articles author keywords, it is shown in Figure 5.

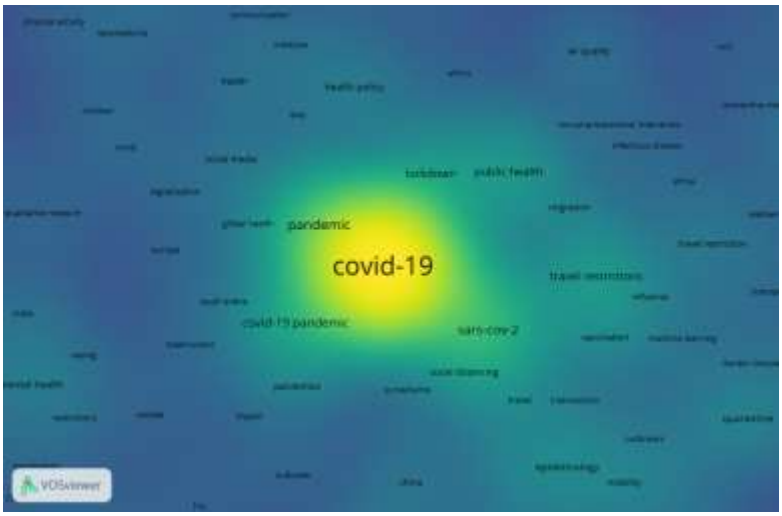

Figure 3. Density visualization of the links.

Note – compiled by authors based on Scopus database

The figure above presents a word cloud generated using VOSviewer, a tool for constructing and visualizing bibliometric networks. This particular visualization highlights the frequency and relational connectivity of keywords within the corpus of literature pertaining to COVID-19. The term "COVID-19" is prominently at the center, signifying its status as the core focus of the analyzed documents. Surrounding it are related terms such as "pandemic", "SARS-CoV-2", and "lockdown", which are also substantial in size, indicating their frequent occurrence and strong association with the central topic in the scholarly discourse.

Adjacent keywords reflect various dimensions of the global crisis, including "public health", "social distancing", "travel restrictions", and "vaccination", demonstrating the multifaceted nature of the research and discussions triggered by the pandemic. There is a clear indication of the intersection of health with technology and policy, with terms like "telemedicine", "health policy", "digitalization", and "surveillance" appearing in the network. The geographical spread, encompassing regions like "Italy", "India", "China", "Canada", and "Saudi Arabia", alongside terms indicating broader scopes like "global health" and "international", underscores the pandemic's worldwide impact and the global scale of the research response. The presence of various other health-related terms suggests that the literature often contextualizes COVID-19 within a broader health and socio-economic framework, considering its implications on mental health, the environment, and other infectious diseases.

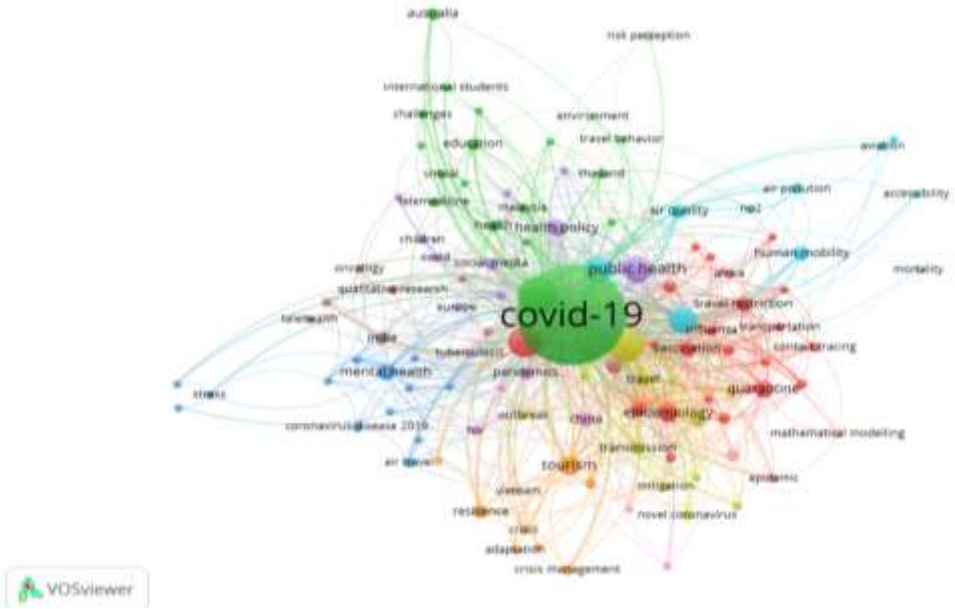

Figure 4. Network visualization of the first hundred words.

Note – compiled by authors based on Scopus database

Figure 4 presents a network visualization generated by VOSviewer, mapping the co-occurrence of keywords in the body of literature on COVID-19. Central to the network is “COVID-19”, depicted as the largest node, indicative of its primary importance within the research. Surrounding it are clusters of interconnected nodes, each representing related key terms and their relative prominence in the discourse. The proximity and lines connecting the nodes suggest thematic and conceptual associations among the terms. Keywords such as “public health”, “pandemic”, and “epidemiology” are prominently connected to “COVID-19”, reflecting their integral role in the understanding and management of the crisis. Other significant terms like “travel restriction”, “quarantine”, and “vaccination” appear in close association, signaling the widespread impact of COVID-19 on various aspects of global health policy and practice.

The visualization also highlights the diverse range of secondary themes that have emerged in response to the pandemic. Keywords such as “mental health”, “telemedicine”, and “education” form distinct clusters, indicating substantial research attention to the broader social and psychological ramifications of the pandemic. The presence of terms like “air quality”, “human mobility”, and “tourism” in conjunction with regional references such as “Africa”, “Europe”, and “Malaysia” illustrates the global scale of COVID-19 research, encompassing environmental concerns, the disruption of normal activities, and the specific challenges faced by different regions. This network visualization underscores the complexity of the pandemic's research landscape, encompassing a wide array of disciplines and perspectives.

Figure 5. Word map from the most cited articles.

Note – compiled by authors based on Scopus database

Dominating the center of the visualization are the terms “COVID-19”, “coronavirus”, “pandemic”, and “SARS-CoV-2”, indicating their centrality to the discourse. Surrounding these core terms are clusters of related keywords that reflect the multifaceted impact of the pandemic. Phrases like “public health”, “lockdown”, “travel restrictions”, and “social distancing” are prominent, suggesting these topics are frequently discussed in conjunction with the pandemic. Similarly, the significant presence of “risk”, “management”, “outbreak”, and “epidemiology” points to a focus on the containment, control, and understanding of the virus's spread.

Moreover, the word cloud reveals the pandemic's intersection with various sectors and aspects of society, with terms such as “supply chain”, “tourism”, “mobility”, and “quarantine” highlighting the economic and social dimensions of the crisis. The appearance of “non-pharmaceutical interventions”, “resilience”, and “crisis policy” underscores the diverse strategies and policies implemented to mitigate the pandemic's effects. The inclusion of specific contexts like “hospital”, “screening”, and “telemedicine” indicates a strong emphasis on healthcare responses. This visual representation effectively encapsulates the broad spectrum of research themes, from individual and community health to global economic and policy challenges posed by the COVID-19 pandemic.

Bibliometric analysis of the citations and publications. First hundred most cited publications’ mean count is 218 in range of 41 and 2,152. Years of publishing are between 2020 and 2023, with the first ten most cited articles being published in 2020. First most cited article by Journal of Sustainable Tourism with

2,165 number of citations and tenth by Science of the Total Environment with 430 citations. List of top five journals by the number of citations in an article can be seen in Figure 6. Overall 160 journals published articles on the topic of COVID-19 and travel restrictions and 16 journals have more than 10 articles. List of top five journals by the number of publications can be seen in Figure 7. Journal with the highest number of articles is the International Journal Of Environmental Research And Public Health.

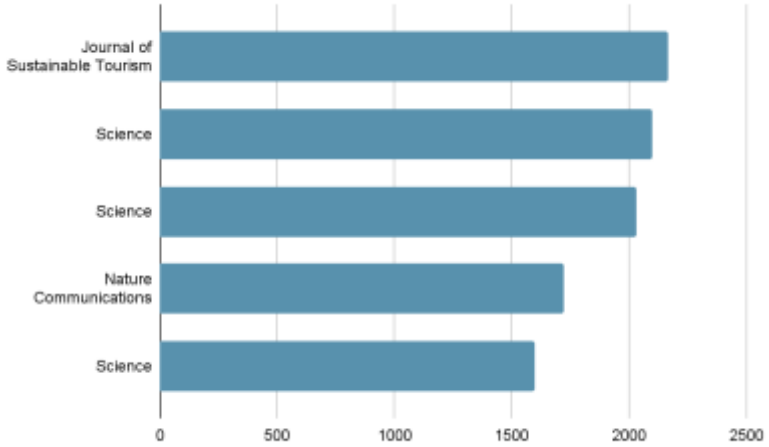

Figure 6. Journals by the number of the top cited articles.

Note – compiled by authors based on Scopus database

The "Journal of Sustainable Tourism" leads with the highest number of citations, surpassing 2000, which reflects its significant impact and the high relevance of its articles in the discourse on sustainable tourism in the era of COVID-19. Following this, three bars labeled "Science" indicate publications from this journal, with citations ranging between approximately 500 to just under 2000. This suggests that "Science" has contributed multiple influential articles to the research landscape on COVID-19, with varying degrees of impact as indicated by the citation counts.

"Nature Communications" is represented by a single bar, showing a citation count that is roughly in the mid-range of those from "Science". This indicates that articles from "Nature Communications" have also been highly influential in the field, albeit with a lower citation count than the highest from "Science". The visualization provides a clear comparative perspective on the influence of different scholarly journals in disseminating research related to COVID-19 and travel restrictions, highlighting the dominance of "Journal of Sustainable Tourism" in this research niche and the substantial contributions of "Science" and "Nature Communications" to the academic conversation.

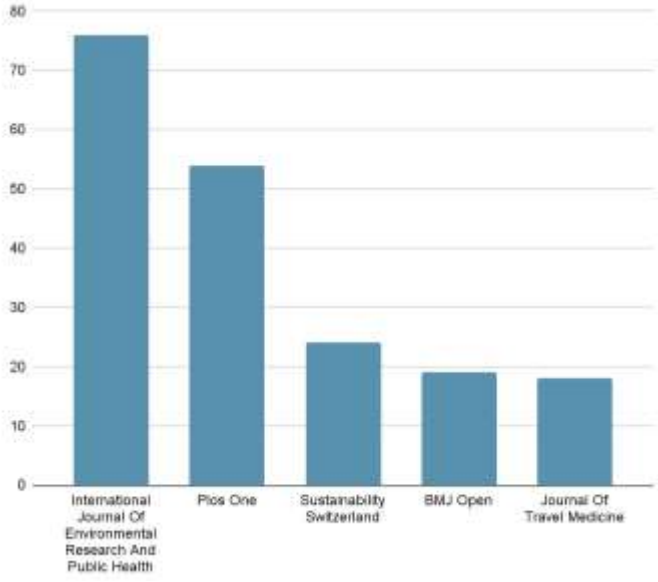

Figure 7. Journals by the number of articles.

Note – compiled by authors based on Scopus database

The “International Journal of Environmental Research and Public Health” leads with the highest number of published articles, over 70, indicating a strong focus on the environmental and public health aspects of the pandemic. “Plos One” follows with just over 50 articles, underscoring its commitment to disseminating a wide range of scientific research relevant to the pandemic, including multidisciplinary approaches.

“Sustainability Switzerland” and the “Journal of Travel Medicine” both show a moderate number of publications, around the mid-20s range, reflecting a targeted interest in the intersection of COVID-19 with sustainability issues and travel medicine, respectively. “BMJ Open” is also represented, with a slightly lower number of publications than “Sustainability Switzerland” and “Journal of Travel Medicine”, suggesting its participation in the scholarly conversation around COVID-19 with an open-access approach. This chart succinctly captures the contributions of these journals to the body of research on COVID-19, highlighting the variations in their focus and the extent of their engagement with this global health crisis.

Bibliometric of co-authorship. Overall number of authors writing on the topic of COVID-19 and travel restrictions are 6,889. Author with the biggest number of articles is British epidemiologist Benjamin John Cowling with 7 articles having link strength of 3 with Research Assistant Professor at The University of Hong Kong Yang Bingyi and an infectious diseases epidemiologist Sheena Sullivan. Wang Yong has the highest number of total link strength 37, while the total link strength of 95 authors is 559. First ten authors by number of publications can be seen in Figure 8 and Figure 9 shows network visualization of co-authorship. Figure 10 highlights the countries links through co-authorship, the minimum number of documents of a country was increased to 15. Out of the 153 countries only 39 meet the thresholds. Main links can be seen by the United States with Australia and the United Kingdom. China as a third country with the highest number of articles has total link strength of 190, while the United States has 391 total link strength.

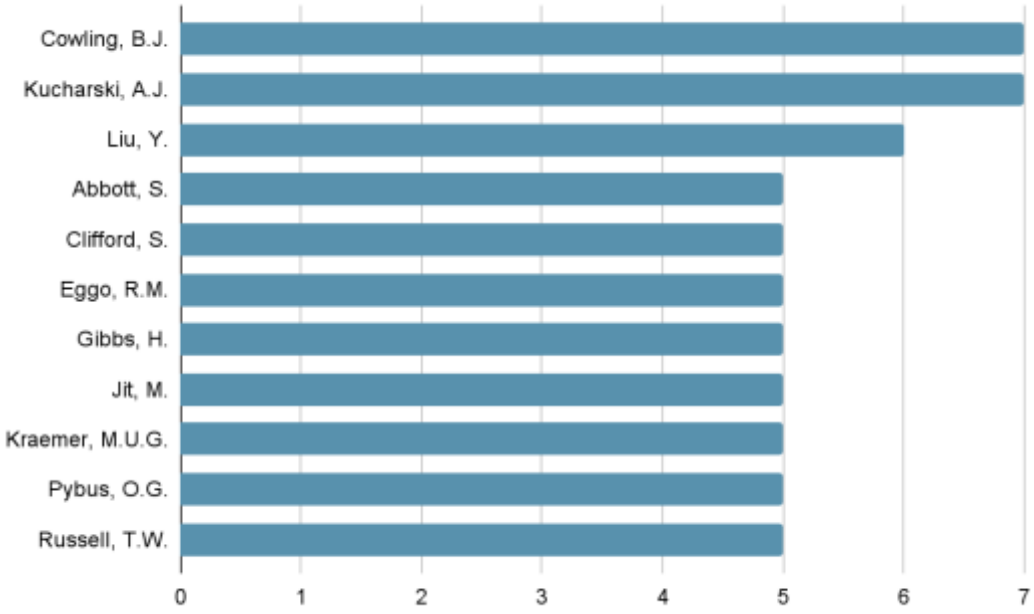

Figure 8. Author by the number of articles.

Note – compiled by authors based on Scopus database

The chart indicates that B.J. Cowling has the highest number of publications, with a total close to seven, suggesting a significant contribution to research in the context of COVID-19. This is followed by A.J. Kucharski and T.W. Russell, each with publications numbering around six, indicating their active engagement in COVID-19 research.

Other researchers such as Y. Liu, S. Abbott, S. Clifford, R.M. Eggo, H. Gibbs, M. Jit, M.U.G. Kraemer, and O.G. Pybus are also represented on the chart with fewer publications ranging from approximately one to five. The distribution of publications among these researchers demonstrates a diverse contribution to the body of knowledge concerning COVID-19, with some researchers showing a more prolific output. The chart effectively highlights the researchers' individual contributions to the scientific community's understanding of COVID-19, reflecting the breadth of the research and the varying degrees of scholarly input from different experts in the field.

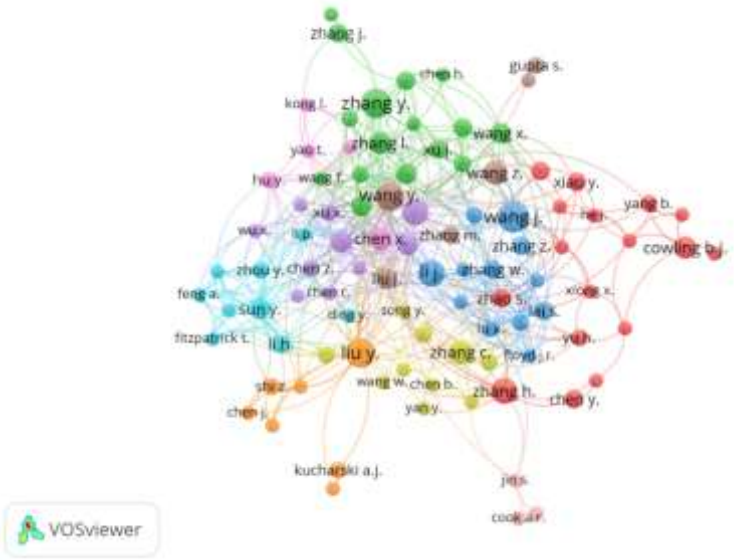

Figure 9. Network visualization of co-authorship.

Note – compiled by authors based on Scopus database

In the visualization, individual researchers are represented as nodes, and the lines between them represent co-authorships, indicating collaboration on published works. The size of the nodes reflects the number of publications or the level of activity of each researcher within this network. Notably, B.J. Cowling and A.J. Kucharski are among the most prominent nodes, signifying their central roles in COVID-19 research collaborations.

The color-coded clusters within the network suggest the existence of various research groups or communities, each likely focusing on different aspects of COVID-19 research. The density of the lines and the proximity of the nodes within these clusters indicate the strength and frequency of collaborations among researchers. This map not only highlights the most prolific individuals in the field but also illustrates the complex web of scholarly interactions that underpin the collective effort to advance the understanding of COVID-19. The visualization serves as a testament to the global and interdisciplinary nature of research in response to the pandemic.

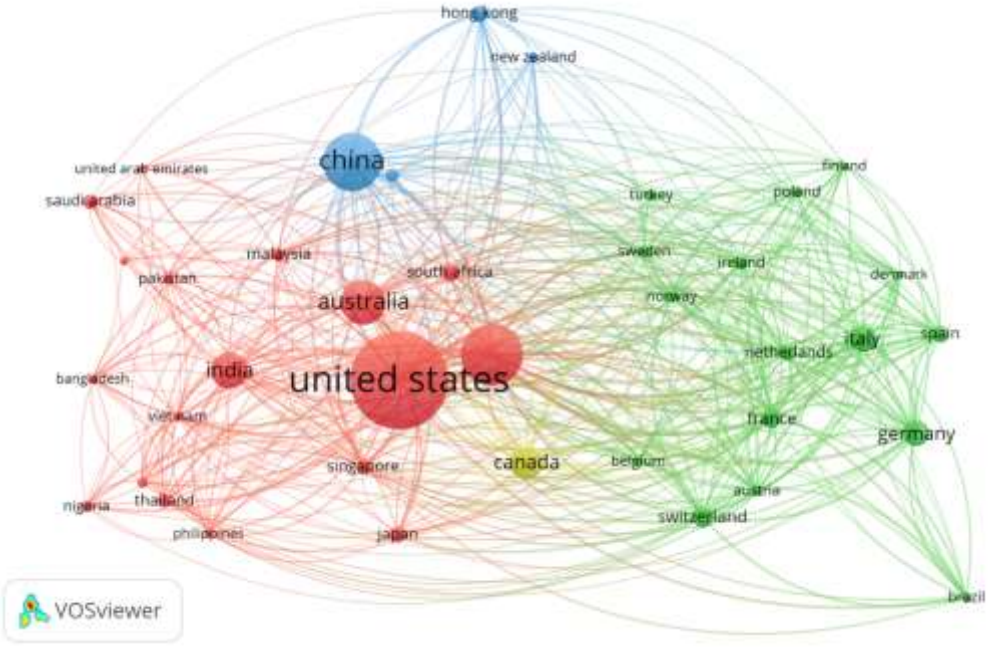

Figure 10. Co-authorship by countries or territories.

Note – compiled by authors based on Scopus database

Nodes represent individual countries, with the size of each node corresponding to the volume of research output or the extent of collaborations that country has engaged in. The United States is shown with the largest node, indicating its prominent role in COVID-19 research and the high degree of international collaboration. China and Australia are also represented with significantly large nodes, suggesting a substantial contribution to the global research efforts on COVID-19.

The lines connecting the nodes illustrate the collaborative links between countries, with the thickness of the lines indicating the strength of collaboration. A dense cluster of connections can be seen among European countries, such as Italy, Spain, Germany, and France, as well as between these countries and the United States, reflecting robust research partnerships. The visualization provides an overview of the global landscape of COVID-19 research, highlighting the interconnected nature of scientific work and the key positions that certain countries hold within this international network. This map underscores the importance of international cooperation in addressing the challenges posed by the pandemic.

Discussions

Globally, many nations have imposed travel restrictions as a result of the COVID-19 epidemic. These limitations were put in place to stop the virus's spread and safeguard public health. Based on the results of this bibliometric analysis an interpretation of different data on the effects of travel limitations in the context of COVID-19 in this discussion section.

The bibliometric analysis showed that since the start of the pandemic, there has been a significant rise in scholarly output relating to COVID-19 and travel restrictions. The number of papers on this subject showed a clear growing trend, underscoring the urgency and significance of comprehending how travel limitations affect containing the virus's spread. 1,484 articles were used in this bibliometric analysis about COVID-19 and travel restrictions from the Scopus database.

Academic world played a significant role in battling COVID-19, like forming evidence-based policy, simulating disease transmission, and assessing the efficacy of preventive measures during the pandemic, as noted by Ferguson et al. (2020). The analysis revealed main actors in this topic, like the United States being a country with the biggest number of articles, followed by the United Kingdom and China.

Main limitation of this bibliometric analysis is excluding all the document types and only using data on articles on the topic.

This bibliometric analysis points out the increased scholarly interest in COVID-19 and travel limitations. Key words, patterns of collaboration, countries and fields were all indicated by the data. This analysis adds to the body of literature by giving a thorough overview of the field of study relating to travel restrictions during the pandemic. In the end, the information gained from such studies can guide though future research on the topic of COVID-19 and travel restrictions.

Conclusions

The understanding of COVID-19 and travel limitations gained by bibliometric analysis supports international efforts to lessen the effects of the pandemic and assure safe and efficient travel in the post-pandemic era. As the World Health Organization declared an end to the pandemic, the topic of COVID-19 is still important. Particularly it is important to analyze such research papers and gather useful information. Overall research on the topic of COVID-19 helps to better understand and predict possible scenarios in the future.

The bibliometric analysis conducted on COVID-19 and travel restrictions provides an empirical foundation for understanding the evolution of the pandemic and the efficacy of various interventions. The substantial increase in scholarly output since December 2019 highlights the academic community's rapid response to the emerging crisis, addressing the disease's transmission dynamics, the impact of non-pharmaceutical interventions, and the broader socioeconomic consequences. The findings from this analysis underscore the pivotal role played by key regions such as the United States, the United Kingdom, and China, not only in terms of publication volume but also in their centrality to global research collaboration networks. The predominance of certain journals and articles within the citation landscape further illustrates the influence of specific research outputs in shaping understanding and policy.

Furthermore, the use of VOSviewer and Scopus data sets has allowed for a nuanced examination of the research ecosystem, identifying main trends and key contributors within the field. The robustness of co-authorship networks revealed through this analysis speaks to the collaborative nature of the scientific endeavor in combating COVID-19. Despite certain limitations, such as the focus on articles to the exclusion of other document types, the bibliometric approach has enriched the discourse surrounding travel restrictions and their implications during the pandemic. The insights garnered provide a valuable resource for policy-

makers, public health officials, and researchers, informing future strategies and studies aimed at managing and mitigating the risks associated with global health emergencies. As the pandemic's status evolves, ongoing analysis of the burgeoning literature will be crucial in navigating the post-pandemic world, ensuring that the global community remains informed and prepared for future challenges.

Complementary Data

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А.И. Самсаева, Ф. Амаго

Локдаундардан жарияланымдарға дейін:
саяхат шектеулері жағдайында COVID-19 зерттеулерінің эволюциясы

Аңдатпа:

Мақсаты: Зерттеудің мақсаты пандемия басталғалы осы зерттеу саласының эволюциясын, негізгі тенденциялары мен әсерін түсіну үшін VOSviewer және Scopus деректер жинақтарын пайдалана отырып, COVID-19 және шектеулері туралы ғылыми әдебиеттерге библиометриялық талдау жүргізу.

Әдісі: Талдау жарияланымдарға, дәйексөздерге және соған қатысты көрсеткіштер тіркесіміне сүйене отырып, Scopus дерекқорындағы 1484 құжатты қамтиды. Зерттеу жетекші елдерді, институттар мен кілт сөздерді анықтауға, сондай-ақ бірлескен авторлық және дәйексөз үлгілерін талдауға бағытталған.

Қорытынды: Зерттеу COVID-19 және шектеулерге байланысты академиялық белсенділіктің, әсіресе 2021 және 2022 жылдары айтарлықтай өскенін көрсетеді. Басылымдар саны бойынша АҚШ, Ұлыбритания және Қытайды алдыңғы қатардағы елдер деп атап өтуге болады. Негізгі қамтылған тақырыптар жиынтығына пандемиямен күресудегі шектеулердің тиімділігі және осы шаралардың әлеуметтік-экономикалық әсері кіреді. Сонымен қатар, зерттеу халықаралық ынтымақтастық желілері мен осы саладағы басылымдардың маңыздылығын көрсетеді.

Тұжырымдама: Библиометриялық талдау COVID–19 және шектеулер бойынша жаһандық зерттеулерге жан-жақты шолу жасайды. Талдау пандемия мәселелерін шешуде халықаралық ынтымақтастық пен көпсалалы тәсілдердің маңызды рөлін көрсетеді. Сонымен қатар, нәтижелер денсаулық сақтау саласындағы төтенше жағдайларды басқарудағы болашақ зерттеу бағыттары мен саяси шешімдерді қабылдау үшін пайдаланылуы мүмкін.

Кілт сөздер: COVID-19, шектеулер, библиометриялық талдау, VOSviewer, Scopus, ғылыми нәтижелер, Халықаралық ынтымақтастық, пандемияға қарсы күрес, әлеуметтік-экономикалық салдарлар, қоғамдық денсаулық сақтау саясаты.

А.И. Самсаева, Ф. Амаго

От карантина до публикаций: эволюция исследований COVID–19 в условиях ограничений на поездки

Аннотация:

Цель: Цель данного исследования заключается в проведении библиометрического анализа научной литературы о COVID–19 и ограничениях с использованием наборов данных VOSviewer и Scopus для понимания эволюции, ключевых тенденций и влияния этой области исследования с начала пандемии.

Методы: Анализ включает в себя использование комбинации метрик, связанных с публикациями, цитированиями и их сочетанием, и охватывает 1484 документа из базы данных Scopus. Исследование сосредоточено на выявлении ведущих стран, институтов и ключевых слов, а также на анализе шаблонов совместной авторской работы и цитирования.

Результаты: Исследование подчеркивает значительный рост академической активности, связанной с COVID–19 и ограничениями, особенно в 2021 и 2022 годах. Соединенные Штаты, Великобританию и Китай можно выделить как лидирующие страны по числу публикаций. Ключевыми темами являются эффективность ограничений на путешествия в управлении пандемией и социально-экономические последствия этих мер. Кроме того, исследование подчеркивает важность международных сетей сотрудничества и публикаций в этой области.

Выводы: Библиометрический анализ предоставляет всеобъемлющий обзор глобальных исследований по вопросам COVID–19 и ограничений. Анализ подчеркивает критическую роль международного сотрудничества и мультидисциплинарных подходов в решении проблем пандемии. Более того, полученные данные могут быть использованы для определения будущих направлений исследований и принятия политических решений в управлении глобальными чрезвычайными ситуациями в области здравоохранения.

Ключевые слова: COVID–19, ограничения, библиометрический анализ, VOSviewer, Scopus, научные результаты, международное сотрудничество, борьба с пандемией, социально-экономические последствия, политика общественного здравоохранения.

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Increasing the yield of wheat as the basic export crop of the agro-industrial complex of the Republic of Kazakhstan

Abstract

Object: The purpose of the work is to study the key problems of increasing the yield of wheat as a basic export crop, analyze the production of wheat in the nearest countries, consider the main world exporters and importers of wheat, and identify ways to increase the yield of wheat. The question of the development of this area of the agro-industrial complex is still open and requires the introduction of a number of innovative processes.

Methods: The methodological basis of the study was general scientific analysis and synthesis, system analysis, methods of economic and statistical analysis and comparative analysis were used.

Findings: The results of the study were the proposals of the authors to increase the level of productivity, such as: the creation of research laboratories; accessibility to obtain and the need to use mineral fertilizers, the need to train agricultural producers in the selection of mineral fertilizers, which not only increase grain yields and improve its quality; selection work and much more.

Conclusions: The study by the authors of the problems of increasing the level of wheat yields showed a direct dependence of production indicators and the volume of exports of wheat of the republic on its yield.

Keywords: productivity, agro-industrial complex, grain crops, fertilizers, rural cooperation.

Introduction

The most important indicator of economic independence, food safety, independence and well-being of any country is the production level of grain crops. Cereals are associated with bread, and bread is the basis of nutrition of any nation, as well as the main product of fodder for intensive animal husbandry. On the scale of the country, the production of grain crops becomes the most important object of foreign economic activity, and occupies a dominant position on the world market.

Hard varieties of spring wheat Kazakhstan have unique baking qualities, and the country has unique natural conditions for their production. Unfortunately, these advantages are not fully utilized. The level of production of grain for its further export does not meet the necessary needs, and this negatively affects the general state of the economy of our state. In this regard, the primary task of all farmers, agricultural enterprises of various forms of ownership are to increase productivity, and as a result, increase gross grain harvests.

Of course, the export potential of the grain industry is very high and currently has the most importance for Kazakhstan, as it is capable of meeting the domestic needs of the country's population. Kazakhstan is one of the world leaders in terms of gross grain collection, and among the CIS countries it takes the third place after Russia and Ukraine. Export wheat is the most competitive cereal crop. It is wheat, which is the most important cereal in export, that determines the trend and tendencies of changes in this group of products. However, Kazakhstan is making maximum use of its potential to increase its competitiveness on the global grain market. And the main reason for that is the low level of modernization and use of innovative technologies in the industry.

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Hypothesis. The use of mineral fertilizers allows you to dramatically increase the yield of any culture, but the decision to use them should be economically justified. Growth in wheat exports may be due to continued growth in the use of fertilizers, however, improperly selected fertilizer may have the opposite effect, reduce yield and make the soil unsuitable for several years.

Literature Review

The problems of the development of agricultural production were reflected in the works of many well-known domestic and foreign scientists. Kazakh and foreign scientists and economists were engaged in questions about the problems of the agro-industrial complex.

So, scientists Saginova S. A. and Sultanova G. T. they believe that "... The presence of huge ecologically clean territories creates favorable conditions for the development of organic agriculture. In our country, more than 70% of land is suitable for growing organic products, including grain products. And for the more effective development of this direction, it is necessary to attract measures to conduct inspections off arms, to train personnel, to create ware houses for obtaining certificates for producers of organic production, as it is associated with large costs..." (Saginova & Sultanova, 2017).

G.S. Akybaeva, M.N. Mukalieva, A.Jh. Koitanova said that "... the agro-industrial complex is considered one of the sectors of the economy of Kazakhstan, which makes a big contribution to the country's sustainable economic growth. There are many agricultural products in Kazakhstan that can be exported. Despite these advantages, the agro-industrial complex of Kazakhstan is characterized by low production productivity, characterized by low quality, underdeveloped infrastructure and insufficient financing..." (Akybaeva et al., 2023).

Krichker, D.R., Ruschitskaya, O.A. in their works, they talk about the historically established grouping of countries exporting agricultural products, including grain, where the three leaders are as follows: Russia, the USA and Canada (Krichker & Ruschitskaya, 2021).

However, taking into account the high level of development of the above-mentioned issues, the problem of increasing the yield of wheat as the basic export grain crop of our republic remains relevant, because Adequate assessment of this process is necessary at the current stage for the development of proposals for the most complete implementation of sowing and export opportunities.

Methods

The research is based on the use of general scientific methods of analysis and synthesis, system analysis, applied methods of economic and statistical analysis and comparative analysis. The application of these methods allows to objectively perceive the peculiarities and tendencies of the development of the agro-industrial complex of the Republic of Kazakhstan and the problems of increasing the yield of wheat.

The theoretical basis of research consists of the works of foreign, Russian and Kazakh scientists on the development of agricultural production, organization and solution of existing problems.

Results

In 2022, the Head of State K.K. in his annual message to the people of Kazakhstan Tokaev spoke several times about the need to develop the country's agro-industrial complex (Akorda, 2022), in particular:

- the need to improve the current state of the agro-industrial complex, as it strongly affects the food security of Kazakhstan;
- the need to increase the added value of Kazakh production through systematic growth of production volumes;
- the need to find fundamentally new methods of subsidizing APC, strengthening monitoring and control for development;
- the need to introduce innovations in the APC. At the moment, a single digital database has been created that accumulates all information about the current state of all sectors of the APC (Akorda, 2022).

As part of these instructions, it is assumed that from 2023, the APC should start functioning differently. For this purpose, 2.9 million hectares of agricultural land have already been returned to the state and another 5 million hectares will be returned. According to the data of the Bureau of National Statistics, about 10 million hectares are not in use or were previously allocated or designated.

Since the moratorium on inspections has been lifted, it is expected that the Government and administration will take appropriate measures by the end of 2023.

Based on the above aspects, the authors conducted a study based on the analysis of production and productivity of wheat as a basic export crop.

Thus, the rating of the top 16 wheat-producing countries in 2021 looks as follows (Fig. 1).

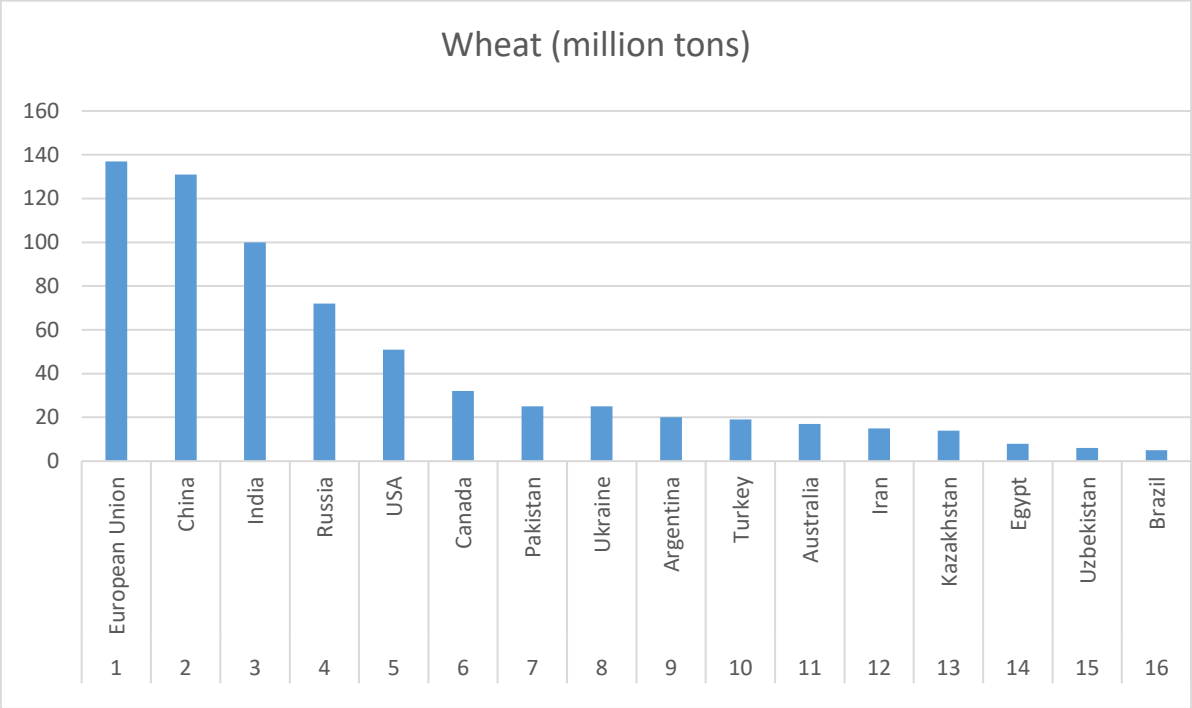

Figure 1. Ranking group of 16 wheat producing countries

Note – compiled by the authors according to (Pyagay, Bespayeva, Iskakova, 2022)

We consider production in the nearest countries — in Russia, Ukraine and compare it with Kazakhstan.

According to the Ministry of Agriculture of the Russian Federation, about 7 mln. t of wheat by the end of 2023. The absolute increase compared to 2021 was 70.8 million. tons, that is on 27 mln. tons more. The total collection of grain and leguminous crops amounted to 132.3 million. t (99.4 million t a year ago). Agricultural cultivation is 38.6 million ha (37.5 million ha in 2021). Thus, the average yield is 34.3 t/ha (26.5 t/ha in 2021).

According to the press service of the Ministry of Agricultural Policy of Ukraine, on the basis of analytical forecasts, the total wheat harvest as of November 19, 2021 is 7 mln. hectars is about 32.6 million. tons, which significantly exceeds the current forecast for 2022. The gross sum is 2.5 mln. hectars is 9.64 million. tons, the yield of wheat is 46.3 t/ha, and corn — 21 mln. tons. almost 3 million hectares of land (Digest, 2021). With an average yield of 13.0 t/ha, 20.1 million tons of grain were moistened. In 2021, with an average yield of 9.8 t/ha, 14.9 million were irrigated. tons or 25.9% less.

In Kazakhstan, in terms of crops, including socially important, the area of wheat harvesting is 12.9 million ha, of which 12.6 million ha or 98.1% were harvested with a yield of 12.4 t/ha and 15.5 million tons (Karashukeev, 2022).

Based on the obtained data, it should be noted that the yield of wheat in Russia is 34.3 t/ha, in Ukraine 46.3 t/ha, and in Kazakhstan 12.4 t/ha. In 2022, the yield in Kazakhstan will be more than 2.7 times lower than that in Russia, and it will be more than 3.7 times lower than that in Ukraine. Comparing the data for 2021, it is 3.7 times compared to Russia and 5 times compared to Ukraine.

The ratio of the productivity of 2022 to 2021 in Kazakhstan indicates that the productivity increased by 25.9% compared to 2021. However, in 2020, the average yield was 11.9 centners per hectare and 13 million were irrigated. tons of grain, which indicates the negative effects of the pandemic on agriculture in 2021.

Since the wheat harvest exceeds domestic consumption many times, part of the harvested wheat is exported. In the ranking of the leading exporting countries in 2021, it is clear that Russia takes the 1st place with an export volume of 30 mln. tons (Orlova & Nikolaev, 2022) to Ukraine in 5 places with an export volume of 14 mln. tons, Kazakhstan occupies the 9th place with an export volume of 5 mln. tons (Table 1):

Table 1. Country — leader in wheat export, 2022

No.	Name of the country	Wheat export volume (million tons)	Export share in the world market (in %)
1	Russia	30	16,67
2	USA	26	14,44
3	Canada	26	14,44
4	France	19	10,56
5	Ukraine	14	7,78
6	Australia	12	6,67
7	Germany	9,2	5,11
8	Argentina	9	5,00
9	Kazakhstan	5	2,78
10	Poland	4	2,22
Note – compiled by the authors according to (Gridneva et al., 2023)			

However, not all large countries have the export potential of wheat, rather, on the contrary, they are recognized as leaders among importers: China imported 10.5 mln. tons and Turkey 8.2 mln. tons (Table 2).

Table 2. Leading countries in import of wheat, 2022

No.	Name of country	Volume of imported wheat (million tons)
1	Egypt	13
2	China	10,5
3	Indonesia	10,5
4	Turkey	8,2
5	Philippines	6,8
Note – compiled by the authors according to (Andrei T. et al., 2022)		

The authors deliberately chose these states, as they, similarly to Kazakhstan, are recognized as countries of the post-Soviet period, in which agriculture is developing almost identically, and farmers are in relatively equal conditions and are among the 10 world exporters of wheat.

Thus, the export potential of Kazakh wheat with domestic consumption is 10 mln. Tons will increase by 6 times and Kazakhstan will most likely enter the top three wheat export leaders in the world.

It should be noted that the positive dynamics of wheat exports provoked a steady rise in wheat prices on the world market over the past 5 years (Fig. 2).

With a correctly constructed state strategy and a gradual increase in volumes, Kazakhstan can become a leader in the export of wheat.

To evaluate the competitiveness of goods, they often refer to the concept of B. Balassi, according to which the competitive advantage consists in a sufficiently large share occupied by the product in the international market, accordingly, the lack of competitive advantage consists in the low share of this product in export markets. For this, they use the tool developed by him — the ratio of comparative advantages (RCA), which has the following form

$$RCA_{ij} = \frac{E_{ij}}{E_{wi}} : \frac{E_{je}}{E_{we}}, \quad (1)$$

where

- export of goods i from country j;
- global export of goods i (except for the export of country j);
- export of all goods produced in country j;
- world export of all goods (except for the goods of country j).

It is assumed that if the value of the RCA coefficient exceeds unity, the country is competitive in the production of this product, if it is less than unity, the country has no competitive advantage. At first glance, the RCA coefficient can be used to identify sectors of the economy in which the country has a competitive advantage (Table 3).

Table 3. Competitive commodity positions for export of the Republic of Kazakhstan, 2018–2022

Name production, %	2018	2019	2020	2021	2022
Cereals, in t.ch.	2,6	3,2	3,0	2,9	3,1
Wheat and meslin	5,9	7,7	8,1	7,5	7,8
Note – compiled by the authors according to (Andrei T. et al., 2022)					

Many factors influence wheat productivity, and the ability to export wheat is directly proportional to its productivity. Let's highlight the main ones:

1) factors of a natural nature, such as soil fertility, climate conditions;

2) factors of an agro-technological character, such as methods of soil treatment, selection of sowing time, protection from weeds and insects;

3) a factor of a biological nature. These include seed genetics, seed preparation for sowing, growth stimulants;

4) factor of fertilizing character (Amalova et al., 2019).

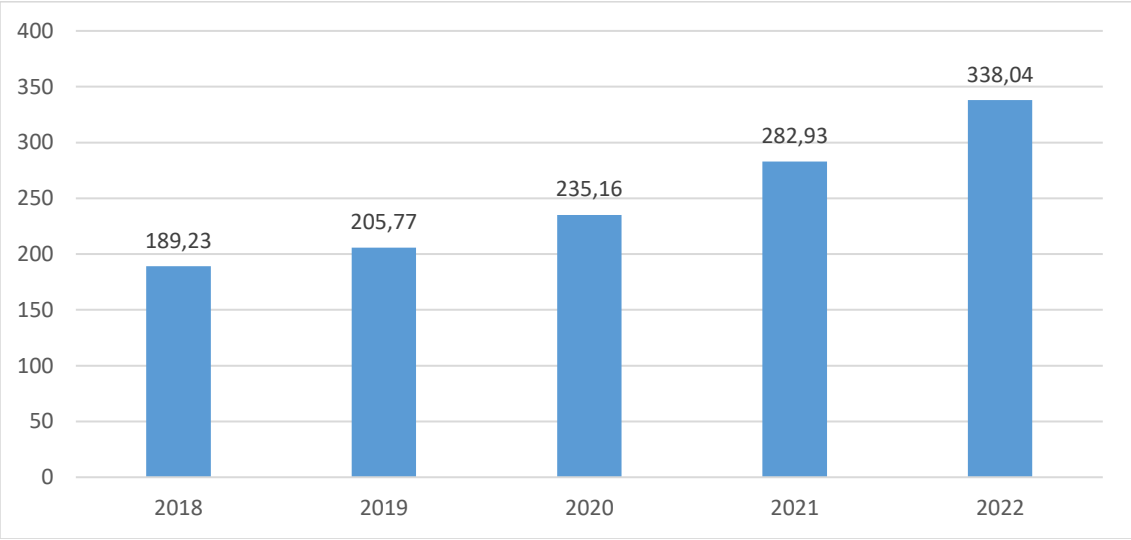

Figure 2. Dynamics of wheat prices, dollars USA

Note – compiled by the authors according to (Swathi & Sridharan, 2022)

Discussions

In order to increase the yield of wheat per hectare, it is necessary to take into account the presence and content of nutrients and trace elements in the soil for the fruitful ripening of the crop. For this, it is necessary to know and understand, taking into account the analysis of the soil, what elements, in what quantity and at what time are required for grain crops. Today, the soil analysis procedure is important, it significantly saves money on the cost of applying mineral and organic fertilizers and makes this application economically feasible and profitable (Orazaeva &, 2021).

The use of mineral fertilizers, as experience shows, becomes the main technological way to improve the quality and yield percentage of grains in general and wheat in particular. Adequate application of fertilizers can increase wheat yield by 2-3 times. In order to provoke growth in the efficiency of field work and productivity, it is necessary to adhere to a number of recommendations on the use of mineral fertilizers at each stage of growth and maturation of the culture. This algorithm is able to further reduce the cost of sowing 1 ha of wheat. The required number of mineral fertilizers and other trace elements are introduced taking into account the planned yield, agrotechnology and forecasted rainfall. The maximum effect is achieved with partial, repeated application of mineral fertilizers in autumn and spring, as well as during the period of crop cultivation. Humidity and soil composition are important (Genievskaya et al., 2019).

When choosing one or another type of wheat, the following factors are taken into account:

- breeding method;
- soil moisture;
- the location of the field;
- temperature background;

- landing period;
- the number of fertilizers and the frequency of their application (Mitikul & Regassa, 2019).

Thus, it is possible to conclude that in the 21st century, productivity depends on the provision of agro-industrial complex with innovative solutions, approaches and technologies. And for this, laboratories are needed for soil analysis, selection of crops for the Kazakh climate, production of fertilizers and much more.

A. B. Tleubayev, a Kazakh scholar. An analysis of the use of mineral fertilizers was carried out, according to the results of which it was established that Kazakhstan used 2.9 kg of mineral fertilizers per 1 ha of arable land (Karashukeev, 2022). Meanwhile, 22.3 kg/ha of mineral fertilizers were used in Russia, and 63.4 kg/ha in Ukraine (Fig. 3) (Tleubaev, 2021).

Tleubayev A.B. It is noted that Kazakhstan and Canada have the same climatic conditions for grain production. At the same time, Canada uses 105 kg/ha of mineral fertilizers, and Kazakhstan uses only 2.9 kg/ha of mineral fertilizers, the yield is 31 kg/ha in Canada, and 12 kg/ha in Kazakhstan. Using the methods of mathematical analysis, it is possible to calculate, with a sown area of 12.9 mln. ha and productivity of 31 t/ha, Kazakh producers could get about 40 mln. tons of wheat at the former world price of wheat in the amount of about 300 US dollars per ton, the total wheat harvest of Kazakhstan was estimated at 12 bln. US dollars.

Based on the reverse, with a yield of 31 t/ha and a harvest of 15 mln. tons, we need only 4.83 million. ha of seed plots, which is 2.58 times less than current indicators. And this would lead to a reduction in the production costs of agricultural producers, a reduction in the purchase of large volumes of fuel, minimization of the rental of additional equipment and workers.

With well-chosen mineral fertilizers, not only the yield of grain increases and the time of ripening is accelerated by 5-6 days, its quality improves. Therefore, the cleaning campaign begins earlier and in conditions of comfortable heat. Wheat acquires the properties of maximum drought resistance and water consumption costs are significantly reduced, the root system becomes stronger and, accordingly, the variety has qualities that are more resistant to external influences (Stukach, 2019).

“KazAzot” and “KazPhosfat” are recognized as the largest enterprises in Kazakhstan for the production of mineral fertilizers. As a result, 378 thousand were produced in Kazakhstan in 2021. Tons of nitrogen fertilizers, the production of phosphoric fertilizers amounted to 393.4 thousand tons. In the forecast, the planned increase in the total capacity of domestic enterprises producing fertilizers, which in 2022 will amount to 1 mln. 156.6 thousand tons (Top of the largest suppliers of fertilizers in Kazakhstan, 2022). At the sown area of 5 mln. 105 kg/ha of mineral fertilizers and 525 thousand will be required per ha. tons of fertilizer, and 12.9 mln. 1 million 354.5 thousand ha. tons of fertilizers and only talk about harvest wheat.

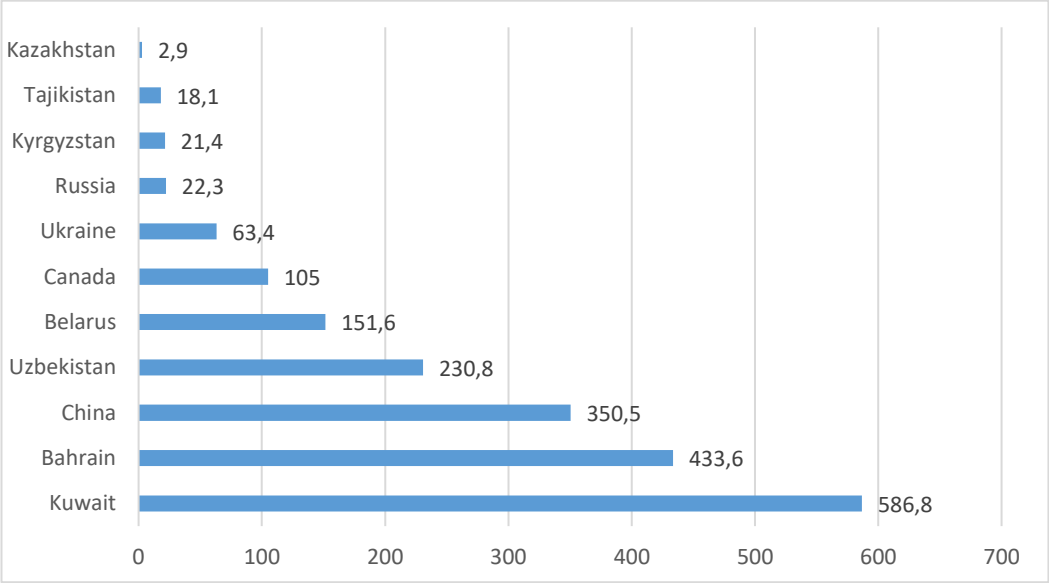

Figure 3. Use of mineral fertilizers on the total area of arable land, kg/ha

Note – compiled by the authors according to (Pyagay et al., 2022).

Conclusions

Thus, in the process of implementation of the instructions of the head of state and, within the framework of the development of the agro-industrial complex, many questions remain open, the solution of which requires a lot due to the introduction of innovative processes, such as:

- creation of research laboratories for soil analysis, selection of crops for the Kazakh climate, production of fertilizers;

- the availability of mineral fertilizers, since the main agrotechnical method that increases the quality and yield of wheat is the use of fertilizers, competent and correct application of mineral fertilizers can double the yield under certain conditions;

- training of agricultural producers on the selection of mineral fertilizers, which not only increase grain yield and improve its quality;

- carrying out selection works.

Since the volume of wheat export directly depends on its productivity, systematic implementation and implementation of the above-mentioned measures will increase the level of productivity in the near future.

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Қазақстан Республикасы агроөнеркәсіп кешенінің негізгі экспорттық дақылы ретіндегі бидай шығымын арттыру

Аңдатпа:

Мақсаты: Жұмыстың мақсаты негізгі экспорттық дақыл ретінде бидайдың өнімділігін арттырудың негізгі мәселелерін зерттеу, жақын орналасқан елдердегі бидай өндірісін талдау, бидайдың негізгі әлемдік экспорт-таушыларымен импорттаушыларын қарастыру, жолдарын анықтау, сонымен қатар бидайдың өнімділігін арттыру. Агроөнеркәсіптік кешеннің осы саласын дамыту мәселесі әлі де ашық күйінде қалып отыр және бірқатар инновациялық процестерді енгізуді талап етеді.

Әдісі: Зерттеудің әдістемелік негізін жалпы ғылыми талдау мен синтез құрады, жүйелік талдау, экономикалық-статистикалық талдау және салыстырмалы талдау әдістері қолданылды.

Нәтижесі: Зерттеу нәтижелері авторлардың өнімділік деңгейін арттыру бойынша ұсыныстары болды, мысалы: ғылыми-зерттеу зертханаларын құру; минералды тыңайтқыштарды алудың қолжетімділігі және пайдалану қажеттілігі, ауылшаруашылығы тауарын өндірушілерді астық өнімділігін арттыру және оның сапасын жақсарту ғана емес, минералды тыңайтқыштарды таңдауға оқыту қажеттілігі; селекциялық жұмыстарды жүргізу және т.б.

Қорытынды: Авторлардың бидай өнімділігін арттыру мәселелерін зерттеуі республиканың бидай өндірісі мен экспорты көрсеткіштерінің оның өнімділігіне тікелей тәуелділігін көрсетті.

Кілт сөздер: өнімділік, агроөнеркәсіп кешені, дәнді дақылдар, тыңайтқыштар, ауыл кооперациясы.

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Повышение урожайности пшеницы как базовой экспортной культуры агропромышленного комплекса Республики Казахстан

Аннотация:

Цель: Целью работы является исследование ключевых проблем повышения урожайности пшеницы как базовой экспортной культуры, проведен анализ производства пшеницы в ближайших странах, рассмотрены основные мировые экспортеры и импортеры пшеницы, а также определены пути повышения урожайности пшеницы. Вопрос развития этого направления агропромышленного комплекса все еще остается открытым и нуждается во внедрении ряда инновационных процессов.

Методы: Методическую основу исследования составили общенаучные анализа и синтеза, системного анализа, применялись методы экономико-статистического анализа и сравнительного анализа.

Результаты: Результатами исследований стали предложения авторов по повышению уровня урожайности, такие как создание исследовательских лабораторий; доступность к получению и необходимость применения минеральных удобрений; необходимость обучения сельхозпроизводителей по подбору минеральных удобрений, которые не только повышают урожайность зерна и улучшают его качество; проведение селекционных работ и многие другие.

Выводы: Исследование авторами проблем повышения уровня урожайности пшеницы продемонстрировало прямую зависимость показателей производства и объема экспорта пшеницы республики от ее урожайности.

Ключевые слова: урожайность, агропромышленный комплекс, зерновые культуры, удобрения, сельская кооперация.

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Peculiarities of demand for medicines and assessment of the consequences of introducing co-payment in Kazakhstan

Abstract

Object: In the context of the population's growing need for medical care and limited resources of the healthcare system, the issue of assessing the population's demand for medical services, especially for medicines, in both developed and developing countries becomes relevant. The study aims to determine the characteristics of the population's demand for medicines in the Republic of Kazakhstan and assess the impact of co-payment mechanisms on medicine consumption.

Methods: To achieve this goal, we conducted a sociological survey of the population in all regions of Kazakhstan, with the participation of 1638 respondents. Questionnaire data were estimated using a logarithmic model.

Findings: As a result of evaluating the logarithmic model, we identified the main factors influencing the demand for medicines. An individual's poor health state increases the demand for and consumption of medicines. We observed decreased demand for medicines among those individuals who assessed their health status by non-medical factors. Individuals who used the services of private medical institutions increased their demand for medicines, unlike those individuals who used the services of specialized medical institutions. A large amount of time spent traveling to medical centers is also one of the factors in increasing drug consumption. Such factors as visits to emergency medical care, the presence of chronic diseases in family members, the gender and place of residence of the individual, and a large number of children in the family influence high demand.

Conclusions: The logarithmic model results show many factors influencing the demand for medicines; the introduction of co-payment further expands the variability of factors influencing the volume of medicine consumption by the population. Various co-payment mechanisms can both reduce consumption and encourage drug consumption.

Keywords*:* Co-payment in Kazakhstan, demand, healthcare, health, medical services, medicines, population.

Introduction

The medical services market is one of the few markets that has demonstrated stable growth and development in the pre-pandemic and post-pandemic periods. The global healthcare services market was estimated at $11.3 trillion in 2022 and will grow to $19.2 trillion by 2030. As part of the medical services market, the global pharmaceutical market, according to Statista, increased from 2001 to 2022 from 390.2 billion dollars to 1.482 trillion dollars. In Kazakhstan, the medical services market is dynamically developing, so in 2019, the volume of the medical services market amounted to 3.67 billion dollars. By 2022, the medical services market grew to 6.2 billion dollars, of which the volume of the pharmaceutical market was 1.7 billion dollars. Many factors, such as a favorable investment climate, increased healthcare system funding, improved disease detection, reduced mortality, increased birth rates, and the aging of the population, facilitated the development of the medical services market. For example, the population in Kazakhstan increased from 2019 to 2022, from 18.3 million to 19.7 million people, and the population aging index increased from 26.5 to 28.2 people per 100 children.

Based on the above factors, we aim to determine the characteristics of the population's demand for medicines in Kazakhstan and assess the impact of co-payment mechanisms on medicine consumption. During the research, we tried to answer the following questions: To what extent can various socio-economic factors affect the demand for medicines, and what are the prospects for introducing co-payment mechanisms for medicines in Kazakhstan? Understanding the reasons for low or high population demand for medical services will

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allow managers to improve the population's health more effectively, coordinate medical care, ensure accessibility of medical organizations, and encourage the population to use medical services. Understanding the characteristics of the demand for medicines helps to take measures to reduce excessive consumption and resistance to pharmaceuticals and improve the environment from pollution by pharmaceuticals (Hensher et al., 2020).

The features of the demand for medicines have been poorly studied in Kazakhstan; this study aims to fill this gap. Through a sociological survey and the construction of a logarithmic model, the main factors of demand for medical care were identified.

Literature Review

A close relationship with the production of medical services determines the demand for medical care. The state can determine priority areas for healthcare development based on demand models. Discrete choice models of health care show that changes in the price level influence changes in medical demand. For example, in developing countries, rising prices in public hospitals encourage people to switch to traditional and informal medicines of poor quality. The single-demand model suggests that when there is a lack of information about health care, the quality of care significantly influences demand (Mwabu, 2008).

A study conducted in the Tsegede region, northern Ethiopia, among 423 respondents using multinomial logistic regression showed that the complexity of the disease, the education of the respondents, the distance to the medical organization, and the quality and price of treatment were significant, and statistically associated with the demand for medical services. Lack of insurance systems and lack of information negatively impact demand in the medical field (Wellay et al., 2018). It is also essential that place of residence in urban or rural areas affects the level of demand in the healthcare sector. Thus, in Kazakhstan, other things being equal, it is highly likely that urban households will seek medical care and spend more on medical services (Thompson et al., 2003).

Some authors note the heterogeneity of price elasticity of demand in healthcare. The lowest elasticity is for preventive visits (-0.02), and the highest elasticity is for visiting specialist doctors (-0.32) and pharmaceuticals (-0.44). Elasticity varies depending on the patient's age, salary, working conditions, industry, and insurance (Ellis et al., 2017).

Drug demand has unique characteristics because four entities determine it. First, patients and drug consumers determine demand. Second, demand is driven by physicians as they act as patient agents. Third, demand is determined by insurers since they are primarily payers. Fourth, pharmacists determine demand by having information about drugs and influencing the drug dispensing process (Schweitzer & Lu, 2018).

The supplier of medicines often initiates this demand and can induce the demand for medicines. In addition, other factors also influence induced demand. For example, there can be information asymmetry, insufficient qualifications of a doctor and insufficient medical literacy of patients, marketing of pharmaceutical companies, a weak healthcare system, and illegal trafficking in counterfeit medicines. Understanding induced demand factors allows measures to reduce unnecessary drug consumption, which positively impacts public health (Mohamadloo et al., 2019).

Research shows that the most inelastic drugs are those used to treat chronic diseases, with a price elasticity of -0.08, and most studies also indicate that the overall price elasticity of drugs is around -0.2. Copayments for medicines have different effects on medicine consumption and largely depend on various factors (severity of the disease, age, income). People with low incomes and chronic diseases may reduce their demand for medicines with the introduction of copayments, thereby negatively affecting their health. Copayments do not affect the consumption of medicines by the working population with average incomes. Loss of treatment adherence is associated with cost-sharing in copayments and chronic diseases and with lack of recovery. Based on this, governments need to choose copayment schemes wisely to avoid the risk of reduced adherence, especially among inelastic treatment groups (Hernández-Izquierdo et al., 2019).

A study conducted in China shows that the main factor influencing the price elasticity of a drug is the type of disease. The price elasticity of demand varies depending on the drug category; for example, anticancer drugs have the most negligible elasticity, and drugs for treating cardiovascular diseases have the most extraordinary elasticity. It is also worth noting that in the group of antitumor and cardiovascular drugs, the absolute value of price elasticity for generics is higher than for original drugs. In the group of antimicrobial drugs, generic drugs have lower absolute elasticity values than brand-name drugs (Zhao et al., 2021).

The rapidly growing demand for medicines in Vietnam is due to several reasons: economic growth and increasing incomes, increasing demographics and urbanization, an aging population due to improvements in

living standards, environmental degradation, and unsafe food products (Angelino et al., 2017). An increase in the use of antibiotics and the emergence of resistance to them is typical for many countries, including Kazakhstan. Factors such as education level, income, and age are associated with antibiotic use and awareness (Iskakova et al., 2023).

A study conducted at the largest hospital in Botswana, Princess Marina, found four classes of drug supply and demand problems: supply problems, demand problems, regulatory problems, and institutional problems. The demand problem is characterized by irrational consumption of medicines and increased marketing strategies (Modutlwa et al., 2023). In developed and developing countries, demand is also negatively affected by poor drug distribution. A randomized trial conducted in 439 health facilities in Zambia confirmed that a direct distribution system through a cross-warehousing system, as opposed to a three-tier system, reduced the duration and frequency of drug shortages. In addition, the direct exchange of information between hospitals and the central drug supply authority reduces the blurring of accountability (Vledder et al., 2019).

Methods

We conducted a sociological survey on the topic: "Health and its impact on the characteristics of demand for medical services and medicines" among 1638 respondents in different regions of the Republic of Kazakhstan. The majority of respondents lived in Almaty — 27.5%, Almaty region — 12.9%, Astana — 7.6%, Turkestan region — 7%, Shymkent — 4.5%, the rest of the respondents lived in other regions of Kazakhstan — 40,5%. 71.8% of respondents lived in cities, 14.5% lived in rural areas, and 13.7% lived in urban settlements. Among the respondents surveyed, 35.7% were men, 64.3% were women. Table 1 presents the main questions and answers of respondents from the sociological survey.

Table 1. Results of a sociological survey on the topic: "Health and its impact on the characteristics of demand for medical services and medicines"

Questions asked to respondents	Respondents' answers to the questions asked				
Age	16—17 years old	18—24 years old	25—44 years old	45—64 years old	65 years and above
	12.3%	53%	22.5%	11.2%	1%
Family status	married	divorced	widowed	divorced	never married
	36.5%	3.2%	2.2%	1.6%	56.2%
Do you have children in your family?	have no children	1 child	2 children	3 children	4 or more children
	43.1%	16.7%	16.7%	12%	11.5%
Education	higher	average	secondary specialized	incomplete higher	lower secondary
	51%	10.4%	12%	24.1%	2.5%
Main occupation	maternity leave, pension	studied	unemployed	work, business, household	limited
	8.7%	40.7%	4.8%	44.7%	health options
Your health status	bad	average	good	found it difficult to answer	
	6.5%	33.3%	57.5%	2,7 %	
On what basis do you assess your own health?	based on medical examination	based on medical examination and well-being	based on how you feel	milk and honey	psychosomatics
	0.1%	19.7%	32%	48.1%	0.1%
Amount of time spent traveling to medical facilities	up to 30 minutes	up to 15 minutes	up to 1 hour	up to 2 hours	more than 2 hours
	40.5%	31.1%	20.6%	4.3%	3.5%
Do you purchase medications or receive them from the government?	I buy it myself	state	I buy some myself, some are issued by the state		I find it difficult to answer
	78.4%	5.4%	11 %		5,3 %
How much do you spend per month on medicines?	up to 11 dollars	from 11 to 22 dollars	from 22 to 45 dollars	from 45 to 79 dollars	more than 79 dollars
	37.6%	28.4%	20 %	7,6 %	6,4 %
Is constant medication necessary?	Yes	No	I find it difficult to answer		
	41,2 %	51,6%	7,2 %		
Note – compiled by the authors					

Respondents were also asked the following questions with the opportunity to select multiple answer options. If you sought medical help for a fee, then indicate the reason, the most popular answers: 24.6% of respondents answered that they wanted to be served at a high level (quickly and efficiently); 19.2% responded that the hospital doctor at their place of residence refused to issue a referral; 19% responded that it takes a long time to make an appointment for diagnostic examinations (30.1% of respondents did not seek medical care for a fee). If a patient went to emergency medical care, did he or she encounter any problems? The most popular answers:

- 29.5% of problems did not arise.
- 16.6% had a very long wait for an answer.
- 16% had a long wait for a medical team (34.9% of respondents did not go to emergency medical care).

The results of a sociological survey show that the majority of respondents (78.4%) buy medicines independently, and the majority (37.6%) prefer inexpensive medicines under $11. Of the respondents surveyed, 41.2% need to constantly take medications. Despite government regulation, rising drug prices are one of the main problems of many Kazakhstanis. One method to reduce the cost of medicines and the cost of purchasing medicines could be the introduction of copayment mechanisms for medicines.

It was supposed to introduce the rules for copayment for medicines and medical devices in Kazakhstan 2020. However, due to the unpreparedness of the healthcare system, the implementation of copayment was postponed to 2026. Community copayment for drug costs refers to the practice where patients pay a particular portion of the cost of drugs, and the government or insurance company covers the rest. It may be in the form of a fixed amount or a percentage of the total cost of the drug. There are various reasons for introducing copayments for medicines. One is reducing health care costs for the government or insurance companies. Introducing copayments can help to reduce the cost of purchasing drugs, especially if drug consumption is high.

However, co-paying for drug costs can also have negative consequences. The high cost of medications can create a financial burden for patients, especially those who depend on regular medications. Under these circumstances, patients may refuse medical treatment and reduce the dosage of medications, which may ultimately negatively affect their health. In addition to the financial burden, co-payments can create conditions for inequalities in access to medicines. Therefore, people with low incomes or without health insurance may have difficulty paying for medications and may not receive the treatment they need. This situation can exacerbate health inequalities and negatively impact public health. Ultimately, guaranteeing access to medicines is an essential aspect of public health. A balance between financial responsibility and access to medicines should ensure the best health outcomes for all citizens.

Forecasting the demand for medicines when introducing a copayment scheme can be done in the following ways. Studying previous periods with copayment schemes can help predict future demand. By analyzing past drug sales and patient demand data, patients can identify trends and understand how demand changes when introducing a new copayment scheme. However, Kazakhstan has not previously introduced copayment schemes for medicines, and this approach is not applicable.

Market research can be conducted among patients and potential drug users to assess their attitudes toward the copayment scheme and predict how it will influence their purchasing behavior. Research methods may include surveys, focus groups, and analysis of their responses.

Computer models and simulations can help to forecast drug demand. Building models based on population data, economic factors, prices, and other variables allows for scenario analysis and predicting how drug demand will change under different copayment scheme options. Modeling considers various factors, including prices, availability, pharmacoeconomics, and consumer behavior.

It is also important to consider the possibility of adaptation and change in consumer behavior in response to the new co-payment scheme. Therefore, it is possible to predict changes in the demand for medicines due to the introduction of co-payments based on the price elasticity of demand for medicines. It assesses the sensitivity of demand to changes in the population's co-pay amount. The population's participation in paying for medicines represents a reduction in the population's income by the co-payment amount.

To estimate the price elasticity of demand for medicines by the population, it is possible to use a linear econometric model:

$$V_i = \beta_0 + \beta_1 I_i + X_i\gamma + \varepsilon_i, \;\; i = 1,2,\dots,N, \qquad (1)$$

where V_i is the volume of demand for medical services or medicines, I_i is income (price), X_i is a vector of characteristics of consumer i and other indicators that can affect demand, β_0, β_1 are coefficients, γ is a vector of coefficients appropriate dimension. The income elasticity of demand can be estimated using the formula:

$$E = \frac{I}{V}\hat{\beta}_1. \quad (2)$$

Here $\hat{\beta}_1$ is the estimated value of the coefficient β_1, and I and V are the average values of income and volume, respectively.

Another approach is to use a linear-log regression model:

$$lnV_i = \beta_0 + \beta_1 lnI_i + X_i\gamma + \varepsilon_i, \;\; i = 1,2,\dots,N. \quad (3)$$

Then the estimate of the income elasticity of demand is equal to the estimated coefficient for the logarithm of income, i.e.:

$$E = \hat{\beta}_1. \quad (4)$$

When carrying out calculations, econometric tests should be performed to ensure the reliability requirements of the estimated model and the results obtained. However, when estimating a multiple regression model, the phenomenon of endogeneity is possible in addition to the usual tests for the significance of coefficients, multicollinearity, heteroscedasticity, and autocorrelation. Endogeneity occurs if the random term is correlated with some of the regressors in the model equation. One way to eliminate this problem is to use the instrumental variable method. However, finding instrumental variables is usually a complex and time-consuming task due to the availability of data that satisfies certain conditions. As in the study (Selezneva, 2014), the model parameters were estimated without considering possible endogeneity.

Results

Table 2 presents the results of evaluating the logarithmic model; this model was built based on data from a survey of 1638 respondents in all regions of Kazakhstan. To avoid possible heteroskedasticity, robust estimates of the coefficients were obtained. All estimated model coefficients are significant at the 1% level except one, which is significant at the 5% level.

Table 2. Estimation results using the logarithmic model

	lnLc	Coef.	Robust Std. Err.	t	P>t	[95% Conf. Interval]	
lnUc	Logarithm of income	.095	.030	3.15	0.002	.036	.154
A1	How would you rate your health? Health is poor	.420	.093	4.51	0.000	.237	.602
A2	Average health	.174	.050	3.46	0.001	.075	.272
C4	On what basis do you assess your own health? Milk and honey	-.133	.047	-2.81	0.005	-.225	-.040
C5	Psychosomatics	-.983	.072	-13.69	0.000	-1.123	-.842
AE	Indicate the reason why you sought medical care for a fee. The doctor at the medical institution at the place of residence did not issue a referral	.908	.159	5.72	0.000	.597	1.219
AK	High professionalism of doctors in a private clinic	.262	.068	3.82	0.000	.127	.396
AQ	Specialized institutions (diagnostic center, etc.)	-.759	.152	-4.98	0.000	-1.058	-.460
Hc	How long will it take you to travel to a medical facility?	.0016	.0007	2.26	0.024	.0002	.0029
AV	If you went to emergency medical services, did you encounter any of the following problems? Very long wait for a response	.244	.069	3.53	0.000	.109	.380
AZ	No, there were no problems	.156	.052	3.00	0.003	.054	.257

Jc	Do you or any of your family members need to take certain medications on a regular basis?	.206	.048	4.27	0.000	.111	.301
K1	Do you purchase medications yourself, or do you receive them from the government? On one's own	-.492	.080	-6.15	0.000	-.649	-.335
K2	The state helps	-.378	.125	-3.01	0.003	-.624	-.131
Mc	What's your gender?	-.108	.049	-2.18	0.029	-.204	-.011
Sc	Do you have children in your family?	.064	.017	3.80	0.000	.031	.097
V3	Please indicate what area you live in? Settlement	.196	.069	2.83	0.005	.060	.332
Cons	Constant	7.775	.361	21.52	0.000	7.066	8.484
Note – compiled by the authors							

Income was calculated as the average of total income divided by the number of people in the family. The estimated income elasticity of drug demand is 0.095, with a 95% confidence interval of [0.036, 0.154]. According to Liu & Chollet (2006) and other studies, most estimates of income elasticities of demand for health care fall between 0 and 0.2. It means that the resulting estimate of 0.095 for the elasticity of demand for medicines is in this interval.

The estimated coefficients for the model variables make it possible to assess how different factors will influence the demand for medicines. An important factor influencing the demand for medicines is the health status of the respondent, especially if the health status is poor. Those individuals who assess their health not by medical examination or well-being but rely on consuming milk and honey and psychosomatics, on the contrary, reduced this demand.

Those who sought medical help for a fee because the doctor at their residence refused to issue a referral or because the high professionalism of doctors in a private clinic increased the demand for medicines. Moreover, those who turned to specialized institutions, on the contrary, reduced demand.

The more time people spent traveling to a medical facility, the more likely they were to buy medicines. The impact on the demand for medicine for any problems when going to emergency medical care is ambiguous, but those who go to it tend to buy medicines. People buy more medicine if one of their family members needs to take certain medications regularly. However, people who do this independently or with government help buy fewer medications.

Men buy less medicine than women. The more children in a family, the more medicines are purchased. Depending on the locality, people living in urban settlements tend to purchase medicines more than those living in cities and rural areas.

Based on the obtained estimates of the elasticity of demand for drugs by income, it is possible to make predictions about changes in the amount of drug consumption after the introduction of co-payment mechanisms. By definition, the elasticity of demand for drugs is:

$$E = \frac{I}{V}\frac{\Delta V}{\Delta I}. \quad (5)$$

Here V is the volume of consumption of medicines, I is income before the introduction of co-payment, ΔI is the amount of co-payment, ΔV is the change in the volume of consumption of medicines. Hence, taking into account that $\Delta V = V' - V$, where V' is the volume of consumption of medicines after the introduction of co-payment, we can write:

$$V' = V\left(1 + E\frac{\Delta I}{I}\right). \quad (6)$$

Based on this formula, it is possible to obtain estimates for the average expenditure of individuals after the introduction of co-payment for drug costs.

Conclusions

In this study, using a logarithmic model, we assessed the influence of various factors on the demand for medicines in the Republic of Kazakhstan. An increase in life expectancy, an increase in chronic diseases, and an increase in public and private spending on healthcare largely determine the relevance of the problem of determining the main factors influencing the demand for medicines. A better understanding of the nature of the demand for medicines will allow healthcare systems to plan purchases more effectively, avoid shortages

of medicines, and regulate excessive consumption of medicines in medical institutions and among the population. Excessive drug consumption contributes to increased drug resistance, especially antibiotic resistance. By analyzing the behavior of drug consumers and introducing a co-payment mechanism, it is possible to help to reduce not only the excessive consumption of drugs but also healthcare costs for the state, insurance companies, and households. Undoubtedly, it is necessary to consider various negative factors, for example, inequality of access to medicines due to the introduction of co-payments. The study showed that those individuals who do it themselves or with the state's help buy little medicine. Of course, introducing co-payments for medicines in 2026 will change the consumer behavior of the population and the demand for medicines.

Complementary Data

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Қазақстанда дәрілік заттарға сұраныстың ерекшеліктері және бірлескен төлем енгізудің салдарын бағалау

Аңдатпа:

Мақсаты: Халықтың медициналық көмекке деген сұранысының артуы және денсаулық сақтау жүйесінің шектеулі ресурстары жағдайында дамыған және дамушы елдерде халықтың медициналық қызметтерге, әсіресе дәрілік заттарға сұранысын бағалау мәселесі өзекті болып отыр. Зерттеудің мақсаты — Қазақстан Республикасындағы халықтың дәрілік заттарға сұранысының ерекшеліктерін анықтау және қосымша төлем тетіктерінің дәрілік заттарды тұтынуға әсерін бағалау.

Әдісі: Осы мақсатқа жету үшін Қазақстанның барлық өңірлерінде 1638 респонденттің қатысуымен халыққа әлеуметтік сауалнама жүргізілді. Сауалнама деректері логарифмдік модель арқылы бағаланды.

Қорытынды: Логарифмдік модельді бағалау нәтижесінде дәрілік заттарға сұранысқа әсер ететін негізгі факторлар анықталды. Жеке адамның денсаулығының нашарлығы сұранысты және сәйкесінше дәрі-дәрмектерді тұтынуды арттырады. Медициналық емес факторлармен денсаулық жағдайын бағалаған адамдарда дәрі-дәрмектерге сұраныстың төмендеуі байқалды. Жеке медициналық мекемелердің қызметтерін пайдаланған адамдар мамандандырылған медициналық мекемелердің қызметтерін пайдаланған адамдарға қарағанда дәрі-дәрмектерге деген сұранысын арттырды. Медициналық орталықтарға баруға көп уақыт жұмсау да дәрі-дәрмектерді тұтынуды арттыратын факторлардың бірі. Жоғары сұранысқа жедел медициналық көмекке жүгіну, отбасы мүшелерінде созылмалы аурулардың болуы, адамның жынысы мен тұрғылықты жері, отбасындағы балалардың көп болуы сияқты факторлар да әсер етеді.

Тұжырымдама: Логарифмдік модельдің нәтижелері дәрілік заттарға сұранысқа әсер ететін көптеген факторларды көрсетеді, бірлесіп төлеуді енгізу халықтың дәрі-дәрмектерді тұтыну көлеміне әсер ететін факторлардың өзгергіштігін одан әрі кеңейтеді. Бірлесіп төлеудің әртүрлі механизмдері тұтынуды азайтып, дәрі-дәрмектерді тұтынуды ынталандыруы мүмкін.

Кілт сөздер: Қазақстанда бірлесіп төлеу, сұраныс, денсаулық сақтау, денсаулық, медициналық қызметтер, дәрі-дәрмектер, халық.

Л.С. Спанкулова, Б.М. Мухамедиев, Е.Б. Букатов

Особенности спроса на лекарства и оценка последствий введения сооплаты в Казахстане

Аннотация:

Цель: В условиях растущих потребностей населения в медицинской помощи и ограниченности ресурсов системы здравоохранения актуальным становится вопрос оценки спроса населения на медицинские услуги, в особенности на лекарственные средства, как в развитых, так и развивающихся странах. Цель исследования заключается в определении особенностей спроса населения на лекарственные средства в Республике Казахстан и оценке влияния механизмов сооплаты на потребление лекарств.

Методы: Для достижения указанной цели был проведен социологический опрос населения во всех регионах Казахстана с участием 1638 респондентов. Данные анкетирования были оценены логарифмической моделью.

Результаты: В результате оценки логарифмической модели были определены основные факторы, влияющие на спрос на лекарственные средства. Плохое состояние здоровья индивида увеличивало спрос и соответственно потребление лекарственных средств. Снижение спроса на лекарства наблюдалось у тех индивидов, которые оценивали свое состояние здоровья немедицинскими факторами. Индивиды, которые пользовались услугами частных медицинских учреждений, увеличивали свой спрос на лекарства в отличие от тех индивидов, кто пользовался услугами специализированных медицинских учреждений. Большое количество времени, потраченное на дорогу в медицинские центры, также является одним из факторов увеличения потребления лекарств. На высокий спрос влияют и такие факторы, как обращения в скорую медицинскую помощь, наличие у членов семьи хронических заболеваний, пол и место жительства индивида, большое количество детей в семье.

Выводы: Результаты логарифмической модели показывают множество факторов, влияющих на спрос на лекарственные средства, внедрение сооплаты еще больше расширяет вариативность факторов, оказывающих влияние на объемы потребления лекарств населением. Различные механизмы сооплаты могут как сократить потребление, так и стимулировать потребление лекарственных средств.

Ключевые слова: сооплата в Казахстане, спрос, здравоохранение, здоровье, медицинские услуги, лекарства, население.

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Transport logistics as a driver of business development

Abstract

Object: The purpose of the study is to create an open and self-sufficient market economy, where one of the main drivers should be the development of business in the formation of transport logistics. The research methodology is based on presenting the role of business in the innovative development of logistics and analyzing the dynamics of the main indicators of its development.

Methods: General scientific, statistical, correlation, retrospective methods of analysis.

Findings: States are counting on business as a new driver of the economy. Currently, there are many factors hindering business development. One of the most difficult problems is that most logistics enterprises do not have sufficient financial resources to meet their own investment and contractual needs. At the same time, the tendency to copy the experience of developed countries in supporting business without adapting to local conditions continues. The author has proposed a number of areas, work in which can help improve the effectiveness of business support programs in Kazakhstan. Logistics special economic zones are primarily important for the state as the basis for generating cargo flows within the country, as well as for creating an integrated network of transport and logistics complexes.

Conclusions: In the context of the formation of economic growth, a model of interaction between stakeholders of a regional digital technology platform is proposed to enhance the innovative activities of businesses. The results can be used by government agencies, representatives of higher education, and the public to ensure the transition from a resource-based to an innovation-oriented economy.

Keywords: financing, business, World Bank of Kazakhstan, entrepreneurship, performance indicator, economic drivers, innovation economy, transport system, logistics.

Introduction

The whole population of Kazakhstan is impacted by the logistics industry, which serves as the hub of social care in the nation. The material and technical foundation of the transport infrastructure is substantially behind international standards, according to an analysis of the state of the economy's transport sector. Inequalities also exist in the development of the various components of the regional transport system as a whole as well as regional complexes. A set of transportation points, primarily local and conventional, containers, and cargo are all included in the transport and logistics infrastructure from a systematic approach perspective. These services are used to coordinate the movement of goods and the provision of logistics services. (Bolodurina & Mishurova, 2019).

A never-ending supply of goods and services is necessary for the operation of most industries. Most notably, his method encourages rationality and innovation, and small businesses rather than big ones are the primary sources of ideas and innovations. Contrary to popular assumption, little businesses prosper when big firms cast a shadow over them.

The State will create a long-term policy to integrate the most acceptable portion of the people in this sector in the sector that is being developed in the business sector in order to fulfill the strategic goals of social and socio-economic development. Economic well-being is based on business development.

Out of 190 nations, Kazakhstan has risen to 36th position in the World Bank's business statistics. To modernize the nation, the requisite program efforts have been proposed in this respect. Their application has grown to be essential to development success. 2050 is the target year for our strategy. We are one of the world's thirty developed nations.

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In 2007, the Republic of Kazakhstan was putting its 2007 vision of sustainable development into practice 2024 as well. Specifically, new economic connections, especially those with other countries, the growth and stability of small businesses, and the promotion of innovation and production are all crucial. This is because there must be initial investments made and around 70,000 small businesses are founded annually. Long-term investments and working cash are also necessary for expanding, established, and medium-sized businesses. Corporate initiatives were quite risky, thus second-tier banks were not very interested in funding them. Therefore, financial assistance from the state is thought to be the best course of action in this case. The Damo Foundation reports that 81% of respondents to a survey of 10,000 current and prospective small- and medium-sized business representatives residing in all 14 regions of Kazakhstan felt that financial support is essential for the growth of small and medium-sized businesses (Gorfinkel, 2011).

Literature Review

The historical mechanism of scientific literature on the formation of business in the fundamental works of A. Smith, K. Kejns (Kejns, 2007; Smith, 2016). Entrepreneurship as a phenomenon is the object of close attention of domestic and objective researchers. Issues of formation, infrastructure support, efficiency and the role of entrepreneurship in the works of researchers E. M. Bukhvaldy, A. V. Vilensky, L. A. Kolesnikova, A. Yu. Chepurenko, L. G. Rudenko, V. M. Karaulova (Chepurenko, 2012; Vilensky, 2013; Buhval'd, 2016). The transformation of entrepreneurship as a phenomenon in Kazakhstan is presented in the works of A. Toksanova, G. Ukubasova, A. Asenova (Toksanova, 2019; Asenova, 2023; Kulbatyrov, 2023). Trends in the development of Kazakhstani entrepreneurship are reflected in the works of N. Kulbatyrov, A. A. Tulepbekova (Kulbatyrov, 2016). Access to innovation has always been a universally recognized axiom for ensuring national competitiveness. A dynamic feature of Kazakhstan's global innovation ranking is its low volatility: in 2019, it took 79th place, 81 years old the place is in 2023. For years, Switzerland, Sweden and the G7 countries have been leading the way. The main engines of economic growth are resources (labor, material, economic), legal framework, infrastructure and institutional environment.

In particular, transport infrastructure and logistics are important factors in the transportation of goods abroad and the search for intermediaries. The results obtained may correspond to alternative indicators and several alternative specifications for the quality of transport infrastructure. Although the country samples vary, the quality of transport and logistics infrastructure is still an important factor in determining relative benefits. These results show that transport policies aimed at improving the quality of transport infrastructure and logistics services have comparative advantages.

The attractiveness of the business sector means an increase in the number of entrepreneurs, the production of goods and services, and consequently, the share of the sector in the country's GDP increases. Innovation and the development of regional penetration into the region are the driving force of the economic development of the whole country. The problems of innovation and transformation in Kazakhstan are solved at the workplace of O. Sabden, F. Dnishev, N. Nurlanova, F. Alzhanova and others (Sabden, 2008; Alimbaev, 2010; Dnishev, 2013; Nurlanova, 2023).

In the “Concept of Innovative Development of the Republic of Kazakhstan until 2020”, an important task is to stimulate innovative business activity and develop regional innovation systems (Kontseptsiia innovatsionnogo razvitiia Respubliki Kazakhstan do 2020 goda). The heterogeneity of legislative regulation of businesses is presented in the work of A. Chepurenko (Chepurenko, 2012) the relationship between regional growth and entrepreneurship in the work of foreign researchers M. Fritsch, P. Muller (Foray, 2009). The model of network interaction by E. Karayannis and D. Campbell (Carayannis, 2010) is aimed at intensifying cooperation between the structures “state-society-business-science”. Its use within the framework of partnership interaction will make it possible to intensify the process of transition to an innovation-oriented economy of businesses (Carayannis, 2009).

Methods

The authors examined the main indicators of the development of businesses according to the Bureau of National Statistics of the Republic of Kazakhstan, the Global Innovation Index (Kazakhstan ranking in the Global Innovation Index 2023). Monitoring the degree of innovative development of Kazakhstan on a global scale showed the presence of feedback between innovative inputs and results. An assessment of the indicators of innovative activity of enterprises of the Republic of Kazakhstan for 2013–2022 was carried out, a negative relationship was determined between investments in R&D and the resulting innovative products, as well as the average transformation relationship between the level of activity in the field of innovations and the share of innovative products in Kazakhstan's GDP. The authors proposed a model of interaction between

stakeholders of a regional digital technology platform. In preparing the article, general scientific, statistical, correlation and retrospective analysis methods were used.

Results

The main direction for improving the interaction of various modes of transport in these processes may be the creation of a network of automated control centers in order to compile and coordinate schedules for the use of mutual modes of transport.

However, there are doubts about the assessment of the company's contribution. Subsequently, the share of small and medium-sized businesses in the country's economy has significantly tripled. In all these cases, the revival of entrepreneurship is not the main reason. The year is 2008. This year, medium-sized enterprises accounted for 10.2% of GDP, although the share of this sector in the region has varied by 2% over the past three years. This sudden jump occurred with the suspension of trade inspections.

The next jump was recorded five years later. The share of small and medium-sized businesses has increased by almost 10 percentage points in just one year: finally 16.7% 2013 at 25.9% of GDP in 2014, as of December 2013. Government statistics began to use only the average number of employees per year. A year later, the admission criteria for small businesses were expanded from 50 to 100 people. Thus, the threshold for medium-sized enterprises was lowered from 50–250 to 100–250.

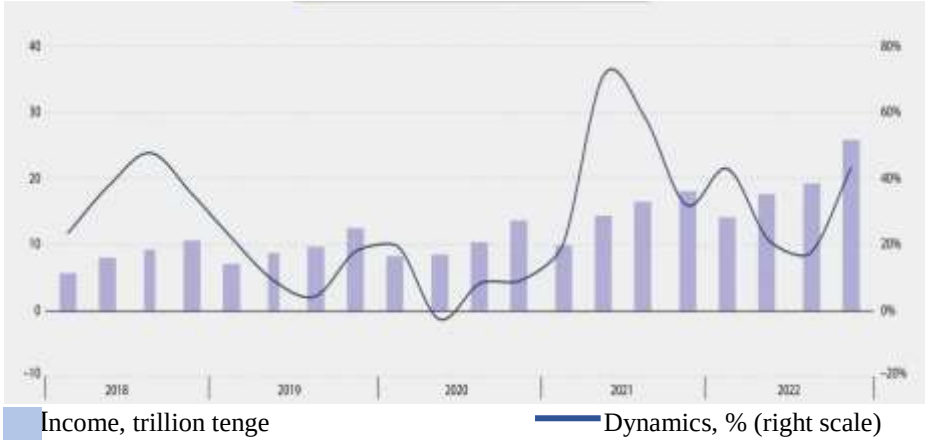

Figure 1. Income from sales of products and services of small companies and their dynamics

Note – source: CC MNE RK

The new method is shown in Figure 1. In the small and medium-sized business sector, most of which belongs to small businesses, the final growth was 6.4% 2013. In 2014, it was 16.1%. The average share of businesses began to decline: if in 2013, in 2009, this figure was 10.3%, and two years later — 4.9%. In other words, there has been a statistical redistribution of GDP in favor of small businesses.

The third jump was recorded in 2018, when calculations began due to the shadow economy. According to the results of the reporting year, the share of small and medium-sized businesses increased to 28.4%, although over the past two years, in 2016 and 2017. This year, it remained at the level of 26.8%. If the method is changed again (the classification criteria are the average annual income and interests of the founders of legal entities), this may lead to a redistribution of GDP in favor of medium-sized enterprises.

The authorities expect medium-sized enterprises to achieve high-quality economic growth. But now this part of the business is more like a large employer. In 2021, about 4.1 million people were employed in the small and medium-sized business sector, which is 18% more than in 2021. Thus, companies employ 36% of the economically active population.

In addition to enterprises, government statistics also include individual entrepreneurs, farmers, gardeners and medium-sized enterprises in agricultural enterprises. The total number of employees, which is at the end of 2022. The annual population is 4.1 million people, almost half of the population are individual entrepreneurs and farmers. In fact, we are talking about forced entrepreneurship — people are forced to open their own businesses because there are no other employment opportunities. And only 9% of employees and medium-sized enterprises work in medium-sized enterprises.

Industry analysis shows that most employees work in inefficient industries. Approximately 44% of retail workers are sole proprietors, and 26% are representatives of small businesses. On the contrary, most em-

ployees of medium-sized enterprises belong to the processing industry, which requires a certain level of experience and knowledge.

The level of investment activity of small businesses is very high. Let's take 2022 as an example. The total volume of investments in shares over these years amounted to almost 15.1 trillion tenge, of which more than half was invested by small businesses. But the problem is that investing in small businesses is characterized by low efficiency — about 74% of all small business investments are used for the construction of buildings and utilities. Only 22% of investments are accounted for by factors of production — equipment and technology. Knowing that most small businesses are engaged in trade and services, we are talking about the construction of shops, boutiques, car service stations, etc.

At first glance, the economic indicators of the small and medium-sized business sector have grown significantly. In recent years, small and medium-sized enterprises have achieved record profits. The incomes of small enterprises amount to 76.8 trillion tenge, while the incomes of medium-sized enterprises amount to about 16.4 trillion tenge. Compared to the results of 2021, increase of 30% in two parts.

The January events did not prevent the growth of economic indicators, business losses in Almaty alone amounted to 92 billion tenge (according to estimates of the Prosecutor General's Office of the Republic of Kazakhstan). In the field of small business, revenue from the sale of goods and services reached 14.2 trillion tenge, which was 43% higher than profit for the same period in 2021. The positive dynamics is also evident in the segmentation of medium-sized businesses enterprises: The company received 3.3 trillion tenge (+34%) in the first quarter of 2022.

A five-year retrospective audit showed that the profitability of small and medium-sized businesses (the ratio of net profit before tax and the ratio of sales of goods and services) has improved significantly. This number of small businesses increased by 12.1% compared to last year to 30% in 2018. A similar growth occurred in the intermediate business unit. At the end of last year, this figure was 10%, and at the end of last year it was 24%.

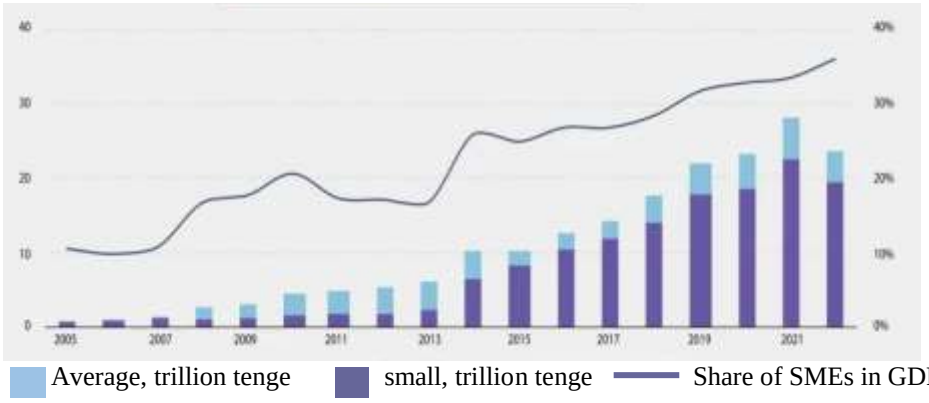

Figure 2. GVA of businesses

Note – source: CC MNE RK

But further analysis shows that so-called zombie companies are growing in the corporate sector. These are unprofitable companies that will not leave the market due to acquisitions or bankruptcies and will continue their activities. The secret of their flexibility lies in negative credit rates and excessive government support, which allow them to survive.

The National Bureau of Statistics publishes quarterly the number of unprofitable medium-sized enterprises (there is no such data in the small business sector). In 2022, during the year, there was an average of 783 non-profit organizations. A year ago, this number was even lower — 718 companies. The most profitable industries are manufacturing (accounting for 48% of the total manufacturing industry), science (46%), trade (41%), construction (40%) and logistics (39%).

The results of 2020. The Central Bank of the Republic of Kazakhstan has conducted an investigation into how many Kazakhstani companies have turned into zombies. The sample includes just over 3,000 large, medium and small enterprises, but it is assumed that their income from prepaid interest and taxes will not be zero by 2010 and 2020.

A comparison of the dynamics of production of small enterprises and loans issued to these enterprises showed that loans are not the main factor in the growth of production in this sector of the economy. From a logical point of view, the status of a company is influenced not by the amount of the loan, but by the effective demand for the goods and services that it produces. In addition, the lack of funds from consumers not only reduces the incomes of producers, but also reduces confidence in the latter. The demand for solvents can be provided by the economy in two ways: with the help of financial resources from abroad or by increasing the amount of value added generated by this economy. In addition, representatives of small and medium-sized businesses were asked if they would borrow money to start a business without a government program to support small and medium-sized businesses. The following answer is given (Fig. 3).

Figure 3. Demand for government programs to support SMEs

Note – compiled by the author

Even in the absence of such a program, more than half of the respondents would attribute business development, which is indicative of the program's ineffectiveness and potential for improvement (Fig. 3). Representatives of small and medium-sized firms who participated in the poll reported that 52.6 percent thought it was difficult to raise capital and 36 percent thought that loans to these types of businesses had higher interest rates. Nearly one-third of the respondents claimed that the impact of financial support for small and medium-sized businesses had been harmed by unfavorable occurrences including low funding, short loan periods, and corruption in financial institutions. More than 50% of respondents, in addition to the above-mentioned funds, noted improved financial support for small and medium-sized enterprises and lower interest rates on loans as possible and effective measures.

The decisions made by regional executive bodies will determine how successfully the strategy is carried out in Kazakhstan. This suggests that all authorities must be mobilized, particularly those in charge of carrying out the government's Business Roadmap 2020 strategy throughout various areas. Furthermore, it indicates that local leaders are unmotivated to assist government officials in carrying out national initiatives. According to this study, the existing system for supporting the work of local administrators who must carry out this strategy is ineffective at motivating people to take action and has little bearing on how well the state assists small and medium-sized businesses. Thus, field study findings are required to validate this theory (Moldagulova, 2017).

The Republic of Kazakhstan authorities (the Administration of the Entrepreneurial Zone), a sample of local administrative bodies in charge of carrying out national policy in the area of supporting small and medium-sized businesses, serve as the primary empirical foundation for our study. The survey was distributed in November 2016 to 158 representatives of local administrative bodies, as well as to 14 regions and two significant cities in the republic.

The study's findings allow for the following conclusions to be made. At the moment, government workers in charge of growing small and medium-sized businesses — particularly those in charge of developing lower-level businesses — are paid too little. A rise in the rate of financial contributions is required. The amount of the contribution fund for civil workers in charge of small- and medium-sized business growth can be determined by taking into account the pay scale of professionals who carry out comparable duties in prosperous non-governmental organizations. The amount of the fee should be decided individually based on each

employee's productivity and work pace. In our case, it depends on the effectiveness of the Business Roadmap 2020 implementation plan and the achievement of the set goals. The system of performance appraisal of personnel responsible for the development of small and medium-sized enterprises needs to be improved.

It is also advised that more employees be included in the public and local executive bodies' planning, coordinating, and adjusting of government plans. After all, they are more engaged in finding local solutions and have a deeper understanding of the requirements of the area.

Kazakhstan has nonetheless put in place a system of financial assistance for small and medium-sized businesses, which is made up of federations, state-owned companies, the parastatal sector, development agencies, foreign banks, mutual funds, and microfinance institutions. The creation of national plans, including the structures and instruments for financial assistance, has engaged prior national institutions as well as regional government players. At present, the nation is executing the second phase of collaboration, with the objective of guaranteeing the steady and equitable expansion of small and medium-sized businesses in the region and preserving both current and fresh long-term job prospects.

Modernizing the transportation and logistics infrastructure in the area is essential for Kazakhstan's processing and production development, since it is reliant on the transportation and logistics services' contribution to product selectivity and price. Taking into account the regional location, regional stations, warehouses, transport corridors, roads, railway stations, and airports, it is advised to apply Kazakhstan's experience in the field of transportation and logistics of new industrial facilities concurrently with the economy. The distance between factories and industrial facilities should not only meet the needs of the domestic market but also be export-oriented. Transport and logistics are used in the export of goods and products.

It should be mentioned that the “Business Roadmap 2020” is one of the initiatives to encourage and grow entrepreneurship through 2020. The growth of small and medium-sized businesses in certain cities and rural regions is the primary focus. The following forms of assistance are offered as part of industrial assistance to small and medium-sized businesses in high-priority economic sectors and the processing industry: long-term lease financing; partial loan guarantees from banks and development banks; interest subsidies on loans and financial leases from banks and leasing companies; development of industrial (production) infrastructure; and construction of industrial land.

Furthermore, in compliance with the December 29, 2016, decision of the Republic of Kazakhstan's Government, ESA 919 authorized a strategy for the growth of collective entrepreneurship and productive employment for the years 2017–2021. The program's objectives are to encourage citizens to participate in small- and medium-sized businesses' operations and to work in productive jobs. Offering microloans to urban and rural communities is one of the objectives. In order to encourage the growth of communal entrepreneurship, steps should be taken to expand the infrastructure, tools, and scope of microfinance through guarantees, microfinance, and seed funding. In the National Plan of Industrial and Innovative Development for 2015 and 2019. Innovative awards are given to innovative small and medium-sized businesses.

Discussions

As a result, the government gives financial assistance for SMEs particular consideration since it recognizes its significance and has established clear regulations governing the instruments and procedures used to provide public financial support. Local executive entities (akimats of Astana, Almaty, cities, and districts) and representatives of the quasi-public sector (Damu Foundation, subsidiaries of KazAgro JSC, NATTR JSC, etc.) are the operators responsible for providing financial support.

Furthermore, the data analysis shows that Kazakhstan has established a financial assistance infrastructure for small and medium-sized enterprises. It demonstrates positive outcomes, for instance, in terms of development organizations, subjects and tools of government assistance for SMEs, employment generated, increase in the proportion of SMEs in GDP, output, and the amount of SMEs in the nation as well as tax revenues to the budget. It should be mentioned that, in spite of the various government initiatives created and implemented by the Government of the Republic of Kazakhstan to promote and grow SMEs, the primary source of funding remains their own resources, according to SMEs' representatives.

The following are the primary obstacles to SME development when it comes to getting funding from official sources:

1) Lack of access to credit and financial resources on terms that meet their needs. The financing of trade and procurement operations is the primary emphasis of the STB lending policy with regard to SMEs. Loans from BWI have hefty interest rates. Furthermore, most startup SMEs lack collateral as banks often need security with a value twice as high as the loan amount.

2) Inadequate growth of the most significant area of the global economic system, microfinance, a separate financial market segment.

To use transport and logistics services when exporting Kazakhstani goods, it is necessary to develop the connection of transport and logistics infrastructure with production and industrial facilities. It should be noted that to export Kazakhstani finished products it is necessary to use transport and logistics infrastructure and geographical opportunities.

Conclusions

According to official statistics, medium-sized businesses far surpass the best indicators in recent years. In this case, official statistics are more reliable than small businesses. Perhaps the government should consider making business development a special priority and create subsidies for businesses. In addition, this support mechanism does not necessarily involve banking intermediation; in this case, since there is no need to pay for banking services, the final cost of the borrower's resources can be significantly reduced. At the same time, not many medium-sized companies can provide opportunities to save resources without using branch banking networks.

While some financial support outcomes have been attained, there are still reserves for growth and development, according to assessments and analyses of issues and development possibilities. Enhancing the productivity of small and medium-sized businesses in the industrial and agricultural sectors should receive particular attention because, as the analysis demonstrates, these businesses can be supported by a variety of tools and modules, and because the dynamic indicators of their development are declining annually, which surely points to institutional issues. However, to implement these plans, the country will have to forget about "feeding" the banking system, which is not easy, given the serious banking lobby.

Therefore, it is essential to make good use of economic and social resources and possibilities in order to improve the region's capacity for logistics and transportation. The establishment of a competitive transportation and logistics infrastructure throughout the nation will guarantee the nation's socioeconomic progress. Strengthening the nation's transport and logistics capabilities in terms of technical modernization of transport and enhancing the quality of logistics is imperative in light of global issues including digitalization, epidemics, and geopolitical crises. The aim of this work is to carry out a comprehensive analysis to evaluate the region's potential for transportation and logistics while accounting for Kazakhstan's environmental development and digitalization indices.

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Көлік логистикасы бизнесті дамытудың драйвері ретінде

Аңдатпа:

Мақсаты: Зерттеудің мақсаты ашық және өзін-өзі қамтамасыз ететін нарықтық экономиканы құру, мұнда көлік логистикасын қалыптастыруда бизнесті дамыту негізгі драйверлердің бірі болуы тиіс. Зерттеу әдістемесі логистиканың инновациялық дамуындағы бизнестің рөлін көрсетуге және оның дамуының негізгі көрсеткіштерінің динамикасын талдауға негізделген.

Әдісі: Жалпы ғылыми, статистикалық, корреляциялық, ретроспективті талдау әдістері пайдаланылған.

Қорытынды: Мемлекет экономиканың жаңа драйвері ретінде бизнеске сенім артуда. Қазіргі уақытта бизнестің дамуына кедергі келтіретін көптеген факторлар бар. Ең күрделі мәселелердің бірі — логистикалық кәсіпорындардың көпшілігінде өздерінің инвестициялық және келісімшарттық қажеттіліктерін қанағаттандыру үшін жеткілікті қаржылық ресурстары жоқ. Бұл ретте жергілікті жағдайларға бейімделмей, бизнесті қолдау бойынша дамыған елдердің тәжірибесін көшіру үрдісі сақталуда. Авторлар Қазақстанда бизнесті қолдау бағдарламаларының тиімділігін арттыруға көмектесетін бірқатар бағыттарды ұсынған. Логистикалық арнайы экономикалық аймақтар мемлекет үшін, ең алдымен, ел ішінде жүк ағындарын қалыптастырудың негізі ретінде, сондай-ақ көлік-логистикалық кешендердің интеграцияланған желісін құру үшін маңызды.

Тұжырымдама: Экономикалық өсуді қалыптастыру жағдайында шағын және орта бизнес субъектілерінің инновациялық қызметін жандандыру үшін өңірлік цифрлық технологиялық платформа стейкхолдерлерінің өзара іс-қимыл моделі ұсынылды. Нәтижелерді мемлекеттік құрылымдар, жоғары мектеп өкілдері, жұртшылық ресурстарға негізделген экономикадан инновациялық бағдарланған экономикаға көшуді қамтамасыз ету үшін пайдалана алады.

Кілт сөздер: қаржыландыру, бизнес, Қазақстан Дүниежүзілік банкі, кәсіпкерлік, тиімділік көрсеткіші, экономикалық драйверлер, инновациялық экономика. көлік жүйесі, логистика.

Б.С. Утегулова, Г.В. Муратбекова, И.Ж. Асильбекова, Н.Д. Адилова, Д.К. Саржанов

Логистика транспортной сферы как драйвер развития бизнеса

Аннотация:

Цель: Целью исследования является создание открытой рыночной экономики, где одним из основных драйверов должно стать развитие бизнеса в сфере формирования транспортной логистики. Методика исследования основана на представлении роли бизнеса в инновационном развитии логистики и анализе динамики основных показателей ее развития.

Методы: Общенаучные, статистические, корреляционные, ретроспективные методы анализа.

Результаты: Государство рассчитывает на бизнес как на новый драйвер экономики. В настоящее время существует множество факторов, сдерживающих развитие бизнеса. Одной из наиболее сложных проблем является то, что большинство логистических предприятий не имеют достаточных финансовых ресурсов для удовлетворения собственных инвестиционных и контрактных потребностей. При этом сохраняется тенденция копирования опыта развитых стран по поддержке бизнеса без адаптации к местным условиям. Авторами предложен ряд направлений, работа по которым может помочь повысить эффективность программ поддержки бизнеса в Казахстане. Логистические особые экономические зоны важны для государства, прежде всего, как основа формирования грузопотоков внутри страны, а также для создания интегрированной сети транспортно-логистических комплексов.

Выводы: В условиях формирования экономического роста предложена модель взаимодействия стейкхолдеров региональной цифровой технологической платформы для активизации инновационной деятельности субъектов малого и среднего бизнеса. Результаты могут быть использованы государственными структурами, представителями высшей школы, общественности для обеспечения перехода от ресурсной к инновационно ориентированной экономике.

Ключевые слова: финансирование, бизнес, Всемирный Банк Казахстана, предпринимательство, показатель эффективности, экономические драйверы, инновационная экономика, транспортная система, логистика.

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Demoeconomics: the interconnection of water resources and demoethical values

Abstract

Object: Application of conceptual analysis within the framework of the concept of demoeconomics to study the relationship of water resources with the values of "Demoethics" as a tool for society sustainable development.

Methods: This work uses a systematic approach to research, which includes a wide variety of techniques, such as the method of logical synthesis, goal setting, goal decomposition, etc.

Findings: The implementation of the demoeconomics concept, based on the demoethics values in the context of "spirituality and morality", "rationality", "responsibility", "justice" and "security" contributes to the effective provision of rational use of water resources and basic needs of the population. The results of the Concept are aimed at achieving ethical rationality. Harmonizing with the Sustainable Development Goals (SDG), they not only promote economic growth and meet the needs of society, but also create the preconditions for reducing socio-economic inequality, increasing economic responsibility and respect for cultural and spiritual values.

Conclusions: The sustainability of ethical rationality requires the transformation of the values of members of society when using natural resources based on the concept of demo-economics, based on the values of demo-ethics in the context of "spirituality and morality", "responsibility", "justice", "rationality" and "security", which can provide a balance between economic, social and environmental needs of humanity, to the manifestation of moral behavior in any life situation, contributing to the sustainability of the quality of life of members of society and the competitiveness of the region.

Keywords: sustainable development goals (SDG), sustainable development of society, water resources, demo-economics, demoethical values, "spirituality and morality", "responsibility", "justice", "rationality", "security", ethical rationality, quality of life.

Introduction

Water is of paramount importance for the sustainable realization of social and economic development, including energy and food production, healthy ecosystems and harmonious human development, as a link between the environment and society.

The problem of changes in the water cycle requires scientific justification because there is uncertainty in the management and use of water resources (Milly et al, 2008; Sedláček & Knutti, 2014), developing and developed countries, cultural, social, political and ongoing technological changes (Swyngedouw, 2009; Linton & Budds, 2014; Schmidt, 2014).

Currently, the United Nations identifies problems of water resource consumption (Water, 2023):

– more than 70% of fresh water is used in agriculture;

– reuse of wastewater not treated to acceptable standards, about 80%;

– increase in child mortality associated with poor quality of drinking water (297,000 people);

– a significant part of the planet's population is not provided with the necessary volumes of water resources (more than 2 billion people);

– about 2 billion people in the world use health care facilities that experience problems with water supply.

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Currently, issues of water use are becoming increasingly relevant, requiring solutions not only at the level of individual states that are not provided with water resources, but also at the UN. One such answer to solving emerging issues is the use of demoethics values. The research proposed in this article is based on information that was presented at the 14th International Exergy and Environment Symposium (IEEES) conference. In which premises were presented about the interaction between demoethical values and energy resources (Zhanbayev et al., 2024).

Literature Review

According to studies conducted in the countries of Central Asia (Vinokurov et al, 2022; Vinokurov et al., 2023) temperatures are rising faster in the Central Asian region than on average on the planet. This negative effect leads to problems such as the reduction of glaciers, which are the basis for the flow of water into the Aral Sea. By 2050, droughts in this region could cause damage in the amount of 1.3% of GDP per year for countries in this region. Moreover, this process could lead to the emergence of about 5 million "climate" migrants in Central Asia (Zhanbayev et al., 2023b). This region also faces problems of inefficient use of water in agriculture, industry, and the environmental consequences of inefficient use.

One of the main problems of the region is the sharp drying of the Aral Sea (Vinokurov et al., 2023). This problem in Central Asia leads to global anthropogenic causes of climate change.

Scientists (Alibekov & Alibekova, 2007; Vinokurov et al., 2023) believe that the exposure of the bottom leads to the appearance of a fairly large area containing harmful substances (pesticides, salts, etc.) that are harmful to humans and the environment. In addition, the melting of snow cover and glaciers is considered to be one of the main factors influencing climate change in the region (including the increase in desert areas) (Zhanbayev et al., 2023b).

The volume of glaciers in Central Asia has decreased by 30% over the past 50 years (Vinokurov et al, 2022). Over the past 60 years, up to 30% of the glaciers in the Pamirs and Tien Shan have melted, and the average rate of glacier melting ranges from 0.2 to 1% per year (Diebold, 2014).

Thus, based on these data, it should be noted that there is an increase in anthropogenic load as a result of extensive environmental management, as well as the emergence of various socio-ecological problems. The President of the Republic of Kazakhstan considers it necessary to create a water policy aimed at the rational use of water resources, on which the well-being and sustainable development of the region depends (Zhanbayev et al., 2023b). The behavior and actions of society members play an important role in the use of water resources and conservation of the environment.

By adopting ethical practices and behavior, we can contribute to water conservation and promote its sustainable use. Water conservation ethics involves making conscious decisions that prioritize responsible consumption of this precious resource.

In recent decades, the world has seen a growing recognition of the ethical implications of our actions on the environment. This has led to the application of ethical standards in government policies as well as in the practice of human behavior towards more sustainable practices. By adopting an ethical approach to water conservation, we can address the challenges associated with increasing water scarcity in the world.

In recent decades, ethical research of an applied nature has become increasingly relevant, which requires a normative and philosophical view to interpret phenomena, in the context of the medical field (Fengqing, 2016; Plöckinger & Auga, 2022), education (Shutaleva et al., 2020) existence information in the media space (Wang, 2020; Podara et al., 2022), political field (Nicholson, 1985; Loginov, 2019), environmental protection (Li et al., 2022; Xu et al., 2022). Also, other studies are conducted in the direction of the influence of ethical leadership on employees' intention to leave the organization (Athanasiadou et al., 2023), the impact of technology on ethics (Shakib & Layton, 2014). We believe that without ethical foundations and principles it is impossible to ensure the sustainability of society. However, when studying the scientific works carried out to date, no studies were identified on the relationship between water resources and demoethics values.

In this study, we will take a deeper look at the concept of demoethical principles, presenting them as fundamental components of people-centered ethics.

The values of demoethics combine the fundamental principles of democracy and ethics to create an integrated ethical framework.

Democracy is now characterized by the principles of equality, freedom and political participation. Ethics is a set of moral principles that define the "right" and "wrong" behavior of a person and his interaction with the environment in accordance with the cultural and ethnic characteristics of a country or region. Com-

bining them, demoethical principles and values put people at the forefront, ensuring collective ethical decision-making, individual autonomy and social harmony.

A demoethical approach to water conservation recognizes people as stewards of the environment and emphasizes that human life and well-being depend on the stability of ecosystems. This means making decisions that will take into account not only the interests of those living today, but also the needs of future generations. These decisions should be aimed at preserving and supporting all ecosystems associated with water resources.

One of the important democratic values aimed at preserving water resources is justice, that is, ensuring equal access to fresh water for all people, regardless of their socio-economic status.

In addition to the value of justice, it is necessary to note the principle of sustainability, which is aimed at caring for water resources and preserving the ecosystems that ensure their availability for long-term use by both our generation and the next.

The value of demoethics "responsibility" involves raising the level of awareness among members of society about the importance and value of water resources, as well as the consequences of their irresponsible use. In this way, we can influence the behavior of members of society and instill in them a sense of responsibility towards water resources.

As a result of applying this concept, SDG 6 will be achieved.

Based on the above, it is necessary to note the importance of the interdisciplinary approach in this study, which considers, within the framework of the concept of demoeconomics, the relationship between water resources and the values of demoethics, and explains how their interaction provides more effective solutions to complex sustainability problems, noting the importance of human behavior and actions playing a key role, role in environmental protection, including the use of water resources.

Methods

Currently, the problem of providing water to agriculture and other sectors of the economy is growing. It is also becoming problematic to provide clean drinking water to the population due to the growing population of the planet. We can consider the solution to this problem in the context of the use of integrated tools of demoeconomics based on demoethical values. Examining the Sustainable Development Goals (SDG), in particular SDG 13 (issues related to climate action and its impacts), SDG 6 (issues related to access to water and sanitation), SDG 7 (issues access to clean and affordable energy), SDG 3 (healthy lives and well-being), SDG 11 (resilient cities and human settlements that are inclusive and safe), We have outlined our recommendations and suggested some strategies that are applicable to defining the relationship between water resources and demo-ethical issues of sustainable development. Essential points of the recommendations are aimed at increasing the parties' interest in the results of decision-making processes.

Results

To achieve SDG 3 (healthy lifestyles and promote well-being), SDG 6 (ensure access to fresh water and decent sanitation for all), SDG 13 (climate change), SDG 7 (clean and affordable energy), SDG 11 (to make cities and human settlements inclusive, safe, resilient and sustainable) measures are proposed to develop the demoeconomy component based on demoethical values.

When introducing into society and observing the principles of demoeconomics based on demoethical values, the implementation of the interconnections of the "water-food-energy-ecosystems" and "water-soil-waste" systems will contribute to the correlation of various sectors of the economy, which, in turn, would make it possible to achieve consistency in the efficient use of resources. In addition, we note the increasing importance of the role of the environmental situation on the quality of life (Fig.).

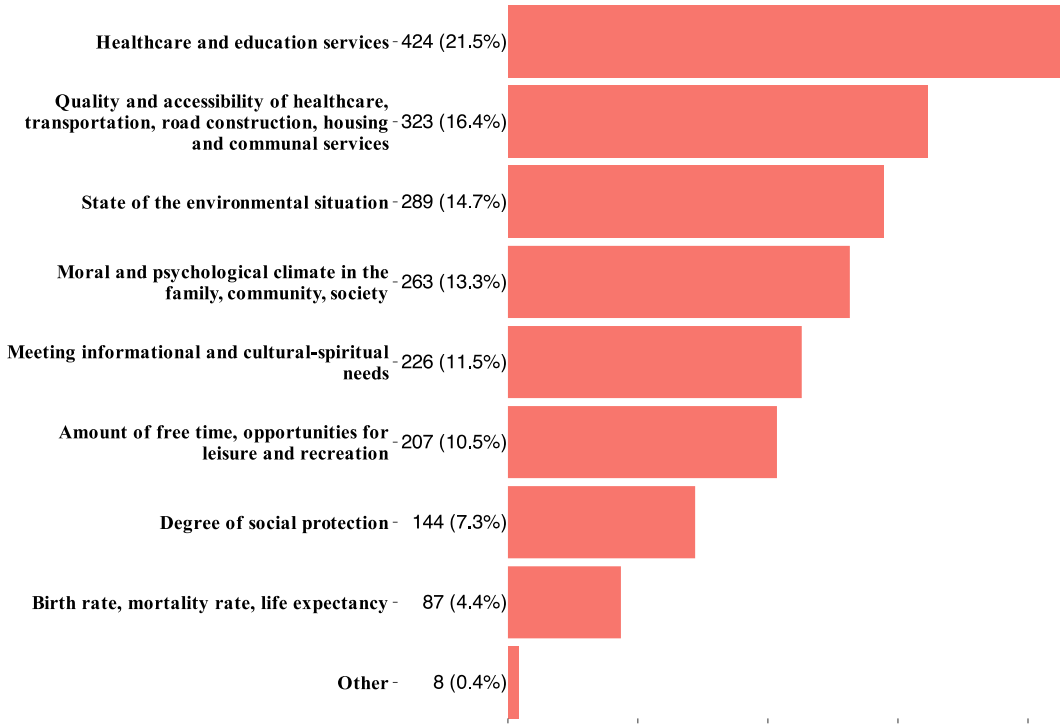

Figure. What factors of the quality of life of the population should the state pay attention to? (Kazakhstan)
Note – compiled by the authors

According to Figure shown here, it can be noted that the key factors in the quality of life of the population are: health care and education services — 21.51%; quality and accessibility of medicine, transport, road construction, housing and communal services — 16.39%; state of the environmental situation — 14.66%; moral and psychological climate in the family, team, society — 13.34%, satisfaction of informational and cultural-spiritual needs — 11.47%. More in-depth research on these indicators will be presented step by step in our next empirical studies. The proposed study examines indicators that reflect the ever-increasing importance of socio-ethical issues and the level of environmental conditions for improving the quality of life. Moreover, the rational and careful use of water is currently one of the most important problems, the solution of which requires the interaction of all inhabitants of the Earth, since water is the most important element of sustainable development.

This paper examines the need and possibility of discussing problems associated with environmental degradation due to resource depletion, on the one hand, and increased consumption, on the other hand. The desire of many countries to move towards a cleaner environment to ensure sustainable economic growth is also taken into account. For these purposes, the study applies the concept of demoeconomics, based on demoethical values.

It should be noted that, from our point of view, the main goal of sustainable development is to achieve a balanced development of technological and ethical rationalities in society, which will be aimed at increasing the economic and environmental competitiveness of a region or country and improving the quality of life of the population.

The proposed concept of the principles and values of demoethics will allow each member of society to adapt to a variety of possible negative consequences that arise in the conditions of the “emerging” climate reality, which is emerging at the current time and affects issues of sustainable development of states. The use of stabilization tools will allow influencing this process in order to level out possible unfavorable scenarios for the development of the situation.

The approach of the concept of demoethics values to the issue of forming a virtuous person, a person — the ruler of the city through such concepts as “security”, “rationality”, “spirituality”, “responsibility”, “morality”, will allow finding a balance between various human needs (economic, social and environmental), as well as to shape his moral behavior in any life situation.

It is worth noting the need to prepare citizens for possible negative events and consequences through such qualities of demoethics as honest work, education, knowledge. As a result of this, the synthesis of education, upbringing, a developed mind, the acquisition of knowledge, scientific principles and honest work will play a special role in the process of sustainable development, including in the issue of careful management of water resources.

Prospects for Demoeconomics based on Demoethical Values

As some researchers note (Frederiks et al., 2015), in order to understand and determine the demand on the part of each individual, environmental behavior, attitudes towards water and energy consumption should be highlighted. This approach takes into account the freedom of choice of a person who is most dependent on himself.

The norm activation model proposed by others (Abrahamse & Steg, 2009) considers the important element of people's conformity to social norms, aspects of freedom of choice and personal responsibility for decision making.

One of the relevant aspects of this study is the fact that research is increasingly recognizing the gap between attitudes and behavior in environmental decision making (Russell & Fielding, 2010). However, the rational choice model we are developing has an impact on policy and economic aspects in ecology. This point of view is associated with the information deficit model. Its main idea is that to make rational choices, people need information that would allow them to make the right decision. The proposed approach is important because it allows us to identify the forward movement of a person aimed at changing behavior, examine the routine and traditions of resource use (Browne et al., 2013), and also take into account the "rebound effect" (Herring, 2006). For example, if a person is motivated to take environmental action by values rather than money, the rebound effect may be smaller (Kaklamanou et al., 2015).

To address the issue of economic, environmental, social and technological uncertainties, a "demoeconomics" component is proposed, based on the premises of demoethics. By demoethics we understand a section of ethics aimed at revealing general ideas about the essence of the world and man's place in it based on the ideas and principles of sustainable development of society.

The theoretical foundations of demoethics — such qualities as education, reason, knowledge, science, honest work — were developed on the principles proposed by Abu Nasr al-Farabi, A. Kunanbaeva, Y. Balasaguni. It is them who ensure today in the methodology of demoethics the effective implementation of the best socially sustainable available technologies (BAT) (Zhanbayev et al., 2023a).

The concept of demoeconomics will be implemented taking into account changes in supply and demand, which are constantly complicated by economic, environmental, social and technological uncertainties in the energy sector, as well as in the use of water resources. The concept of demoeconomics, which is based on such principles and values of demoethics as "spirituality and morality", "responsibility", "justice", "rationality" and "security", helps to form in a person (a virtuous person, a city ruler) the foundations of moral behavior in any life situation.

Ultimately, every member of society must demonstrate sustainable and moral behavior, which will lead to an improvement in the quality of life of the population and the competitiveness of the region.

The role of demoethical values in the issue of water resource use is associated with an understanding of the importance of caring for nature and compliance with the ethical principles of environmental conservation.

The value "spirituality and morality" in this case includes:

1. Awareness by every member of society of the value of water resources; the ability to provide everyone with access to clean drinking water;

2. Cooperation at all levels for the conservation and more efficient use of water resources;

3. Careful attitude towards water, reducing its consumption, including by reducing the level of pollution.

The value of "responsibility" includes:

1. Compliance with legislation, that is, rules and laws governing the use and protection of water resources;

2. Economic aspects, since careful and rational use of water and water resources by humans contributes to economic development;

3. Sustainability, that is, the preservation of water resource ecosystems, maintaining ecological balance in them in order to enable future generations to use this resource necessary for survival;

4. Conscious consumption of water resources. People need to be aware of the amount of water they use and make efforts to reduce it — by installing efficient use systems, recycling wastewater, and other measures;

5. Cooperation and partnership in the field of water resources of all stakeholders. People should take part in public discussions on these issues, cooperate with local water supply authorities, environmental organizations and other structures to jointly develop and implement programs for the conservation of water resources in their territory.

The value of "equity" in relation to water resources.

Scientists note (Khaneiki et al., 2023) the importance of understanding the issue of equitable distribution of water in individual regions.

Iran's water mission is an example of how dams and canals benefit sectors with high water demand. However, upon studying the available data and scientific works, it was revealed that this decision has a negative impact on tourism, as it harms the natural components of the country. A study by Majid Labbaf Khaneiki concludes that the decline in tourism is exacerbating social inequality and instability.

Cameron Fioret (Fioret, 2023) notes the need to advocate for water justice as a social-ecological issue. Note that there is a deeper meaning to be hidden here, namely, an indication of moral and political damage, which is a sign of the failure of democracy. Thus, water injustice is an indicator of a flawed structure.

Understanding and awareness of the principles described above will allow society to find approaches to sustainable management of water resources, and, as a result of these actions, preserve clean water and nature in general.

In achieving the Sustainable Development Goals (SDG), water resources play a very important role, as they are of great importance for addressing issues of human resource development, ensuring human health and well-being, and eradicating poverty and hunger.

Water resources are inextricably linked with other sectors of the economy, such as energy, food security, nutrition, and are also necessary for achieving other social and environmental goals.

The value of "rationality" plays the major role in the management and conservation of water resources.

Water is one of the important substances on the planet, which supports life, the very existence of all living things. For humans, water is also an important product, since it is used not only for simple maintenance of life, but humans use it for the development of industry, agriculture, that is, the economy that we currently have. Planet earth is endowed with a huge amount of water resources, but people currently cannot use all the water for their consumption, only fresh water. Each region has different amounts of water resources, but they are also largely negatively impacted by industry in the form of toxic pollution. Therefore, as noted in a study on water scarcity (Hasanova, 2014), it is necessary to develop methods and train people in the careful and rational use of water.

The Johannesburg Declaration on Sustainable Development of 2002 (Johannesburg Declaration..., 2002) specifically noted that water and marine pollution continues to deprive millions of people of a decent life (paragraph 13). In this regard, in the Implementation Plan for the World Summit..., 2002, adopted there in Johannesburg in 2002, the central issue was devoted to the careful and efficient use and redistribution of drinking water, the ability of the population to have access to sanitation services, improving the water resources management system.

Without targeted actions by society, the state and all countries as a whole to protect and rationally use water resources, progress towards sustainable development is impossible. Water resources in the first quarter of the 21st century must, more than ever before, be considered, first of all, from the perspective of sustainable development.

Former UN Secretary General Kofi Annan, at the opening of the International Decade for Action "Water for Life" in 2005, rightly noted that the world's water resources are "the hope for survival and achieving sustainable development in the 21st century" (International decade for Action "Water for life", 2005).

The value of "security" plays an important role in the management and conservation of water resources. The concept of security includes a huge number of categories that affect human life. Water security is of utmost importance and affects the quality of life of every person, as it depends on access to clean and fresh water.

Many industries and agriculture also depend on water.

Addressing water security issues helps restore social justice and strengthen measures to protect nature. However, in the modern world there is a large number of unresolved issues regarding the possession of water

as an irreplaceable resource. To identify and solve problems arising in the field of water security, cooperation between regions is necessary. This is the only way to improve the economic and environmental situation in the region, restore social justice and set a course for sustainable development of society.

Thus, "demoeconomics" is a section of economics that, based on ideas about the sustainable development of society, considers issues of improving the quality of life of the population through freedom of social choice, reasonable consumption and conscious restrictions, taking into account the achievements of the digital and green economy.

The main idea of demoeconomics is that economic and social processes should take into account the interests and needs of the population, and not just the economic and political elites. The key factors in demoeconomics are environmental sustainability, social justice and innovative development potential.

Demoeconomics attaches great importance to the digital economy, since it is the basis of modern development and plays an increasingly important role in public life every day.

The digital economy opens up new opportunities for economic and social development, improves the efficiency of production and consumption, and also helps resolve issues of rational use of water resources.

Green economy is one of the important areas of demoeconomics. It is a green economy in which energy and resources are used in the most efficient and environmentally friendly way. The goal of the green economy is not only to improve the quality of life of the population and ensure sustainable development of society, but also to preserve natural resources.

Demoeconomics provides an opportunity to create more flexible and adaptive economic and social systems that can adequately respond to the changes and challenges of the modern world.

One of the main principles of demoeconomics is the participation of the population in decision-making processes related to the economy and social sphere. This principle can be implemented in various forms — from constant exchange of views and consultations to direct participation of the population in decision-making through various mechanisms of civil participation.

Overall, demoeconomics can provide new impetus to economic development and the creation of a fairer and more sustainable society as a whole. It provides an opportunity to create new models of economic development that will take into account the interests of both all segments of the population and nature.

Let us note that based on what was described above, sustainable development is understood as a model of the existence and development of society, which includes demoethical, demoeconomic, demographic, and democratic components of the development strategy of the state and country. The main goal is to achieve a balanced development of technological and ethical rationalities in society, since they are the main factors in improving the quality of life of the country's population and increasing the competitiveness of the region.

Conclusions

The concept of demoeconomics, based on demoethical values such as "spirituality and morality", "responsibility", "justice", "rationality" and "security", opens the way to the emergence of a new way of thinking that is not limited only to the water sectors of the economy. In recent years, approaches such as Demoethics "demographic processes – climate change – energy migration – water scarcity" and "Green economy" – environmental compliance – corporate social responsibility (CSR) have also been described, which were developed as part of our research on modeling of socio-economic systems within the framework of sustainable development.

Thus, we believe that every member of society should possess the values of "Demoethics" and be aware of how important water is to the life of humanity. As a result of the application of the new values of "Demoethics," a new way of thinking arises for present and future generations, which allows us to understand the role of natural resources for humans and nature.

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Р.А. Жанбаев, Д.Г. Максимов, С.С. Сагинтаева, А.Е. Маденова

Демоэкономика: су ресурстары мен демоэтикалық құндылықтардың өзара байланысы

Аңдатпа:

Мақсаты: Қоғамның тұрақты даму құралы ретінде демоэтика құндылықтарымен су ресурстарының байланысын зерттеу үшін демоэкономика тұжырымдамасы шеңберінде тұжырымдамалық талдауды қолдану.

Әдісі: Мақалада логикалық синтез әдісі, мақсат қою, мақсатты декомпозиция және т.б. сияқты көптеген әдістерді қамтитын зерттеудің жүйелі тәсілі қолданылды.

Нәтижесі: «Руханилық пен адамгершілік», «ұтымдылық», «жауапкершілік», «әділдік» және «қауіпсіздік» ұғымдары контексінде демоэтика құндылықтарына негізделген демоэкономика тұжырымдамасын іске асыру су ресурстарын және халықтың базалық қажеттіліктерін ұтымды пайдалануды тиімді қамтамасыз етуге ықпал етеді. Тұжырымдаманың нәтижелері этикалық ұтымдылыққа қол жеткізуге бағытталған. Тұрақты даму мақсаттарымен үйлестіре отырып, олар экономикалық өсуге және қоғамның қажеттіліктерін қамтамасыз етуге ықпал етіп қана қоймайды, сонымен қатар әлеуметтік-экономикалық теңсіздікті азайтуға, экономикалық жауапкершіліктің өсуіне және мәдени-рухани құндылықтарға құрметпен қарауға алғышарттар жасайды.

Қорытынды: Этикалық рационалдылықтың тұрақтылығы адамзаттың экономикалық, әлеуметтік және экологиялық қажеттіліктері арасындағы тепе-теңдікті қамтамасыз ететін, қоғам мүшелерінің өмір сүру сапасын және өңірдің бәсекеге қабілеттілігін арттыруға мүмкіндік жасайтын, кез келген өмірлік жағдайда моральдық мінез-құлықтың көрінуіне ықпал ететін «руханилық пен адамгершілік», «жауапкершілік», «әділдік», «ұтымдылық» және «қауіпсіздік» контексіндегі демоэтика құндылықтарына негізделген демоэкономика тұжырымдамасы негізінде табиғи ресурстарды пайдалану кезінде қоғам мүшелерінің құндылықтарын трансформациялауды талап етеді.

Кілт сөздер: тұрақты даму мақсаттары, қоғамның тұрақты дамуы, су ресурстары, демоэкономика, демоэтикалық құндылықтар, «руханилық пен адамгершілік», «жауапкершілік», «әділдік», «рационалдылық», «қауіпсіздік», этикалық рационалдылық, өмір сапасы.

Р.А. Жанбаев, Д.Г. Максимов, С.С. Сагинтаева, А.Е. Маденова

Демоэкономика: взаимосвязь водных ресурсов и демоэтических ценностей

Аннотация:

Цель: Применение концептуального анализа в рамках концепции демоэкономики для изучения взаимосвязи водных ресурсов с ценностями демоэтики как инструмент устойчивого развития общества.

Методы: В статье использован системный подход к исследованию, включающий в себя самые разнообразные методики, такие как метод логического синтеза, целеполагания, декомпозиции целей и т.д.

Результаты: Реализация Концепции демоэкономики, основанной на ценностях демоэтики в контексте понятий «духовность и нравственность», «рациональность», «ответственность», «справедливость» и «безопасность», способствует эффективному обеспечению рационального использования водных ресурсов и базовых потребностей населения. Результаты Концепции направлены на достижение этической рациональности. Гармонизируя с целями устойчивого развития, они не только способствуют экономическому росту и обеспечению потребностей социума, но и создают предпосылки для уменьшения социально-экономического неравенства, роста экономической ответственности и уважительного отношения к культурно-духовным ценностям.

Выводы: Устойчивость этической рациональности требует трансформации ценностей членов общества при использовании природных ресурсов на основе концепции демоэкономики, базируемой на ценностях демоэтики в контексте понятий «духовность и нравственность», «ответственность», «справедливость», «рациональность» и «безопасность», которые могут обеспечить баланс между экономическими, социальными и экологическими потребностями человечества и проявлениями нравственного поведения в любой жизненной ситуации, способствуя устойчивости качества жизни членов общества и конкурентоспособности региона.

Ключевые слова: цели устойчивого развития, устойчивое развитие общества, водные ресурсы, демоэкономика, демоэтические ценности, понятия «духовность и нравственность», «ответственность», «справедливость», «рациональность», «безопасность», этическая рациональность, качество жизни.

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Modern tools for managing the climate economy of Kazakhstan

Abstract

Object: The purpose of the article is to examine the effects of climate change and propose appropriate measures to reduce emissions.

Methods: The article used systematic, analytical and statistical methods to manage the climate economy. The research methodology draws on qualitative research into current and evolving issues related to the impacts of climate change. To systematize the methods, official statistical data from the Global Change Data Laboratory and the Bureau of National Statistics of the Republic of Kazakhstan were used.

Findings: The article analyzes per capita carbon dioxide emissions from fossil fuels and industry, as well as the dynamics of costs and investments in air and climate protection. According to the authors, government policy to ensure reliable energy to achieve sustainable development goals cannot be achieved without taking into account environmental requirements. Reliance on low-cost, carbon-intensive energy solutions while ignoring environmental issues makes it difficult for the country to reduce its carbon emissions. Climate economics must focus on lean production.

Conclusions: Modern tools for managing the climate economy should be aimed at effective planning for the use of natural resources, the use of digital technologies to track and manage energy, and investing in enterprises involved in the disposal of food waste.

Keywords: natural resources, emissions, climate economics, management, ecology, investment.

Introduction

Currently, climate change is one of the most serious problems in the world. Climate risks can have serious and immediate impacts on sectors of the economy, financial markets and households. Many countries have already taken on the task of taking additional measures to combat climate change. However, there are significant unresolved issues in the development and implementation of climate policy, especially regarding timing, size and expected impacts.

The World Bank's country report on climate and development for Kazakhstan (2022) shows that actions to combat climate change will complement and accelerate the country's economic transformation, as well as benefit the development region. The World Bank has proposed measures to introduce renewable energy sources due to the wear and tear of devices in the electricity sector.

We all know that one of the main factors of climate change is the high level of gas emissions resulting from the use of fossil fuels. As economies have grown over the past few decades, energy consumption has increased and environmental degradation has become widespread. Against the backdrop of rising global temperatures, loss of animals and plants, deforestation and increased air and water pollution, it is urgently necessary to increase environmental sustainability and combat climate change.

Therefore, it is possible to obtain results by developing and implementing turning national adaptation strategies related to the management of the climate economy. However, there are currently no effective mechanisms that can provide support in the form of technology, capital and managerial expertise to facilitate the development and expansion of climate policy. Therefore, the study of modern tools for managing the climate economy is becoming relevant.

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Literature Review

In recent years, there has been a significant increase in scientific research in the field of climate change economics, mainly related to energy markets and environmental impacts. The new areas of research are mainly related to policies focused on Sustainable Development, Natural Resource Management and environmental models.

Many scientists have studied the relationship of the climate economy with other processes. For example, Yue Xi et al. (2023) has proven that climate policy changes will be influenced by renewable energy consumption in the future, and scientists warn that "attention should be paid to the risks of climate change in periods related to each type of energy". Gricelda Herrera-Franco and other researchers (2023) analyzed the interactions between water, energy, food communication and climate change, covering the basis of policy, sustainability, management and decision-making processes. Najia Saqib (2022), on the other hand, has studied the causal relationship between the use of renewable energies, economic growth and the environment. Xia Chen and other scientists (2021) found that the impact of climate change on clean energy investment varies significantly in countries with different levels of clean energy investment.

Some economists directly associate Climate Change with the use of Natural Resources. Brian W. Miller et al. (2023) considered resource management issues in the context of climate change. In their opinion, these issues are not simple: "a high degree of uncertainty interferes with our ability to predict environmental trajectories with confidence, and the resources affected often contain multiple management patterns or are subject to competing management goals". According to George Halkos and Shunsuke Managi (2023), environmental economics evaluates the benefits of the environment, while Resource Economics analyzes the allocation of scarce resources.

Of course, one of the greenhouse gases affecting climate change is carbon dioxide emissions. Petterson Molina Vale (2016) addressed the issues of Inter-time discounting and emission reduction. In his opinion, emissions research should be related to the economy of insurance against catastrophic risks, trade and climate economics, as well as the economy of adaptation to climate change. Balint T. et al. (2017) notes that the energy sector is the main producer of carbon dioxide emissions, so it plays a fundamental role in the transition to a low-carbon economy.

Failure to manage the climate economy effectively can have various environmental consequences. Najia Saqib et al (2023) has proven that the link between technological innovation, economic growth, renewable energy sources and environmental footprint has important policy implications for environmental sustainability. Mahfuz Kabir et al. (2022) studied the environmental risks and global warming resulting from the predominant use of fossil fuels. In their opinion, with the total supply of greenhouse gases, there is a need to use renewable energy sources to eliminate the negative impact on ecology, the environment and the atmosphere.

Thus, the climate economy has become a more integrated science of Natural Resources and their productivity and sustainable development. The scientific works of the researchers analyzed the interactions between water, energy, food communication and climate change, covering the basis of the processes of policy, sustainability, management and decision-making of the climate economy. At the same time, the issues of effective use of Natural Resources, the impact of greenhouse gas emissions on ecology, the environment and the atmosphere are analyzed.

Methods

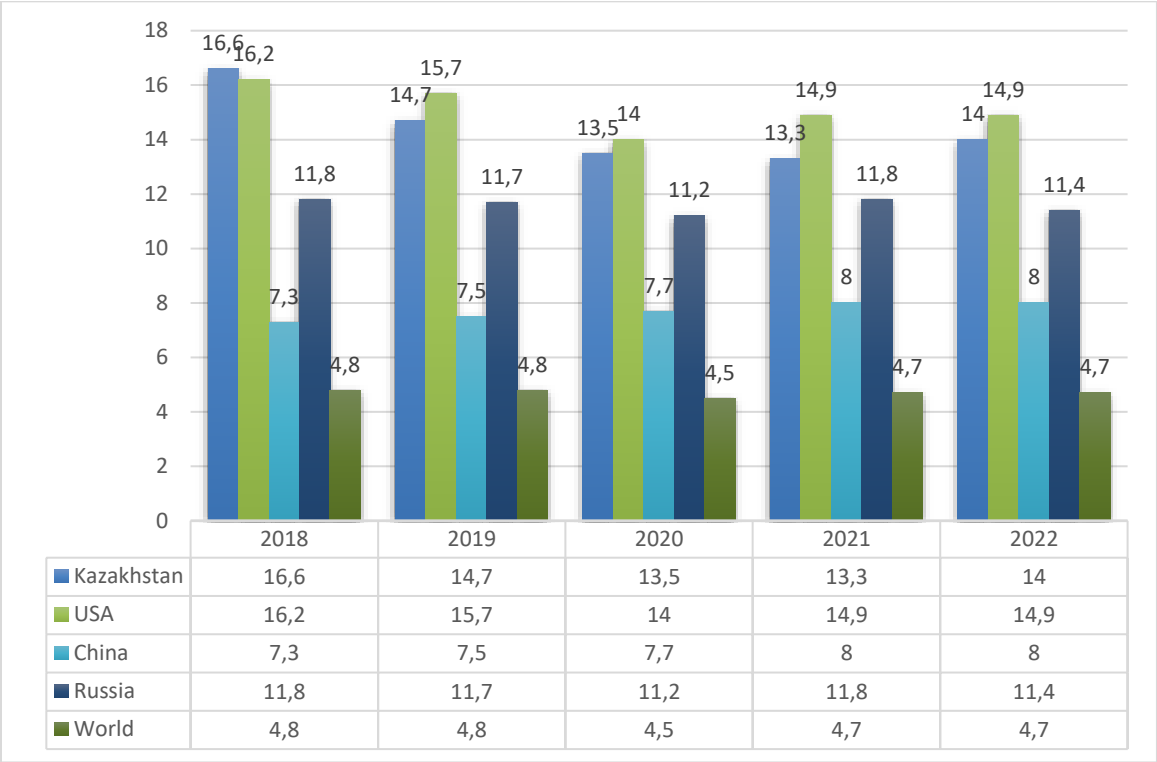
The authors use systematic, expert and statistical methods of managing the climate economy. The research methodology is based on qualitative research into current and emerging issues related to the impact of climate change. To systematize the methods, official statistical data of the laboratory of Global Change data and the Bureau of national statistics of the Republic of Kazakhstan were used.

Results

Many areas of the Sustainable Development Goals (SDGs) adopted at the United Nations General Assembly (2015) are designed to support the transition to a climate economy. For example, SDGs-7 (affordable and clean energy), SDGs-12 (responsible consumption and production) and SDGs-13 (action to combat climate change) are directly related to the climate economy. However, reliable energy supply to meet the Sustainable Development Goals cannot be met without taking into account environmental requirements. Therefore, it is necessary to consider the climate economy taking into account the directions of environmental requirements.

The main tool for regulating climate policy in Kazakhstan is the Environmental Code (2021). This Code provides for the introduction of an emissions trading system, that is, a market mechanism, which requires an annual reduction in emissions by 1.5% by 2030.

However, this mechanism is not fully implemented due to the use of fossil fuels in the Republic of Kazakhstan. For the same reason, it was found that per capita carbon dioxide emissions from fossil fuels and industry are at a very high level (Fig. 1).



	2018	2019	2020	2021	2022
Kazakhstan	16,6	14,7	13,5	13,3	14
USA	16,2	15,7	14	14,9	14,9
China	7,3	7,5	7,7	8	8
Russia	11,8	11,7	11,2	11,8	11,4
World	4,8	4,8	4,5	4,7	4,7

Figure 1. Emissions of carbon dioxide (CO_2), tons per capita from fossil fuels and industry

Note – source: compiled by the authors based on the Global Change Data Lab (2023)

The figure shows data from the states of the United States (14.9 tons), Kazakhstan (14 tons), Russia (11.4 tons) and China (8 tons), where per capita carbon dioxide losses are higher than the world level (4.7 tons). Currently, the countries of the United States, Kazakhstan and Russia depend on fossil fuels, that is, coal. For this reason, these states release a large amount of carbon dioxide (CO_2) emissions into the air. The Chinese state switched to renewable energy sources in subsequent years.

The Republic of Kazakhstan has a number of legislative and regulatory documents that make it possible to take the necessary measures to reduce emissions. For example, the action plan for the implementation of the Concept of the Republic of Kazakhstan for the transition to a “green economy” for 2021–2030 (2020) and the Concept for the development of the fuel and energy complex of Kazakhstan until 2030 (2014) provide for the main measures in the heat and electricity generation sector that affect the reduction of emissions.

Recognizing the importance of mitigating the effects of climate change, our country has adopted a number of climate change policy initiatives in recent years. However, ignoring environmental concerns and relying on low-cost, high-carbon energy solutions has made it difficult for the country to reduce greenhouse gas emissions. The country's rapid economic growth is directly related to the large-scale consumption of fossil fuels. For this reason, the main energy sources include cheap oil, coal and natural gas.

To reduce Kazakhstan's dependence on natural resources, it is necessary not only to promote the development of enterprises aimed at a green economy, but also to invest a number of financial resources.

In the period from 2018 to 2022, costs and investments in the protection of atmospheric air and climate are growing every year (Fig. 2).

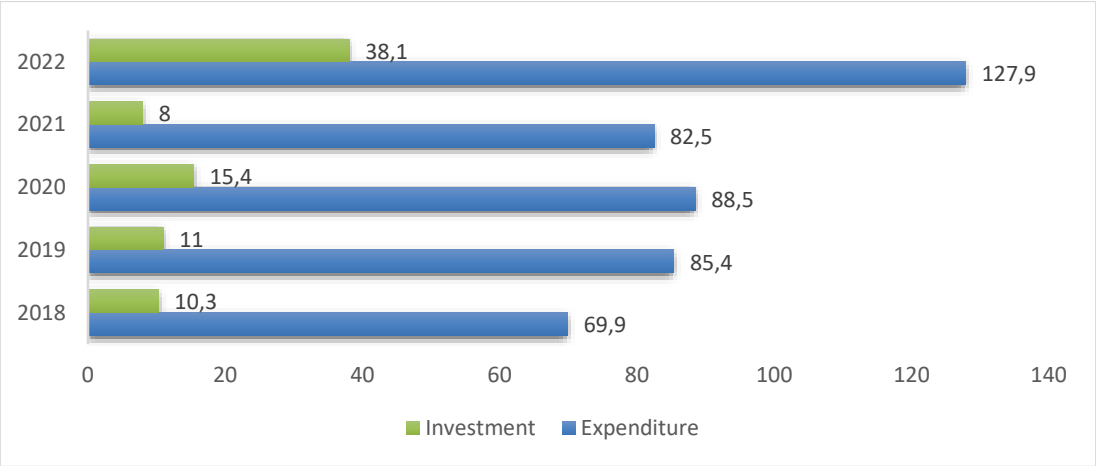


Figure 2. Expenditures and investments in the protection of atmospheric air and climate in the Kazakhstan Republic, billion. tenge

Note – source: compiled by the authors based on data from the National Bureau of Statistics (2023)

According to data from the National Bureau of Statistics (2023), 69.9 billion dollars were allocated for atmospheric air and climate protection in 2018 and in 2023, 127.9 billion tenge were spent. These funds are aimed at preventing pollution, cleaning flue gases and ventilation emissions by changing the production process to protect the air, preserve the climate and protect the ozone layer, as well as expert measurements, control, laboratory tests and much more.

Over the past five years, the volume of investments aimed at protecting atmospheric air and climate has increased from 10.3 billion tenge (2018) to 38.1 billion tenge (2022). These investments are made in new construction, expansion, reconstruction and modernization of facilities (including costs for the modernization of the facility carried out during major repairs).

The problem of solid household waste, which affects climate change, releasing harmful greenhouse gases into the atmospheric air, needs special study. Among the main factors that directly or indirectly impede the effective management of household waste in Kazakhstan, urbanization and the development of food and household markets lead to a steady increase in the volume of waste in the country. Also, most of the household waste is recyclable, in addition, these resources and materials can be used to create new products that may be in demand in the modern market. These include rubber and plastic products, glass, paper, fabric and many other materials.

Evidence of these results is the change in the formation of solid household waste per capita in the Republic of Kazakhstan (Fig. 3).

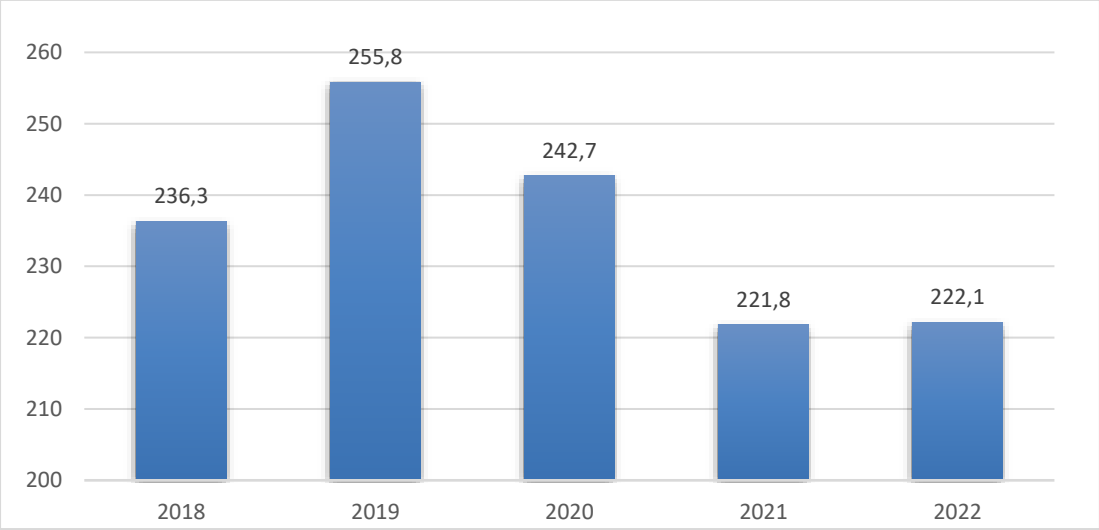


Figure 3. Formation of solid household waste per capita in the Republic of Kazakhstan, kg

Note – source: compiled by the authors based on data from the National Bureau of Statistics (2023)

For the period from 2018 to 2022, the per capita production of solid household waste decreased from 236.3 kilograms to 222.1 kilograms in the Republic of Kazakhstan. This change is influenced by the creation of a system of selective waste collection, waste processing and sorting stations, the construction of waste processing plants, the development of the secondary raw material market, and the development of a system of benefits for enterprises.

It should be noted that despite significant general achievements in ensuring the timely disposal of household waste in Kazakhstan, solid household waste remains relevant and requires an integrated approach to creating a legal mechanism for handling such waste and its practical application. To do this, it is necessary to prevent the formation of waste by making changes in the production process, collect and transport waste, process and dispose of hazardous waste (heat treatment, disposal to landfill, other methods), process and bury safe waste (incineration, disposal to landfill, other methods), conduct expert control and laboratory tests.

Let's build a multiple regression model with a dependent variable Y and three independent variables X1, X2, X3, where

Y – Carbon dioxide emissions per capita (co_2) from fossil fuels and industry (ton);

X1 – Costs for the protection of atmospheric air and climate (thousand tenge);

X2 – Investments in the protection of atmospheric air and the problems of climate change (thousand tenge);

X3 – Solid waste generation per capita (kg).

The quantitative analysis was carried out on the basis of data from the official website of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan https://stat.gov.kz //.

To check the variables for multicollinearity, we construct a matrix of paired coefficients (Table 1).

Table 1. Matrix of paired coefficients

	Y	X1	X2	X3
Y	1			
X1	-0.43904497	1		
X2	-0.20669913	0.65705914	1	
X3	0.283246737	-0.4169634	-0.418295287	1

Table 1 shows that the most significant relationship is between the dependent variable Y and X1 (-0.439), and the relationship is reversed. That is, the growth of one indicator leads to a decrease in the second (and vice versa). The next most important influence on Y is the X3 factor. The relationship between them is direct, since the coefficient is positive (0.283). This means that with the growth of solid household waste, carbon dioxide emissions per capita are also increasing. The matrix of paired coefficients demonstrates the absence of multicollinearity between variables (Xij<0.7), which allows us to include all the factors considered in the model. We put forward 2 hypotheses:

1. H_0: all coefficients $b_1, \ldots, b_n = 0$, that is, there is no linear relationship between the variables Y and X_i.

2. H_1: $b_1, \ldots, b_n \neq 0$, that is, there is a linear relationship between Y and at least one X_i.

To test the hypotheses, let's build a multiple linear regression in MS Excel (Table 2).

Table 2. Regression analysis results

CONCLUSION OF THE RESULTS						
Regression statistics						
Multiple R	0.8730					
R-square	0.7622					
The normalized R-square	0.0486					
The standard error	1.3002					
Observations	5					
Analysis of variance						

	df	*SS*	*MS*	*F*	*Significance F*	
Regression	3	5.4174	1.8058	1.0682	0.0495	
Remains	1	1.6906	1.6906			
Total	4	7.108				
	Coefficients	*The standard error*	*t-statistics*	*P-Value*	*Lower 95%*	*Upper 95%*
Y- intersection	21.5269	14.1250	1.8240	0.03697	157.9480	201.0019
X1	-0.1726	0.1027	-1.7815	0.03416	-1.4770	-1.1318
X2	-0.2790	0.1823	1.9307	0.03684	-2.0371	-2.5951
X3	0.0168	0.0497	1.8372	0.04930	0.6152	0.6488

The analysis of variance showed that the observed value of F of the Fisher criterion is greater than the tabular one, since the *"Significance of F" is less than 0.05*. So the H_0 hypothesis is rejected and the alternative hypothesis H_1 is accepted that at least one coefficient $b_i \neq 0$, that is, there is a linear relationship between Y and X_i. This means that the constructed multiple regression model is reliable and statistically significant.

As Table 2 shows, the regression coefficients are statistically significant: the "P – Value" for the coefficients should be no more than 0.05. This is the probability of an error. In the constructed model, all coefficients are significant, since they correspond to the condition P – Value < 0.05.

Thus, the evaluation of the model showed that all the coefficients of multiple regression are statistically significant and reliable.

Interpretation of the resulting model:

1. An increase in the cost of protecting atmospheric air and climate by 1 thousand tenge will lead to a decrease in carbon dioxide emissions per capita by an average of 0.173 tons;

2. An increase in investments in atmospheric air protection and climate change problems by 1 thousand tenge will reduce carbon dioxide emissions per capita by an average of 0.279 tons;

3. An increase in the formation of solid waste per capita by 1 kg will increase carbon dioxide emissions per capita by an average of 0.0168 tons.

Discussions

It is known that it is necessary to understand climate change from a scientific point of view, to facilitate the impact on countries around the world, and to take urgent measures to adapt. Because concentrations and emissions are growing despite uncertainty and drop points in climate forecasts, causing environmental consequences.

Climate economics focuses on cost-effective production, which aims to improve productivity levels while reducing carbon emissions by developing a more uniform operating routine. In turn, lean manufacturing seeks to reduce carbon emissions and reduce environmental costs across the entire value chain. Therefore, modern tools for climate economic management should be aimed at solving the following tasks:

- effective planning of the use of Natural Resources. One of the main sources of planning in natural resource management is climate forecasts for the future. This requires the development of a complex of systemic approaches to determine the interaction between climate, land, energy and water policy;

- use of digital technologies for energy monitoring and management. The introduction of digital technologies in corporate governance can lead to improved communication between stakeholders, more accurate data analysis, more efficient production flows, and various process improvement initiatives;

- investment in enterprises engaged in the disposal of household waste. Currently, food waste is becoming a major problem contributing to climate change, as they not only occupy a valuable place in landfills, but also emit harmful greenhouse gases when decomposed.

Conclusions

Taking into account the peculiarities of the domestic and foreign climate economy, the following conclusions can be drawn:

- currently, the climate economy is becoming a more integrated science of Natural Resources and their productivity and sustainable development. In the scientific works of researchers, the climate economy is considered as the interactions between water, energy, food communication and climate change, which contain the basis of policy, sustainability, management and decision-making processes. Also, scientists pay

great attention to the issues of efficient use of Natural Resources, the impact of greenhouse gas emissions on ecology, the environment and the atmosphere;

- public policies related to the provision of reliable energy to achieve the Sustainable Development Goals cannot be implemented without taking into account environmental requirements. Ignoring environmental concerns and relying on cheap, high-carbon energy solutions makes it difficult for the country to reduce carbon emissions. Therefore, the climate economy should be directly related to economical production;

- modern tools for managing the climate economy should be aimed at effective planning of the use of Natural Resources, the use of digital technologies for tracking and managing energy, and investment in enterprises engaged in the disposal of household waste.

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Қазақстанның климаттық экономикасын басқарудың заманауи құралдары

Аңдатпа:

Мақсаты: Мақаланың мақсаты — климаттың өзгеруінің салдарын зерттеу және шығарындыларды азайту бойынша тиісті шараларды ұсыну.

Әдісі: Мақалада климаттық экономиканы басқарудың жүйелік, сараптамалық және статистикалық әдістері қолданылған. Зерттеу әдістемесі климаттың өзгеруінің әсеріне қатысты ағымдағы және дамып келе жатқан мәселелерге сапалы зерттеулерге негізделген. Әдістерді жүйелеу үшін жаһандық өзгерістер туралы деректер зертханасының және Қазақстан Республикасы Ұлттық статистика бюросының ресми статистикалық деректері пайдаланылды.

Нәтижесі: Мақалада жан басына шаққандағы көмірқышқыл газының қазба отындары мен өнеркәсіптен шығарылу көрсеткіштері, сондай-ақ атмосфералық ауа мен климатты қорғауға жұмсалатын шығындар мен инвестициялар динамикасы талданған. Авторлардың пікірінше, тұрақты даму мақсаттарына қол жеткізу үшін сенімді энергетиканы қамтамасыз ету жөніндегі мемлекеттік саясатқа экологиялық талаптарды ескермей қол жеткізу мүмкін емес. Экологиялық мәселелерді елемеу кезінде арзан және көміртекті көп қажет ететін энергетикалық шешімдерге тәуелділік елге көмірқышқыл газының шығарындыларын азайтуды қиындатады. Климаттық экономика үнемді өндіріске бағытталуы керек.

Қорытынды: Климаттық экономиканы басқарудың заманауи құралдары табиғи ресурстарды пайдалануды тиімді жоспарлауға, энергияны қадағалау және басқару үшін цифрлық технологияларды пайдалануға, тұрмыстық қалдықтарын кәдеге жаратумен айналысатын кәсіпорындарға инвестициялауға бағытталуы тиіс.

Кілт сөздер: табиғи ресурстар, шығарындылар, климаттық экономика, менеджмент, экология, инвестиция.

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Современные инструменты управления климатической экономикой Казахстана

Аннотация:

Цель: Целью статьи является рассмотрение последствия изменения климата и предложение соответствующих мер по снижению уровня выбросов.

Методы: В статье были использованы системные, аналитические и статистические методы для управления климатической экономикой. Методология исследования опирается на качественное исследование текущих и развивающихся проблем, связанных с последствиями изменения климата. Для систематизации методов были использованы официальные статистические данные Лаборатории данных о глобальных изменениях и Бюро национальной статистики Республики Казахстан.

Результаты: Авторами проанализированы показатели выброса углекислого газа на душу населения от ископаемого топлива и промышленности, а также динамика затрат и инвестиции на охрану атмосферного воздуха и климата. По их мнению, государственная политика по обеспечению надежной энергетики для достижения целей устойчивого развития не может быть достигнута без учета экологических требований. Зависимость от недорогих и углеродоемких энергетических решений при игнорировании экологических проблем затрудняет стране сократить выбросы углекислого газа. Климатическая экономика должна быть направлена на бережливое производство.

Выводы: Современные инструменты управления климатической экономикой должны быть направлены на эффективное планирование по использованию природных ресурсов, применение цифровых технологий для отслеживания и управления энергией, инвестирование средств в предприятия, занимающиеся с утилизацией пищевых отходов.

Ключевые слова: природные ресурсы, выбросы, климатическая экономика, управление, экология, инвестиция.

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Эффект международной торговли на экономический прогресс Казахстана: анализ и прогнозы

Аннотация:

Цель: Цель данного исследования заключается в анализе воздействия международной торговли на экономический рост Казахстана до 2024 года с последующей выработкой прогнозов на будущее. Также целью исследования является выявление основных факторов, определяющих успешность торговых операций страны и их влияние на общий экономический прогресс.

Методы: Сбор данных о международной торговле Казахстана за прошедший десяток лет, включая объемы экспорта и импорта, структуру торговли, торговых партнеров и другие ключевые показатели. Изучение торговых партнеров Казахстана, выявление особенностей взаимодействия и анализ влияния их экономических изменений на Казахстан.

Результаты: Исследование подтвердило стремительный рост внешнеторговой активности Казахстана, подчеркнуло важность его интеграции в мировую экономику и необходимость совершенствования экспортной политики. Ключевыми факторами успеха оказались модернизация инфраструктуры, цифровые технологии и укрепление торгового сотрудничества. Эти выводы указывают на необходимость дальнейших усилий для обеспечения стабильного экономического роста в будущем.

Выводы: Проведен комплексный анализ влияния международной торговли на прогресс Казахстана, объединяя аспекты экономического роста, занятости и уровня жизни. Проведение глубокого исследования за прошедший десяток лет позволяет выявить устойчивые тенденции и факторы, влияющие на различные аспекты развития страны.

Ключевые слова: экспортно-импортная политика, механизм, международное разделение, международная торговля, экспортируемые товары, экономический рост, внешнеэкономические проблемы, динамичный рост.

Введение

Казахстан, находясь в центре Евразийского континента и сочетая обширную территорию с богатыми природными ресурсами, выстраивает свою уникальную миссию. Участие в международных отношениях и разносторонние интересы страны направляют ее взгляды на Евро-Атлантический и Азиатско-Тихоокеанский регионы.

В современном мире международная торговля играет ключевую роль в экономическом развитии стран, способствуя интеграции в мировую экономику и обеспечивая рост производства, занятости и благосостояния. В контексте Казахстана изучение влияния международной торговли на его экономический прогресс представляется особенно актуальным и значимым.

Цель данного исследования заключается в анализе и оценке воздействия международной торговли на экономический прогресс Казахстана с учетом данных и тенденций до 2021 года. Проблемные аспекты, которые будут рассмотрены, включают анализ изменений в торговом балансе, объемах экспорта и импорта, а также влияния международных торговых соглашений и геополитических событий на экономику Казахстана.

Одной из стратегических целей Казахстана является достижение вхождения в число 50 наиболее конкурентоспособных стран мира. Присоединение ко Всемирной торговой организации (ВТО) рассматривается как важный механизм для проведения экономической модернизации и повышения конкурентоспособности на мировых рынках. Руководство страны подчеркивает необходимость эффективного использования возможностей, предоставляемых членством в ВТО.

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Основной акцент делается на значимости конкурентоспособности как определяющего фактора успешной интеграции в мировую экономику. Национальный проект нацелен на активное продвижение в число 50 ведущих конкурентоспособных стран мира с последующим укреплением позиций Казахстана. Важным предположением является поднятие казахстанских товаров и услуг на уровень, соответствующий мировым стандартам.

Подчеркивается, что развитие внешней торговли остается одной из сложных внешнеэкономических задач Казахстана. Экспорт играет важную роль в экономике страны, составляя значительную долю валового национального продукта (Ahmad T., Zhang D., 2020). Новые тенденции в мировой экономике, конкуренция на внешних рынках и необходимость технологической модернизации требуют серьезного анализа для эффективного совершенствования экспортного потенциала.

Научный поиск в области казахстанского экспорта становится все более актуальным, поскольку требуется выявление новых тенденций и закономерностей в этом сложном процессе с учетом потребностей экономической теории и практики (Aitzhanova, A. et.al., 2014) . Это также обусловлено необходимостью защиты внешнеэкономических интересов и обеспечения экономической безопасности Казахстана. Поставленная проблема является актуальной как с теоретической, так и с практической точки зрения.

Современный казахстанский экспорт отличается от прошлого не только сохранением своей экономической сущности, но и приобретением нового содержания и форм. Он является крупнейшей отраслью экономики, развивающейся в условиях либерализации внешнеэкономических отношений. Также характеризуется масштабностью, широким ассортиментом и разветвленной географической структурой. Разнообразные формы международных торгово-экономических связей и их углубление с интеграцией Казахстана в мировое хозяйство создают новые вызовы и противоречия в сфере мирового экспорта.

Литературный обзор

Существующие исследования подчеркивают положительную корреляцию между участием Казахстана в мировой торговле и его экономическим ростом. Анализ предыдущих десятилетий подчеркивает, что расширение торговых связей с мировым сообществом способствовало увеличению валового внутреннего продукта страны. В своей статье «Связь между международной торговлей и экономическим ростом в Казахстане» С. Ахтер и другие рассматривали влияние международной торговли на экономический рост Казахстана, подчеркивая важность участия страны в глобальных торговых процессах. В своем исследовании «Занятость в Республике Казахстан в контексте глобальной конкурентоспособности» Б. Доскалиева и другие провели анализ взаимосвязи между международной торговлей и занятостью в различных секторах экономики Казахстана. Исследование «Экономическая интеграция: преимущества и риски для экономики Казахстана» К.А. Ахметовой сосредотачивается на социальных аспектах воздействия международной торговли на уровень жизни и благосостояние населения Казахстана. В статье «Проблемы и перспективы торгово-экономического сотрудничества между Китаем и Казахстаном» А.М. Мырзахметова и А. Балапан анализируют вызовы и перспективы, с которыми сталкивается Казахстан в условиях изменяющейся мировой торговой арены. В работе «Анализ развития экспортной торговли в Республике Казахстан» У. Сабыр представляет прогнозы развития экономики Казахстана, ориентированные на мировые торговые тенденции.

Методы

Использование разнообразных методов исследования, включая позитивный, нормативный, сравнительный и системный анализ, синтез, обобщение и научную абстракцию, а также математико-статистические методы, обеспечивает всесторонний и глубокий анализ рассматриваемой темы. Методология исследования охватывает различные подходы и инструменты, что позволяет рассмотреть тему с разных точек зрения и учесть разнообразные аспекты внешней торговли Республики Казахстан. Разнообразие используемых методов включает табличные и графические способы представления данных для наглядного отображения информации, методы анализа абсолютных, относительных и средних величин для выявления тенденций и показателей, а также структурный анализ, который помогает проанализировать структуру и взаимосвязи между различными элементами и переменными. Применение индексного метода может быть полезным для создания сравнительных оценок и установления индексов различных параметров.

Результаты

Международная торговля является важнейшим аспектом мировой экономики и исторически была основной формой международных экономических отношений. Она охватывает внешнюю торговлю всех стран, включая экспорт и импорт товаров и услуг. Страны стремятся продавать свою продукцию по выгодной цене, приобретая необходимые товары из других стран на наиболее выгодных условиях. Цель состоит в том, чтобы максимизировать выручку от продаж и приобрести товары первой необходимости для бесперебойного функционирования своих внутренних рынках.

Мировая торговля связана с тем, что в современном мире люди не могут обойтись без тесного взаимодействия. Другими словами, без глобализации хозяйственной жизни. Ситуация исторически объективно такова, что надо взаимодействовать со всеми государствами.

Международное разделение труда привело к тому, что страны стали специализироваться на производстве определенных товаров и вести торговлю с другими нациями. Эта специализация основана на концепции, согласно которой каждая страна производит то, для чего она лучше всего подходит, в результате чего образуется излишек, который можно продавать в другие страны. На специализацию влияют различные факторы, включая природные условия, уровень экономического и технологического развития, а также устоявшиеся традиции. Эти предпосылки определяют способность страны производить конкретный продукт или услугу в значительных количествах. Специализация стран в определенных областях производства и последующий обмен товарами составляют основу современной мировой торговли.

Международная торговля играет жизненно важную роль в мировой экономике, облегчая трансграничную продажу товаров и услуг, способствуя экономическому росту и обеспечивая стабильность стран. Это открывает значительные возможности для получения значительного дохода, укрепления отношений с другими странами, накопления технологий и капитала и стимулирования общей экономической активности (Dodonov, V., 2010).

Стоит отметить, что обмен товарами и услугами в пределах одной страны, включающий сделки между покупателями и продавцами внутри этой страны, называется внутренней торговлей.

11 декабря 2020 года министр торговли и интеграции Республики Казахстан Б. Султанов принял участие в конференции, посвященной анализу процессов присоединения к Всемирной торговой организации. В своем выступлении он поздравил Хорватию, Китай, Саудовскую Аравию и Казахстан с годовщинами вступления в ВТО и выделил преимущества членства Казахстана в этой организации.

Казахстан стал полноправным членом ВТО 30 ноября 2015 года после 19 лет интенсивных двусторонних и многосторонних переговоров. За весь этот период торговое законодательство Казахстана выровняли с нормами и правилами соглашений ВТО.

Условия присоединения Казахстана к ВТО направлены на повышение конкурентоспособности отечественных предпринимателей, разнообразие национальной экономики, создание благоприятной инвестиционной среды для обрабатывающей промышленности и сферы услуг, а также обеспечение переходных периодов для чувствительных секторов экономики. С момента присоединения к ВТО почти половина иностранных инвестиций, привлеченных в Казахстан, направлена в несырьевые секторы, при этом на сектор услуг приходится 30 %, а на обрабатывающую промышленность — 18 %. В настоящее время 164 страны являются членами ВТО, и их доля составляет 98 % мирового товарооборота.

Рисунок 1. Процесс вступления Казахстана в ВТО*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

После вступления в ВТО Казахстан открыл свой рынок для товаров из более чем 160 стран мира. Структура импорта указывает на то, что на государства-члены приходится значительная доля, составляющая 95 % от общего объема казахстанского импорта. Эта доля остается относительно стабильной, поскольку до вступления в ВТО она уже была на уровне 95–97 %.

Несмотря на то, что Казахстан является членом ВТО уже восемь лет, у него все еще есть определенный переходный период в сфере торговли и услуг. Этот переходный период является временными мерами, которые позволяют постепенно адаптироваться к полному соблюдению правил ВТО. Как только этот переходный период истечет, потребители в Казахстане в полной мере ощутят на себе последствия вступления страны в торговую организацию.

В целом, членство Казахстана в ВТО облегчило более широкий доступ к международным рынкам и внесло вклад в интеграцию экономики страны в глобальную торговую систему.

По результатам заседаний Рабочей группы по интеграции Казахстана во Всемирную торговую организацию проведена существенная работа по приведению законодательства Республики Казахстан в соответствие с требованиями ВТО (Doskaliyeva, B. et.al., 2018). Внесены изменения в более чем 50 законодательных актов, включая Таможенный, Налоговый, Уголовный и Административный кодексы, а также в законы, регулирующие вопросы валютного регулирования, лицензирования, антидемпинговых мер, субсидий и компенсационных мер, защиты внутреннего рынка при импорте товаров, технического регулирования, безопасности пищевой продукции, ветеринарии и карантина растений.

Всемирная торговая организация была учреждена в апреле 1994 года в Марракеше на основе Марракешского соглашения. ВТО представляет собой всесторонний комплекс из более чем 50 многосторонних торговых соглашений.

Страны-члены ВТО обязаны соблюдать примерно 50 многосторонних соглашений, юридических документов и нормативно-правовых актов. Ключевыми соглашениями являются Соглашение об учреждении ВТО и сопровождающие его соглашения, в совокупности именуемые «многосторонними торговыми соглашениями». Торговое соглашение формирует систему правил и предписаний, которые регулируют более 90 % мировой торговли товарами и услугами.

ВОЗ выступает в качестве договорного механизма, включающего в себя ряд соглашений, которые обеспечивают основу для международной торговли. По-видимому, это создает прозрачную, предсказуемую и справедливую торговую систему, способствующую экономическому росту и развитию во всем мире.

Среди многосторонних торговых соглашений, заключенных в рамках Всемирной торговой организации, особое значение имеют нетарифные соглашения, включающие в себя Соглашение по техническим барьерам в торговле (ТБТ) и Соглашение по применению санитарных и фитосанитарных мер (СФС).

Соглашение о технических барьерах в торговле (Соглашение по ТБТ) признает суверенное право каждой страны устанавливать обязательные технические стандарты, которые включают технические регламенты и эталоны (Raihan, A., Tuspekova, A., 2022). Однако в Соглашении по ТБТ подчеркивается важность обеспечения того, чтобы эти технические регламенты не создавали произвольных или ненужных барьеров для международной торговли.

В 2021 году Казахстан впервые за последние семь лет отметил значительное увеличение внешнего товарооборота, который превысил отметку в 100 миллиардов долларов. Экспорт и импорт достигли своего максимума с 2014 года, составив 60,34 млрд. и 41,17 млрд. долларов соответственно. Основную долю в экспорте составили минеральные товары, принося две трети общего объема, в то время как 40 % импорта пришлось на поставки оборудования и техники.

По сравнению с предыдущим годом общий объем внешней торговли вырос на 17,4 %, достигнув 101,5 млрд. долларов. Этот рост продолжает тренд, начатый с 2017 года, однако следует отметить, что текущие показатели все еще не достигли уровней, характерных для периода фиксированного курса тенге. Важным контекстом является решение о переходе к плавающему курсу тенге в 2015 году, которое сопровождалось резким ослаблением национальной валюты и оказало заметное воздействие на экономику страны.

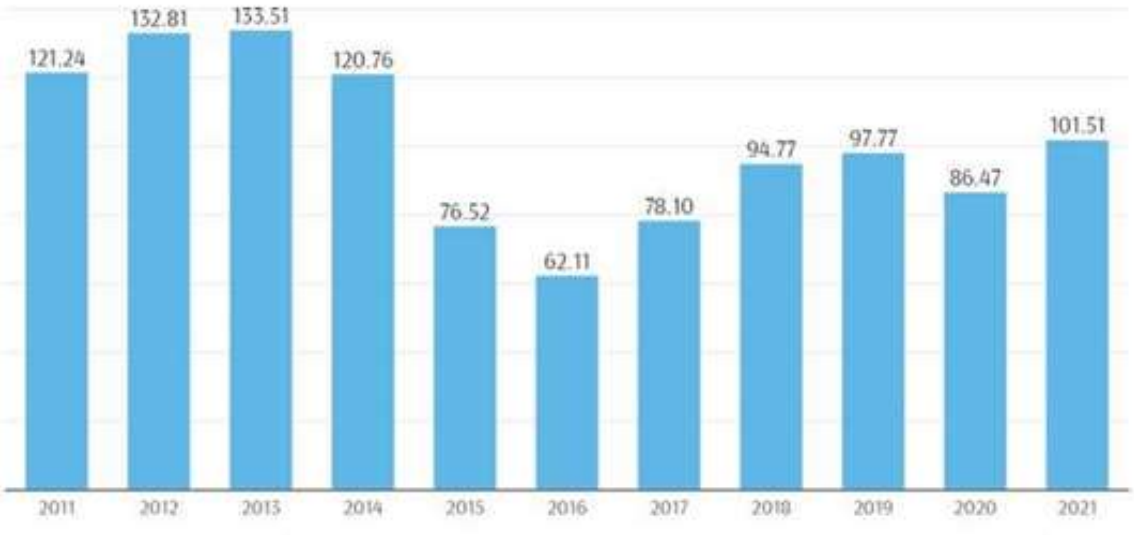

Рисунок 2. Товарооборот Республики Казахстан в период с 2011–2021 гг.*

**Примечание.* Составлено авторами на основании источника (https://www.stat.gov.kz/).

По итогам 2021 года объем экспорта достиг 60 млрд. 339,6 млн долларов, что представляет увеличение на 26,9 % и является трехлетним максимумом. Несмотря на постепенное снижение доли минеральных продуктов в структуре экспорта за последнее десятилетие, данный сектор все еще значителен, составляя 66 % общего объема экспорта в 2021 году, как и в предыдущем 2020 году.

Вклад металлов и изделий из них в общий объем экспорта в 2021 году составил 17,5 %, что является максимумом за последние 4 года. Доля прочих товаров в общей структуре экспорта составила 16,5 %. Эти данные свидетельствуют о разнообразии товарной структуры экспорта и важности различных секторов внешней торговли Казахстана.

Рисунок 3. Объем экспорта Республики Казахстан в период с 2011–2021 гг.*

**Примечание.*-Ссоставлен авторами на основании источника (https://www.stat.gov.kz/).

В течение 2021 года Казахстан успешно расширил свои экспортные поставки, достигнув 122 стран мира. Однако в 63 случаях объем продаж оказался скромным, не превышая 10 млн долларов, включая 37 стран, где экспорт не превысил 1 млн долларов. В то же время в 39 странах были сделаны значительные продажи товаров, превышающие 100 млн долларов. Эти цифры подчеркивают многообразие географии экспорта Казахстана и различия в объемах торговли с разными странами мира, создавая живописный ландшафт внешнеэкономической активности республики.

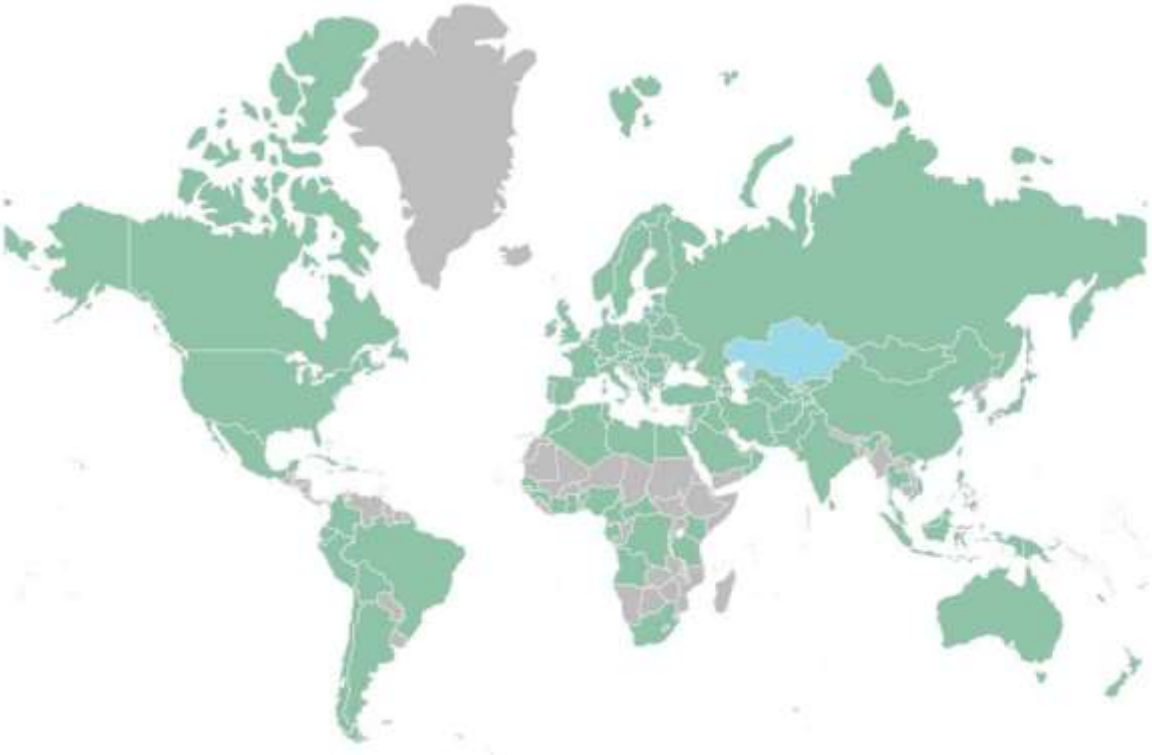

Рисунок 4. Экспорт товаров Республики Казахстан по странам мира*

**Примечание.* Составлен авторамина основании источника (https://www.stat.gov.kz/).

В 2020 году мы экспортировали товары в 119 стран, однако в 64 из них объем продаж составил менее 10 млн долларов, в том числе в 37 странах экспорт был даже менее 1 млн долларов.

В 2021 году объем импорта достиг 41 млрд. 173,8 млн долларов, превышая предыдущий год на 5,8 %. Эти показатели являются максимальными за последние 7 лет. При этом основную часть импорта составляют машины, оборудование, транспорт и другие товары, их доля в общем объеме составила 40,6 %, что соответствует среднему уровню предыдущего десятилетия.

Рисунок 5. Объем и структура импорта Республики Казахстан*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

Продукция химической отрасли внесла значительный вклад в общий импорт, составив 16,2 %, что представляет собой максимальный показатель за последние 4 года. Также следует отметить, что доля продуктов и продовольствия в общем импорте составила 11,8 %, что является максимальным значением за последние 5 лет.

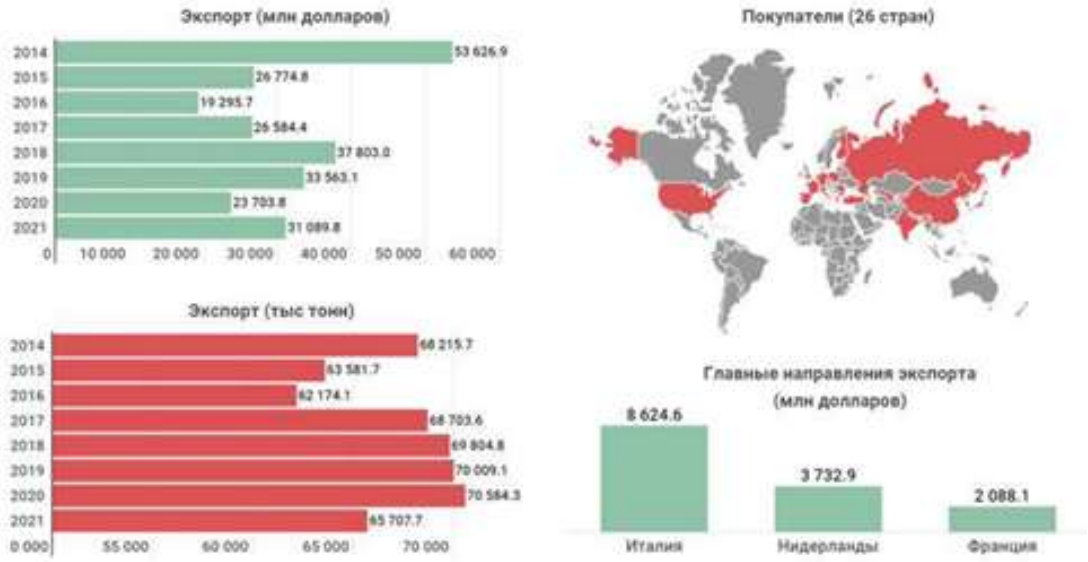

Рисунок 6. Динамика экспорта нефти и нефтепродуктов*

**Примечание. Составлен авторами на основании источника (https://www.stat.gov.kz/.)*

В 2021 году выручка от экспорта нефти достигла свыше 31 млрд. долларов, что составило 51,5 % от общего объема экспорта. Общий объем торговых операций возрос на 31,2 %, несмотря на снижение физического объема поставок на 6,9 % до 65,7 млн т. Этот рост обусловлен увеличением цен, в то время как ограничения по добыче, установленные в рамках соглашения ОПЕК+, повлияли на уменьшение физического объема поставок.

Доля выручки от экспорта нефти в общих доходах составила 51,5 %. Важно отметить, что это значение немного уменьшилось по сравнению с предыдущим годом (2020), где она равнялась 71 %. С другой стороны, доля стран Азии в общей структуре выручки увеличилась с 26,8 % в 2020 году до 29,3 % в 2021 году.

Заметен значительный рост выручки от экспорта в Италию (на 32 %, до 8,6 млрд. долларов) и Нидерланды (на 46,4 %, до 3,7 млрд. долларов), а также начало активных продаж в Сингапуре (рост в 14,6 раза, до 1,1 миллиарда долларов). Этот положительный тренд контрастирует с уменьшением выручки от продаж в Швейцарию (на 314,4 млн долларов, до 959,1 млн долларов), Японию (на 307,1 млн долларов, до 74,7 млн долларов) и Индию (на 304,1 млн долларов, до 1,5 млрд долларов).

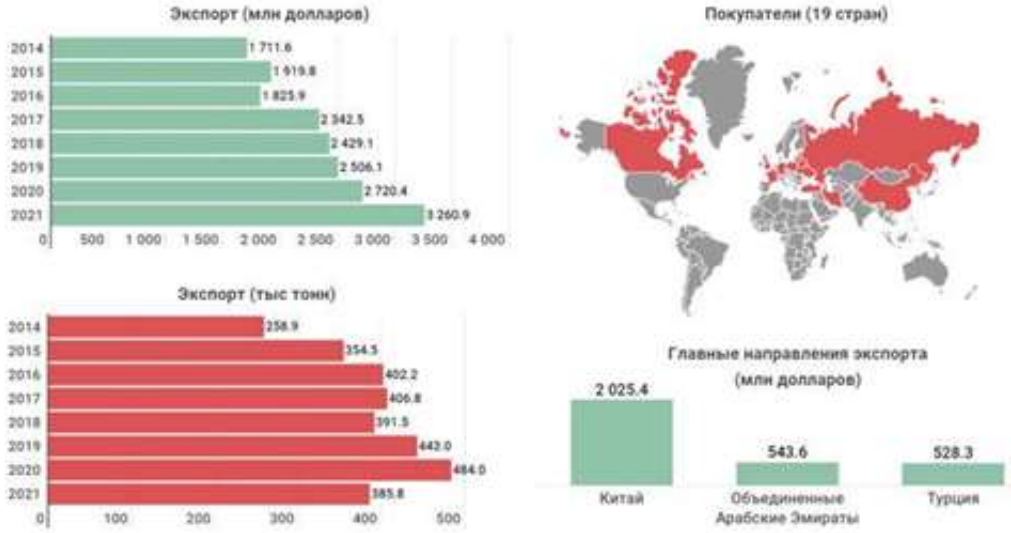

Рисунок 7. Экспорт медной руды*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

Доходы от экспорта нефти в 2021 году выросли на 19,9 %, достигнув $ 3,26 млрд. Физический объем поставок снизился на 20,3 % до 385,8 тыс. т, представляя минимум за последние 6 лет.

Доля Китая в общем объеме экспорта меди составляет 62,1 %, что превышает $2 млрд. Это сокращение по сравнению с предыдущим годом, когда Китай участвовал на уровне 67,6 %. Другие значимые рынки включают ОАЭ ($543,6 млн) и Турцию ($528,3 млн).

Продажи в ОАЭ выросли на 85,8 % при увеличении объема отгрузок на 23,5 %. В Китае и Турции продажи увеличились соответственно на 10,2 и 15,4 %, несмотря на снижение физического объема сделок (-27,5 % и -20,6 %). Однако объем сделок с Францией сократился с $60 млн до $18,4 млн.

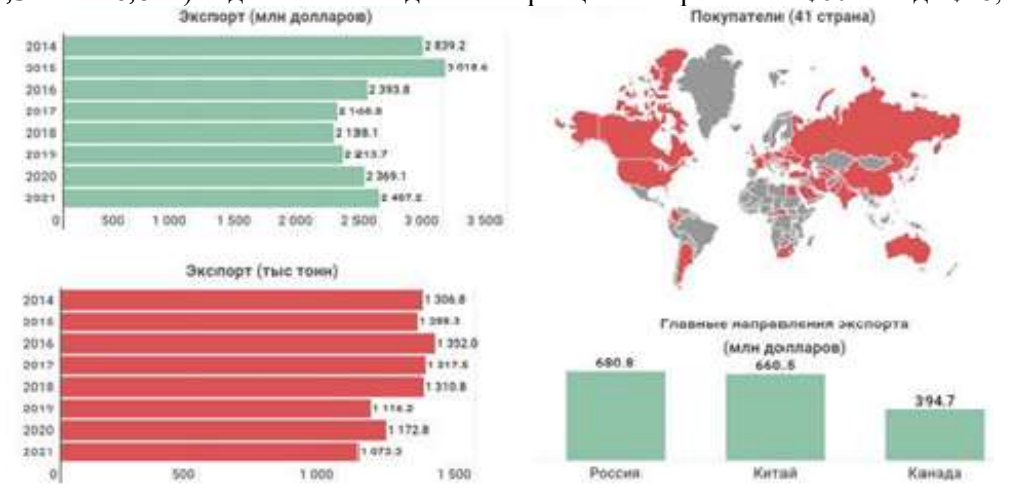

Рисунок 8. Экспорт неорганической химии, соединения металлов и радиоактивных металлов*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

Объем международных поставок недавно превысил отметку в 1 млн т, но сократился на 8,5 %, достигнув минимального значения за последние 8 лет. Интересно, что, несмотря на уменьшение физического объема, доходы от экспорта выросли на 5 %, приближаясь к отметке в $2,5 млрд. Это третий год подряд, когда доходы растут, достигнув максимума с 2015 года. Экспорт был направлен в 41 страну мира, при этом основные поставки приходились на 4 страны: Россию, Китай, Канаду и Францию, которые обеспечивают 80 % общего объема экспорта. Сокращение объема экспорта в Китай на 25,2 % привело к увеличению акцентов на России, которая стала ключевым направлением с ростом на 11,2 %. Сокращение экспорта в Индию было компенсировано увеличением продаж в Канаду и Францию.

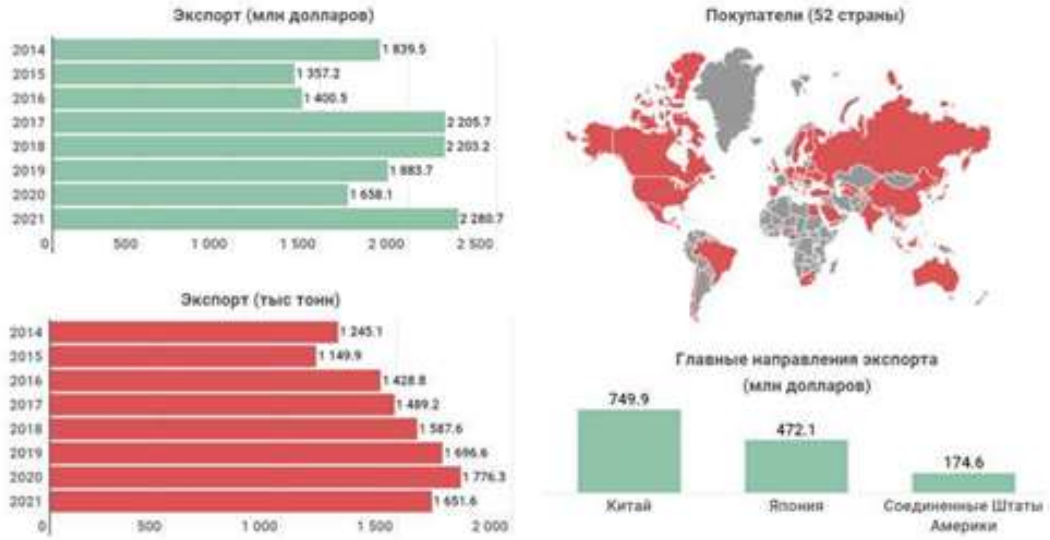

Рисунок 9. Экспорт ферросплавов*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

За прошедший год выручка от экспорта значительно увеличилась на 37,6 %, достигнув практически $2,3 млрд. Это произошло, несмотря на снижение физического объема продаж на 7%, который составил 1,65 млн т. Основные рынки экспорта включают Китай, где выручка составила $749,9 млн, и Японию с $472,1 млн. Кроме того, среди крупных покупателей выделяются США, Россия, Германия, Корея и Индонезия. Например, поставки в Индонезию увеличились в 2,3 раза, сопровождаясь ростом объемов поставок. Однако стоит отметить, что физический объем продаж в Китай уменьшился на треть, что привело к снижению выручки на 4,5 %.

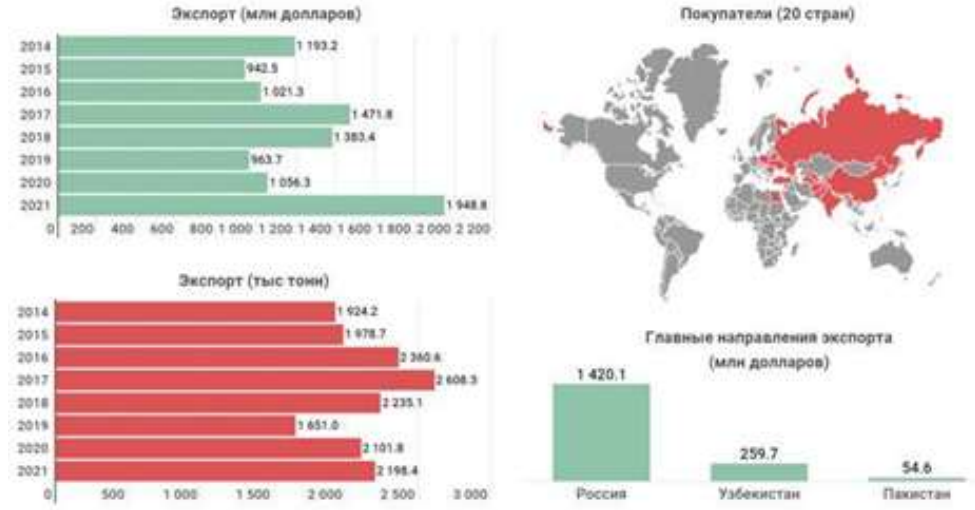

Рисунок 10. Экспорт прокатов из плоского железа, стали*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

В прошлом году наблюдался значительный рост объемов продаж железных руд и концентратов за рубеж, достигнув более 14,5 млн т и установив максимальный показатель с 2014 года. Годовой прирост составил 1 %, что подчеркивает устойчивый характер этого восходящего тренда.

Особенно впечатляющим стало увеличение доходов от экспорта на 55,2 %, перевалив за отметку в $1,6 млрд. Это представляет собой значительный финансовый поток и является наивысшим показателем за последние восемь лет.

Отдельного внимания заслуживает доля России в общем экспорте, которая составляет 69,4 %, принеся в казну более $1,1 млрд. Этот фактор выделяет Россию в качестве ведущего игрока на мировом рынке железных руд.

Несмотря на общий успех, стоит отметить, что основной вклад в рост экспорта приходится на Россию, где доходы увеличились практически вдвое. Китай также оставался значимым партнером, увеличивая продажи на 6,2 %, несмотря на снижение объемов на 20,8 %.

Эти динамичные тренды в мировом рынке железных руд подчеркивают важность разносторонних экономических связей и долгосрочной устойчивости в этом отраслевом секторе.

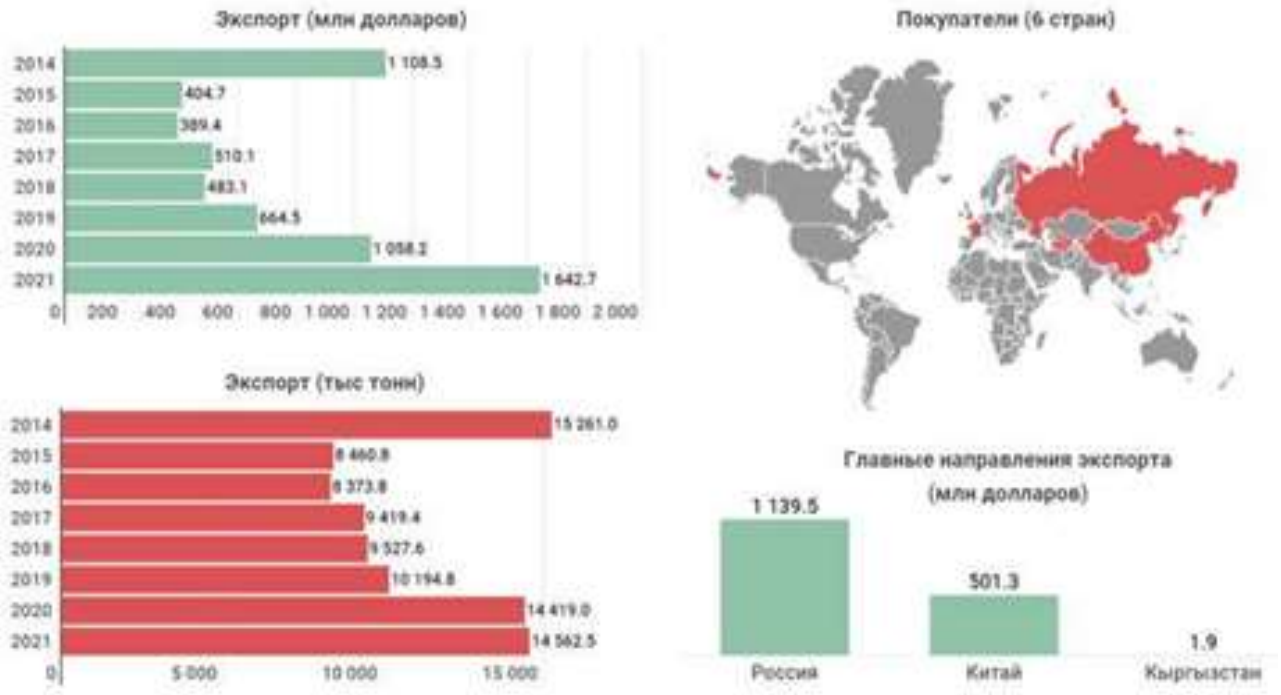

Рисунок 11. Экспорт железной руды и концентратов*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

В течение последних четырех лет наблюдается стабильный рост выручки от экспорта пшеницы и меслина. В 2021 году этот показатель вырос на 24,7 %, превысив отметку в $1,4 млрд и установив новый рекорд, который сохраняется как минимум восемь лет. Объем поставок также увеличился на 10,3 %, достигнув 5,8 млн т.

Страны Центральной Азии и Ближнего Востока, включая Узбекистан, Таджикистан, Иран и Афганистан, стали ключевыми участниками успешного экспортного тренда. Вместе они составляют 80 % общего объема экспорта, с особенно блестящими результатами в Иране (рост с $4,6 млн до $147,6 млн), Туркменистане (с $11,9 млн до $70,1 млн) и Италии (с $34,6 млн до $71,2 млн). Однако стоит отметить уменьшение объемов продаж в Россию (вдвое, до $33,5 млн) и в Китай (на четверть, до $43,8 млн), что представляет интересный аспект в контексте общего успеха на мировых рынках.

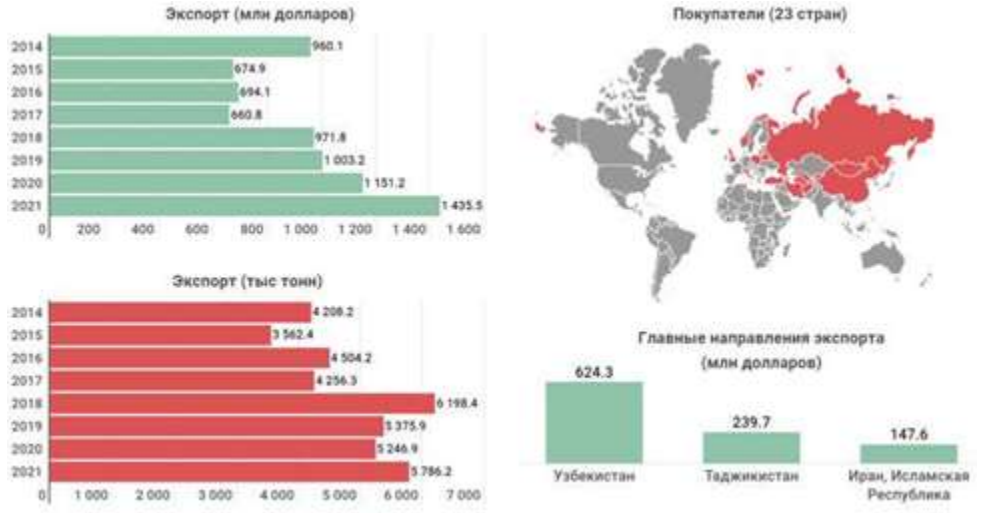

Рисунок 12. Экспорт пшеницы и меслин*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

Экспорт газа в текущем году зафиксировал свой минимум за последние пять лет, уменьшившись до суммы менее $1,3 млрд, что представляет собой снижение на 31,4 % по сравнению с предыдущим годом. Этот тревожный тренд обусловлен уменьшением физических объемов продаж на 19,2 %, что привело к уменьшению до 16 млрд куб. м. Физические поставки газа сокращаются уже второй год подряд, достигнув многолетнего минимума.

Примерно 83 % доходов от экспорта газа приходится на Китай, превышая более чем $1 млрд. Россия остается самым крупным альтернативным рынком с долей в $136,7 млн. Снижение поставок газа в Китай на 19,2 % сказалось на доходах, вызвав их снижение на 31,4% (-$588,1 млн). Экспорт в Швейцарию упал в пять раз, с $160,5 млн до $32,7 млн.

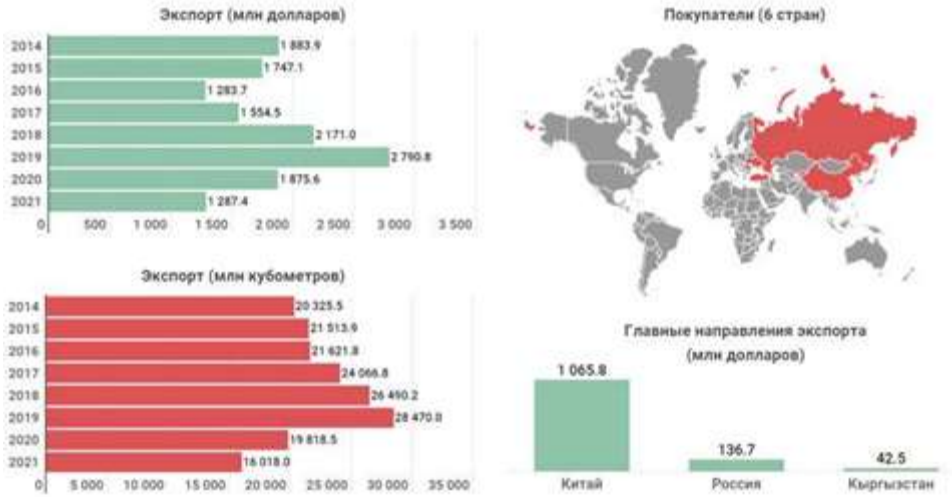

Рисунок 13. Экспорт природного газа*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

Доходы от экспорта серебра в 2021 году достигли высшего уровня за последние восемь лет, увеличившись на 21,4 %. Тем временем объем физических продаж сократился на 6,1 %, достигнув отметки в 995,6 т.

Главный вклад в этот успех внесла Великобритания, ответственная за 90 % доходов от экспорта. Остальные страны, включая Индию, Турцию, Узбекистан и Швейцарию, внесли небольшой вклад в общий объем экспорта.

Экспорт в Великобританию увеличился на 21,9 %, несмотря на уменьшение физического объема продаж на 7,1 %. В то время как экспорт в Швейцарию сократился в пять раз.

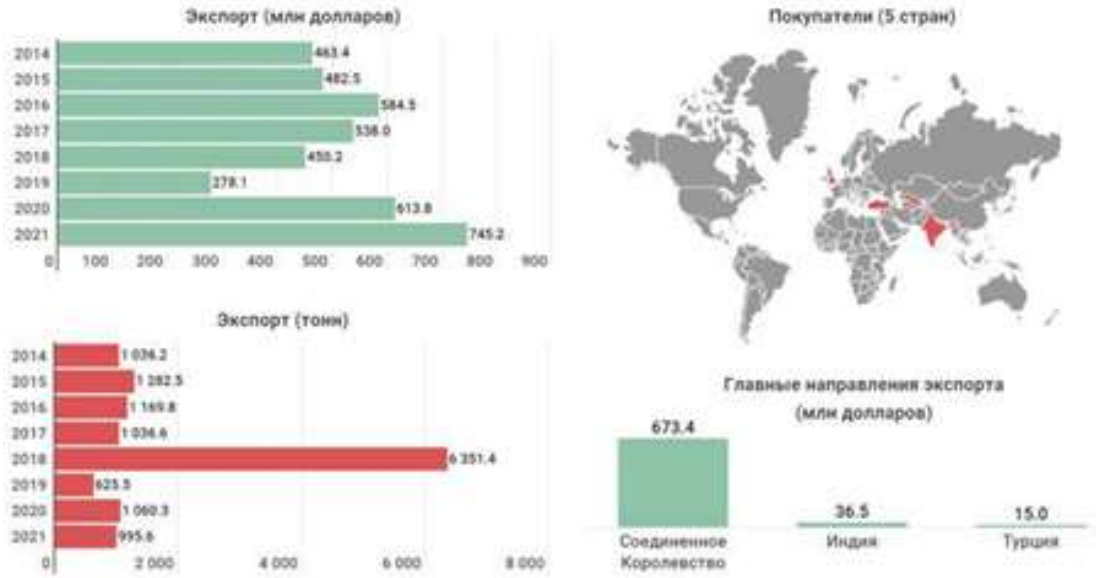

Рисунок 14. Экспорт серебра*

**Примечание.* Составлен авторамим на основании источника (https://www.stat.gov.kz/).

Продажи алюминия в 2021 году достигли самого высокого уровня за последние несколько лет, увеличившись на 11,4 % до 297,7 тыс. т. В то же время доход от этих продаж значительно вырос, достигнув $745 млн.

Турция стала основным покупателем казахстанского алюминия в 2021 году. Также другие страны, включая Узбекистан, Грецию и Хорватию, увеличили свои закупки. Продажи в Турцию выросли на 85,5%, а в Узбекистан — на 62,9 %. Важно отметить, что продажи в Грузию полностью прекратились.

В сфере импорта основные товарные категории составили 21,3 % от общего объема сделок. Россия и Китай выделяются как основные поставщики, особенно в машиностроении, металлургии и легкой промышленности. Общий объем импорта вырос на 5,8 %, достигнув наивысшего уровня за последние 7 лет. В декабре 2021 года был зафиксирован максимальный месячный показатель с начала 2017 года.

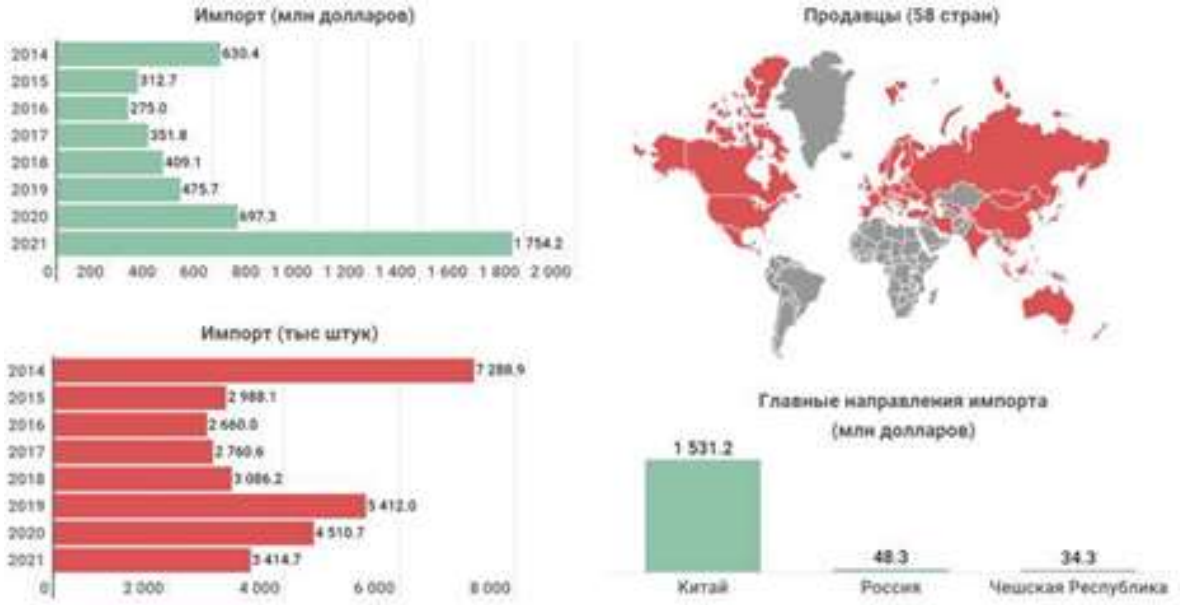

Рисунок 15. Импорт вычислительных машин и их блоков*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

В течение 2021 года наблюдалось существенное увеличение импорта вычислительных машин. Стоимость привезенного оборудования увеличилась в 2,5 раза по сравнению с предыдущим годом и достигла отметки в $1,754,2 млрд. Однако физический объем поставок сократился почти на четверть, снизившись до 3,4 млн штук.

Основным поставщиком остается Китай, чей вклад составляет 87 % от общего импорта и превышает $1,5 млрд. Практически весь прирост в импорте приходится на увеличение стоимости товаров из Китая в 3,2 раза, что добавило более $1 млрд. В оставшиеся объемы входят поставки от 57 стран мира.

Заметно снизились объемы закупок из Малайзии (с $22,4 млн до $3,8 млн), а импорт из Нидерландов практически прекращен (с $28 млн до $0,4 млн). Интересно отметить, что в предыдущем году эти страны занимали важное положение в ТОП–4 основных поставщиков.

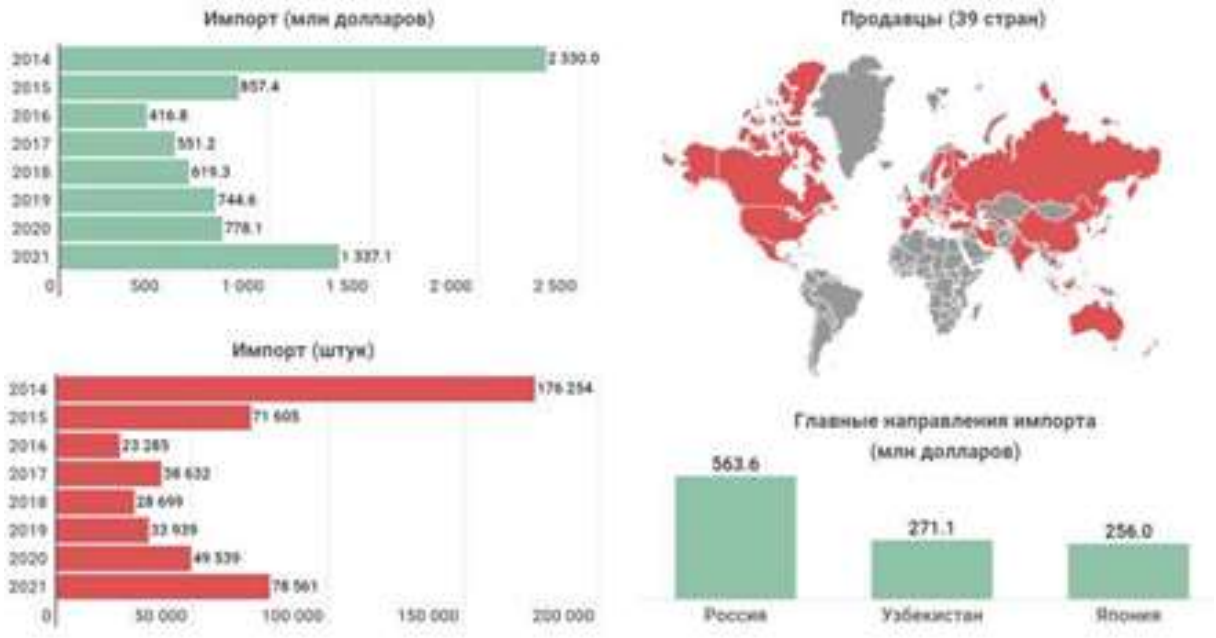

Рисунок16. Импорт легковых автомобилей*

**Примечание.* Составлен авторамина основании источника (https://www.stat.gov.kz/).

В последние четыре года в Республике наблюдается постоянный рост ввоза легковых автомобилей, и в 2021 году этот тренд достиг своего пика, достигнув 78,6 тыс. единиц — самого высокого уровня с 2014 года, что представляет собой впечатляющий рост на 58,6 % за год. Этот внушительный поток автомобилей приносит не только современные технологии и стиль на дороги, но и значительный финансовый влив в страну, стоимость импорта выросла на 71,9 % и достигла $1,3 млрд — максимального уровня за последние семь лет.

В этом автомобильном путешествии главные участники — Россия, Узбекистан, Япония и США, вливают свою воду в общий поток. Импорт из России, подобно множеству рекоплава, увеличился на $214,4 млн (+61,4 %). Япония, как ключевой источник воды в этом потоке, внесла свой вклад увеличением на $124 млн (+93,9 %). Узбекистан, как важное постоянное влияние, добавил воды в бурлящий поток увеличением на $105,4 млн (+63,6%). США, словно вода в водопаде, удвоили свой вклад, достигнув $67,7 млн [17].

Этот водоворот легковых автомобилей не только изменяет динамику дорожного движения, но и вносит свой водный след в экономическую картину, где каждый автомобиль — это не просто транспорт, а часть общего водоворота страны.

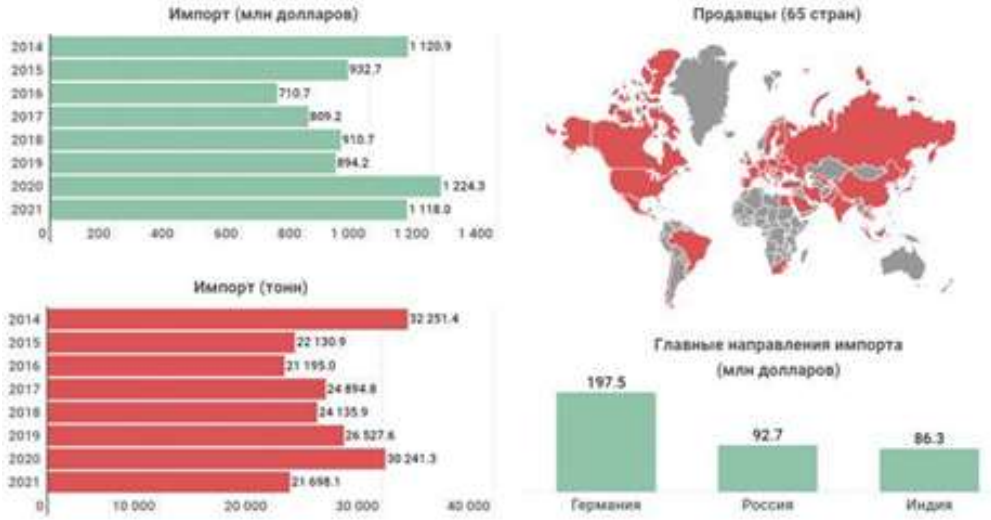

Рисунок 17. Импорт медикаментов*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

За последний год общий вес ввезенных в республику лекарств сократился на 28,2 %, достигнув 21,7 тыс. т, что является минимальным значением с 2016 года. Столь значительное снижение в стоимостном выражении составило 8,7 %, сократившись до $1,1 млрд. Этот тренд частично объясняется высоким уровнем в 2020 году, который создал высокую базу.

Импорт лекарств приобрел разнообразие, затрагивая 65 стран мира, при этом импорт из 26 из них превышает $10 млн. Главным направлением стали поставки из Германии, что составляет 17,7 % от общего объема.

Интересно отметить изменения в динамике торговли: рост импорта из Испании на фоне резкого снижения сделок с Францией и Индией.

По сравнению с 2020 годом, появилось 12 новых стран-поставщиков, однако их объемы остаются невеликими, составляя всего $6,7 млн, из которых $5,2 млн приходится на Бразилию.

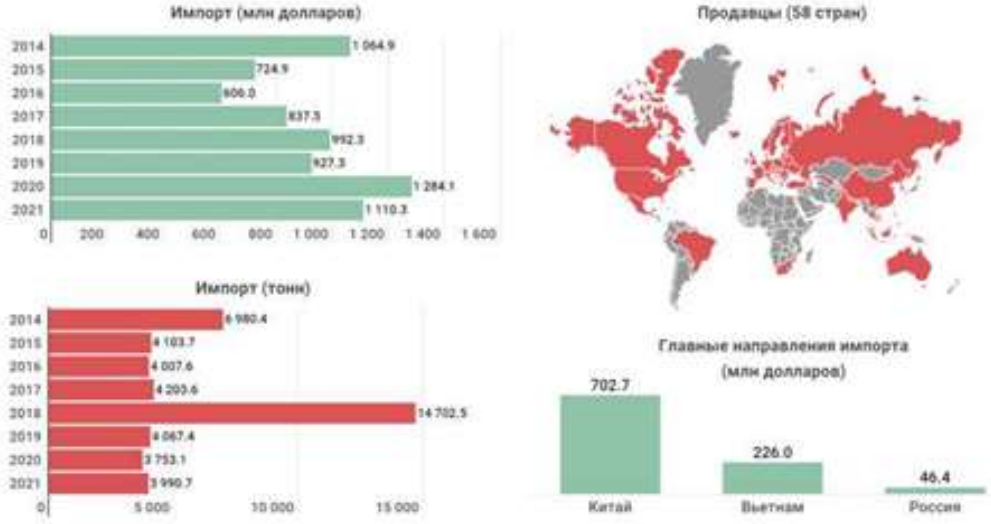

Рисунок 18. Импорт телефонных аппаратов и коммуникационной аппаратуры*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

В 2021 году наблюдалось уменьшение общей стоимости ввезенных в республику телефонов и оборудования для коммуникаций на 13,5 %, составившее $1,1 млрд. В то же время физический объем поставок увеличился на 6,3 %, достигнув 4 тыс. т. Китай и Вьетнам остаются ключевыми поставщиками, обеспечивая более 83 % всего импорта, в то время как остальные поставки распределены между 56 странами мира.

Отмечается уменьшение объема сделок с Китаем (-15,2 %) и Вьетнамом (-3,4 %), а также упадок импорта из России (-18,3%) и Индии (-21,7%). Единственным относительно значительным ростом является импорт из Польши, который увеличился. Эти динамики отражают сложное взаимодействие стран в сфере коммуникационных технологий, где экономические факторы смешиваются с глобальными тенденциями рынка.

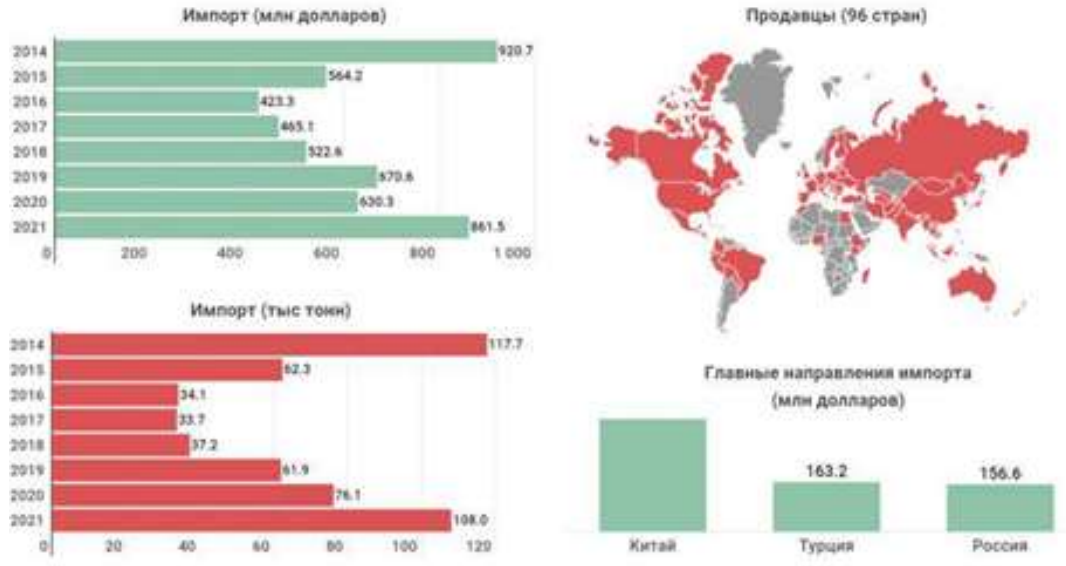

Рисунок 19. Импорт одежды и принадлежностей одежды*

**Примечание.* Составлен авторами на основании источника (https://www.stat.gov.kz/).

В 2021 году импорт одежды в Казахстан достиг семилетнего максимума, составив $861,5 млн, что означает рост на 36,7 %. Физический объем закупленной продукции также вырос, достигнув 108 тыс. т, что является пиковым значением с 2014 года.

Обсуждение

Страны, снабжающие Казахстан одеждой, включают Лесото, Боливию, Намибию, острова Теркс и Кайкос, а также еще 92 страны мира. Китай оказался основным поставщиком, предоставив продукцию на сумму $373,9 млн. Значительный рост импорта из Китая (92,2 %) сыграл ключевую роль в общем приросте. Также отмечается увеличение торговли с Турцией (+$49 млн, достигнув $114,3 млн), в то время как импорт из России сократился на 15% (-$27,7 млн, до $156,6 млн). Эти динамики подчеркивают разнообразие поставщиков одежды и динамичный характер мирового рынка.

Заключение

В свете расширения глобальной экономики и неуклонного развития мировой торговли Казахстан оказывается в ключевом положении, где его участие в этом процессе становится важным фактором для достижения экономического прогресса и устойчивого развития. Проведенный анализ позволяет сделать ряд важных выводов и предложений, которые могут служить основой для дальнейших стратегических действий в области внешнеэкономической политики.

Во-первых, на основе обзора литературы и анализа предыдущих исследований, мы подтверждаем важность участия Казахстана в мировой торговле. Положительная корреляция между уровнем международной торговли и экономическим ростом страны является фундаментальным фактором, подтверждающим необходимость активного участия в мировой торговле.

Во-вторых, анализ взаимосвязи между международной торговлей и занятостью в различных секторах экономики Казахстана выявляет потенциал торговли в создании рабочих мест и развитии трудового рынка. Это подчеркивает важность разработки стратегий, направленных на стимулирование экспортной деятельности и содействие развитию производства.

Также анализ социальных аспектов воздействия международной торговли на уровень жизни и благосостояние населения Казахстана указывает на необходимость участия страны в глобальных торговых процессах с учетом социальных интересов и потребностей населения.

На основе изложенного выше мы рекомендуем Казахстану продолжать активное развитие своей внешнеэкономической политики, в том числе путем укрепления торговых отношений с партнерами, диверсификации экономики, развития торгово-экономической инфраструктуры и содействия инновационной деятельности.

Таким образом, настоящая статья подчеркивает важность продолжения интеграции Казахстана в мировую экономику и разработки стратегий, направленных на укрепление его позиций на мировых рынках в целях обеспечения стабильного экономического роста и социального благополучия.

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Г.П. Коптаева, К.А. Атенова, А.Б. Көшербаева, А.М. Есиркепова, С.А. Сагинова

Халықаралық сауданың Қазақстан прогресіне әсері: өткен онжылдықты талдау және болашаққа болжамдар

Аңдатпа:

Мақсаты: Зерттеудің мақсаты — халықаралық сауданың Қазақстанның 2024 жылға дейінгі экономикалық өсуіне әсерін талдау, содан кейін болашаққа болжам жасау. Сондай-ақ, елдің сауда операцияларының сәттілігін және олардың жалпы экономикалық прогреске әсерін анықтайтын негізгі факторларды анықтау.

Әдісі: Экспорт пен импорт көлемін, сауда құрылымын, сауда серіктестерін және басқа да негізгі көрсеткіштерді қоса алғанда, өткен он жыл ішінде Қазақстанның халықаралық саудасы туралы деректерді жинау. Қазақстанның сауда серіктестерін зерделеу, өзара іс-қимыл ерекшеліктерін анықтау және олардың экономикалық өзгерістерінің Қазақстанға әсерін талдау.

Тұжырымдама: Зерттеу Қазақстанның сыртқы сауда белсенділігінің қарқынды өсуін растады, оның әлемдік экономикаға интеграциялануының маңыздылығын және экспорттық саясатты жетілдіру қажеттігін атап өтті. Табыстың негізгі факторлары инфрақұрылымды жаңғырту, цифрлық технологиялар және сауда ынтымақтастығын нығайту болды. Бұл тұжырымдар болашақта тұрақты экономикалық өсуді қамтамасыз ету үшін одан әрі күш салу қажеттілігін көрсетеді.

Қорытынды: Экономикалық өсу, жұмыспен қамту және өмір сүру деңгейінің аспектілерін біріктіре отырып, халықаралық сауданың Қазақстанның ілгерілеуіне ықпалына жан-жақты талдау жасалды. Соңғы он жылда тереңдетілген зерттеу жүргізу ел дамуының әртүрлі аспектілеріне әсер ететін тұрақты үрдістер мен факторларды анықтауға мүмкіндік береді.

Кілт сөздер: экспорттық-импорттық саясат, механизм, халықаралық бөліну, халықаралық сауда, экспорттталатын тауарлар, экономикалық өсу, сыртқы экономикалық мәселелер, серпінді өсу.

Koptayeva G., Atenova K., Kosherbayeva A., Yessirkepova A., Saginova S.

The effect of international trade on the economic progress of Kazakhstan: analysis and forecasts

Abstract

Object: The investigation scrutinizes the impact of a country's involvement in global trade on its economic growth over the preceding decade. It encompasses an analysis of the quantity of exports and imports, the proportion of international trade in relation to GDP, alterations in trade composition, and various other pertinent factors.

Methods: Compiling data on Kazakhstan's global trade dynamics spanning the last ten years, encompassing export and import volumes, trade structure, key partners, and other vital metrics. Investigating Kazakhstan's trade collaborators, discerning interaction patterns, and analyzing how changes in their economies affect Kazakhstan. The originality and significance of the research lie in its comprehensive exploration of how international trade influences Kazakhstan's development, considering aspects like economic growth, employment, and living standards. Delving deeply into the past decade facilitates the identification of enduring trends and factors influencing diverse facets of the country's progress.

Findings: The investigation exposed the favorable influence of global trade on Kazakhstan's economic advancement in the preceding decades. The upsurge in both outbound and inbound trade was coupled with a sustained elevation in the nation's gross domestic product (GDP).

Conclusions: They consist in a comprehensive analysis of the impact of international trade on the progress of Kazakhstan, combining aspects of economic growth, employment and living standards. Conducting in-depth research over the past decade allows us to identify stable trends and factors affecting various aspects of the country's development.

Keywords: export-import policy, mechanism, international division, international trade, exported goods, economic growth, foreign economic problems, dynamic growth.

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Анализ механизмов регулирования языковой политики Республики Казахстан

Аннотация

Цель: В настоящее время Казахстан проходит исторический момент трансформации казахского алфавита на латиницу, что позволит стране интегрироваться в мировое цифровое пространство, а также сблизит с другими тюркоязычными странами. В связи с этим перед Правительством, научным сообществом и перед всей страной в целом стоит сложная задача успешного перехода, что обусловливает актуальность выбранной темы. Цель научной работы заключается в анализе государственных механизмов регулирования языковой политики и разработке некоторых рекомендаций для их совершенствования. Предметом научной работы является промежуточный результат языковой политики в вопросе перехода казахского языка на латинскую графику.

Методы: В рамках научной работы были использованы следующие методы: сбора материала; методы его обработки; индуктивный; сравнительного анализа; описательный; статистический и контент-анализа.

Результаты: Правительством ведется активная работа по переходу казахского языка на латинскую графику по всем направлениям. Со стороны общественности, согласно социологическому исследованию, также не наблюдается значительных препятствий, напротив, прослеживается положительная динамика информированности о языковой реформе и положительного отношения к ней.

Выводы: В результате научного исследования авторы предлагают следующие рекомендации: разработать и принять соответствующие нормативные акты о правилах казахского алфавита и орфографии на латинской графике; сформировать, обучить и подготовить кадровый резерв специалистов; разработать и внедрить систему мотивации, поощрения и пропаганды изучения государственного языка на латинском алфавите не только граждан Казахстана, но и для казахов и наших соотечественников, проживающих за пределами Казахстана.

Ключевые слова: языковая политика, казахский язык, переход, латинский алфавит, языковая реформа, система мотивации.

Введение

Уже после обретения страной Независимости в 1991 году лингвисты страны говорили о необходимости перехода на латинский алфавит. Согласно архиву Российского информационного агентства «Интерфакс», в 2006 году этот вопрос был официально включен в число приоритетов правительства (Interfax, 2006). В 2012 году реформа алфавита была включена в национальную стратегическую программу, рассчитанную до 2050 года (ИПС «Әділет», 2012).

Таким образом, Казахстан, который использует кириллицу с 1940 года, в 2017 году начал переход на латинские буквы Указом Президента РК (Информационно-правовая система нормативных правовых актов Республики Казахстан, 2017). Примечательно, что на зимних Олимпийских играх в январе 2022 года казахстанские спортсмены впервые нанесли название своей страны латинскими буквами на свою спортивную форму. Так, Комитет страны одобрил и объявил об изменении, и олимпийские спортсмены прошли маршем в Пекине под названием страны, написанным так: Qazaqstan (Новостной портал Vesti.kz, 2022).

Однако данный процесс требует время для реализации и принятия со стороны населения и международного сообщества. Речь идет об изменении письменности всей страны с населением 19 миллионов человек и официальным двуязычием, где жители говорят на казахском и русском языках. К 2031 году школьные учебники, официальные документы, коммерческие вывески и уличные указатели в стране должны быть переписаны латинскими буквами, то есть через шесть лет после первоначально запланированной даты в 2025 году.

С 2017 года, когда был подписан Указ об изменении казахского алфавита на латиницу, далее были разработаны несколько вариантов нового алфавита, всего было предпринято четыре попытки внесения поправок. Два из них произошли менее чем за год, в период с октября 2017 года по февраль

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2018 года, с использованием 32-буквенной версии алфавита и нескольких апострофов, которые были заменены ударениями.

Последняя и актуальная версия была разработана экспертами Института языкознания имени Ахмета Байтурсынова и представлена в начале 2021 года. Этот алфавит состоит из 31 буквы, включающей 28 казахских звуков, и некоторых языковых символов для обозначения гласных с такими особенностями, как *ə (ä), ө (ö), ү (ü), ұ (ū) и ғ (ğ).), ш (ş).* Он был подготовлен по принципу «один звук — одна буква» и соответствует стандарту *qwerty* для цифрового письма (Электронное правительство Республики Казахстан, 2023).

Тем не менее такой лингвистический маневр требует более глубокого анализа, чем просто установление соответствующих букв. В связи с этим актуальность анализа совершенствования механизмов регулирования языковой политики Казахстана обусловлена необходимостью эффективного и качественного трансформации казахского алфавита на латиницу.

В рамках работы сформулированы две гипотезы:

1-ая гипотеза: переход казахского языка на латиницу укрепит национальную идентичность, сблизит с группой тюркских языков и поспособствует интеграции Казахстана в мировое цифровое пространство.

2-ая: в ходе перехода на латинский алфавит казахский язык утратит часть культурного наследия, возникнет риски языковой ассимиляции и сложности перехода на другой алфавит среди широких масс населения.

Обзор литературы

Einar Haugen (1953), первый кто разработал в 1953 году концепцию языкового планирования (*language planning*), термин, который пользуется определенным признанием научного сообщества. Он использовал его для описания государственного вмешательства в норвежский язык, целью которого было переопределить национальную идентичность после столетий датского правления.

В последующих работах J.A. Fishman (2005) появляется дополнительное понятие, а именно языковая политика. Для Fishman, планирование — это реализация языковой политики. Определение, данное Calvet Louis-Jean (1996) в обобщенной форме, языковая политика — это определение широкого выбора в отношениях между языками и обществом и его практическое применение, языковое планирование.

Таким образом, языковое планирование является результатом принятия решений государством, обладающим средствами, в том числе законодательными, но не только (N. Labrie, 1997), чтобы проводить в жизнь свою политику языкознание.

Предложенная Jean-Claude Corbeil (1980) эта терминология широко используется сегодня в Канаде. Для него языковое планирование может иметь уничижительный оттенок, в то время как фраза «языковая адаптация» подразумевает средне- и долгосрочные усилия по более эффективному использованию коллективного ресурса языка (языков), в соответствии с потребностями и интересами нации, с гибким планом, который определяет эволюцию языка общества, не нарушая его, а наоборот, требуя его членства и участия.

Вместе с тем интересным представляется определение Norman Labrie (1993): языковая адаптация относится к преднамеренным усилиям по влиянию на поведение других людей в отношении усвоения, структуры и функционального распределения их языкового кода. И обратите внимание на выражение «преднамеренные усилия», которое отражает явный и запланированный характер вмешательства. Norman Labrie (1993) предлагает, как это делали в свое время другие авторы (E. Haugen, 1959; Rubin, 1971; J.–C. Corbeil, 1980), схему различных этапы создания лингвистическая адаптация этой процедуры принятия решений, по выражению Einar Haugen:

1) проведение исследований;

2) формулирование политики (разработка предложений, которые должны привести к принятию решения);

3) принятие решений (выбор политики);

4) реализация (правоприменение и надзор);

5) оценка.

Проведение исследований является весьма актуальным и решающим этапом, поскольку оно должно учитывать рассматриваемую социолингвистическую ситуацию. Формулировка политики, с

этой точки зрения, касается как решений, принятых для изменения основного текста, так и статуса языка.

В 1969 году в публикации Международного центра исследований двуязычия Heinz Kloss (2002) провел различие между планированием корпуса и планированием статуса, определениями, которые встречаются во многих работах (L.–J. Calvet, 1996) и которые, несомненно, позволяют систематизировать анализы. С одной стороны, была бы проделана вся работа по повышению статуса языка, а именно по увеличению его лингвистического капитала, а с другой — работы более конкретно о корпусе (работа над терминологией, размышления о качестве языка). Но на самом деле в ситуациях, когда принимаются языковые решения, вмешательства в корпус и статус идут рука об руку и, если идти дальше, не могут изучаться отдельно.

J.A. Fishman (1965) пишет, что сферы деятельности (профессиональная среда, семейное окружение) представляют собой особые социальные ситуации, которые могут быть проанализированы в зависимости от времени, места, темы и роли собеседников; именно эти факторы определяют выбор того или иного языка. Различных видов использования языки проистекают из понятия статуса, когда один из языков считается более престижным, чем другой. Это соотношение между языками составляет диглоссию. Уже в 1959 году Ferguson (1959) пересмотрел это понятие, появившееся на рубеже веков, применив его к двум разновидностям одного и того же языка.

Изучение различных аспектов языковой политики Казахстана интересно для международного и казахстанского научного сообщества, особенно среди них выделяются исследования данных авторов: Се Чжоу и Ван Фан (2020), О.Б. Алтынбековой (2006), И.С. Савина (2001), К.С. Шалгимбековой (2013), Ш. Риаханова (2021), С.Ж. Баяндиной (2014) и других. Вместе с тем совокупность культурных тенденций советского пространства представлена в работе С. А. Питиной (2018). Проблемы евразийской интеграции и места роли позиции русского языка, в том числе и в Республике Казахстан, освещены в работе А.С. Айрапетяна (2015). О развитии политики трехъязычия сказано в научных исследованиях Д.С. Султана и Д.Р. Сабировой (2018); об аспектах языковой политики — Б. Абдгалиева (2007); Б. Хасанулы в своей работе предложил основные концепции языковой политики РК и показал, что изучение и развитие казахского и других языков являются важными факторами, способствующими демократизации страны (Хасанулы, 2001).

Вместе с тем, в казахстанской науке недостаточно научных работ и исследований касательно перехода казахского языка на латиницу, что еще раз подчеркивает актуальность выбранной темы.

Методы

Исследование основано на традиционном методе социолингвистических исследований; мотивационном подходе, который основан на изучении социологии; а также системном подходе направленный на выявление исторической эволюции языковой ситуации; описательный метод, используемый для описания современной социально-политическая ситуация; статистический метод и метод контент-анализа.

Результаты

Понятие «языковая политика» очень широкое и всеобъемлющее, которое может охватывать все категории деятельности или коммуникативных ситуаций, существующих в обществе. Языковая политика может подразумеваться, когда социальные силы действуют свободно, подвергаясь различным влияниям. Однако языковая политика чаще всего формулируется в официальных текстах. Тогда речь идет о настойчивом вмешательстве, направленном на изменение ориентации социальных сил, чаще всего в пользу того или иного языка или определенных языков, выбранных из используемых языков. С другой стороны, важно проводить различие между понятиями «языковая политика» и «языковое законодательство», поскольку языковая политика может существовать без законодательного вмешательства. Действительно, во многих случаях языковая политика просто вытекает из существующей языковой практики.

Языковая политика может включать элементы, касающиеся статуса целевых языков, то есть их признания в качестве официальных языков, национальных языков и т.д., и их соответствующего использования в различных областях (государственное управление, торговля, бизнес, работа, образование) — или, в более широком смысле, языковым правам основы граждан или сообществ говорящих (например, коллективные права меньшинства говорящих). Языковая политика также может включать элементы, влияющие на языковой кодекс, то есть на его внутреннее развитие (например, стандартизация, модернизация словарного запаса или реформа орфографии). Во многих случаях может суще-

ствовать взаимозависимость между статусом и кодом языка. Чтобы достичь определенного статуса, язык должен быть оснащен инструментами, чтобы быть способным выполнять функции, которые ему хотят присвоить. Вот почему существует множество примеров языковой политики, включающей оба аспекта.

Языковую политику можно классифицировать с разных точек зрения. Здесь необходимо выделить две основные категории языковой политики:

- стимулирующую языковую политику;
- языковую политику обязательного характера.

В первом случае поддерживается естественное саморегулирование практик или поведения говорящих, выдвигая на первый план, например, меры поддержки и пропагандистские кампании или законодательные меры, не предусматривающие санкций. Во втором случае возможно дополнительно прибегать к законодательным и нормативным мерам, которые могут сопровождаться санкциями.

Тип политики будет определяться в зависимости от характеристик для конкретной ситуации. Для лингвиста Jacques Leclerc (2007), который изучил языковую политику большого числа стран и всесторонне описал ее, различные возможные политики заключаются в следующем:

1) невмешательство (официальный язык) и отраслевая политика (меньшинства);
2) невмешательство (официальный язык) и политика ассимиляции (меньшинства);
3) повышение статуса официального языка и его дифференцированный статус;
4) популяризация государственного языка и отраслевая политика;
5) признание государственного языка, политика ассимиляции.

Существует несколько причин, оправдывающих интервенционизм в языковых вопросах. Таким образом, можно принять языковую политику, чтобы защитить историческую ценность языка или восстановить приоритет языка, который доминирует. Некоторые государства вмешиваются таким образом с целью сохранения статуса фактического национального языка (языков), положение которого (которых) может быть ослаблено в результате значительных миграционных потоков или других исторических причин.

Если обращаться к теории, то концепция языкового планирования была разработана в более широком контексте глобального развития с упором на необходимость учитывать культурный и языковой характер развития. Культурный характер развития подчеркивается той ролью, которую язык может играть в разработке, передаче и применении знаний, которые лежат в основе социального и экономического развития народов и языковых сообществ.

Языковая адаптация лежит в плоскости стратегий и средства, которые необходимо реализовать для достижения общих целей заранее определенной языковой политики. Таким образом, языковая адаптация заключается в реализации языковой политики государства или организации, которые хотят явно вмешаться в языковой вопрос. Таким образом, языковая адаптация — это процесс, который может отвечать целям, которые сильно отличаются друг от друга и вытекают из языковой политики, будь то сформулировано или нет.

Таким образом, в соответствии с этой типологией языковое вмешательство может быть направлено на достижение следующих целей. Примеры вмешательств в отношении статуса (Seargeant Philip, 2023):

- возрождение языка: например, случай, когда иврит стал языком общения после создания Государства Израиль;
- языковая адаптация, направленная на межъязыковое общение: например, внедрение политики двуязычия или официального многоязычия в Канаде и Швейцарии, а также во многих африканских странах. В эту категорию попадает разрешение языковых конфликтов между несколькими сообществами носителей языка;
- оценка и поощрение использования языка (расширение): например, случай французского языка в Квебеке, случай каталонского языка, случай санго в Центрально-Африканской Республике, балтийские языки и т. д. Успех продвижения по службе язык в основном направлен на его статус, но последний может зависеть от степени развития кода, особенно словарного запаса;
- выживание языков, находящихся под угрозой исчезновения: например, бретонский, валлийский, ретороманский, фризский, языки коренных американцев, ряд африканских языков и т. д.;

- уважение прав языковых меньшинств (например, Швеции и Финляндии) или языкового большинства (например, в Квебеке: там французский язык составляет большинство, но меньшинство во всей Канаде);
- управление использованием конкретных официальных языков в международной организации, такой как Организация Объединенных Наций. Примеры вмешательств в языковой код;
- реформа языка: например, введение латиницы в турецкий язык, недавние попытки реформировать орфографию во французском и немецком языках, а также переход казахского языка на латинскую графику;
- языковая стандартизация: это относится к норвежскому, каталонскому или многим африканским языкам, которые находятся в процессе описания и кодификации;
- модернизация лексики и, в частности, терминологии: например, в случае каталонского, французского, балтийских языков, африканских языков, арабского, иврита и т. д. Так, например, мы можем упомянуть терминологическую работу, направленную на замену лексических заимствований из иностранных языков, как это практикуется официальными органами во Франции и Квебеке;
- гармонизация и стандартизация терминологии: например, работа Технического комитета 37 ИСО (терминология и языковые ресурсы) и все национальные и международные органы по стандартизации;
- стилистическое упрощение: например, франко-квебекская работа по упрощению языка администрирования.

Если говорить о языковом законодательстве, то оно включает в себя совокупность правовых текстов (законов, постановлений, декретов, директив и т. д.), в которых описываются языковые права, обязанности, регулирующие использование языков в различных сферах общественной жизни на территории. В целом, закон определяет статус языков и уточняет их использование в тех областях и обстоятельствах, где существует вероятность конфликта или несправедливости. Многие страны и правительства выбрали языковую политику в рамках законодательства. В настоящее время подсчитано, что большинство стран-членов Организации Объединенных Наций проводят языковую политику, а также большое количество несуверенных правительств.

Цели языкового права чаще всего заключаются в установлении правил, определяющих выбор языков в определенных сферах общественной жизни, и в определении обстоятельств, которые могут гарантировать использование языка, включая защиту, к которой стремятся языковые меньшинства.

Таким образом, посредством официальных и нормативных актов Закон закрепляет языковые права отдельных лиц и языковых сообществ. Эти официальные тексты могут принимать несколько форм, например, некоторые Конституции содержат языковые положения. В большинстве случаев это общие соображения, которые могут включать статус одного или нескольких языков.

Касательно Казахстана, то в Конституции Республики (1995) в ст. 7 закреплен статус казахского языка как государственного, наряду с этим «в государственных организациях и органах местного самоуправления наравне с казахским официально употребляется русский язык», также говорится, что «государство заботится о создании условий для изучения и развития языков народа Казахстана», что означает что государство уважает и признает языки других национальностей.

Помимо этого, разъяснение этих общих утверждений обычно делается в одном или нескольких конкретных законах или в законе, относящемся к языковой политике. Так, в Казахстане приняты Закон «О языках в Республике Казахстан» (1997) и Концепция развития языковой политики в Республике Казахстан на 2023–2029 годы (2023), которые дополняют нормативно-правовую базу государственной языковой политики. Наряду с этим функционирует государственный орган Комитет языковой политики Министерства науки и высшего образования Республики Казахстан, который координирует реализацию языковой политики.

Наряду с этим, положения языковой политики определяются путем включения языковых мер в различные отраслевые законы. Например, Трудовой кодекс для языка работы, закон о национальном образовании для преподавания языков или для языка обучения, законы о государственное управление в отношении языка государственного управления, законы, защищающие потребителей в отношении языка маркировки товаров и т. д.

Обсуждение

На сегодняшний день важно подчеркнуть, что приоритетное направление языковой политики Республики Казахстан заключается в переходе казахского языка на латинский алфавит, согласно Указу Президента РК от 27 октября 2017 года.

Изначально Правительство планировало, что данная реформа завершится к 2025 году, однако, в июне 2022 года Президент Касым-Жомарт Токаев (2022) на заседании Национального Курултая заявил, что не следует торопиться с лингвистической реформой, в связи с этим срок перехода на латиницу перенесли на 2031 год. Основные положения перехода казахского языка на латинскую графику зафиксированы в Концепции развития языковой политики в Республике Казахстан на 2023–2029 годы, которые включают в себя:

- проведение общественных конференций, собраний по внедрению новых правил орфографии;
- разработка методов изучения алфавитов и правил орфографии;
- разработка уроков для разных социальных групп для изучения правил орфографии;
- производство цифрового контента для цифровых площадок;
- оформление документов на национальном языке, перевод паспортов и документов, удостоверяющих личность граждан, на новый алфавит;
- разработка инструкций по использованию латинского алфавита в визуальных и рекламных продуктах;
- создание информационных систем для машинного перевода и редактирования казахских текстов, написанных на основе латинского алфавита.

Таким образом, со стороны Правительства ведутся работы по поэтапному переходу на латиницу. Ввиду того, что данная реформа охватывает все сферы общества, а также непосредственно всех граждан, интересным представляется изучить общественное мнение по данному вопросу.

Согласно опросу компетентного государственного института, уровень информированности населения об основных аспектах перевода казахского алфавита на латинскую графику показывает хорошие результаты и оценивается в 74,5 %. В то же время количество ответивших, что незнающих новые правила составило четверть от всех опрошенных респондентов (см. рис.).

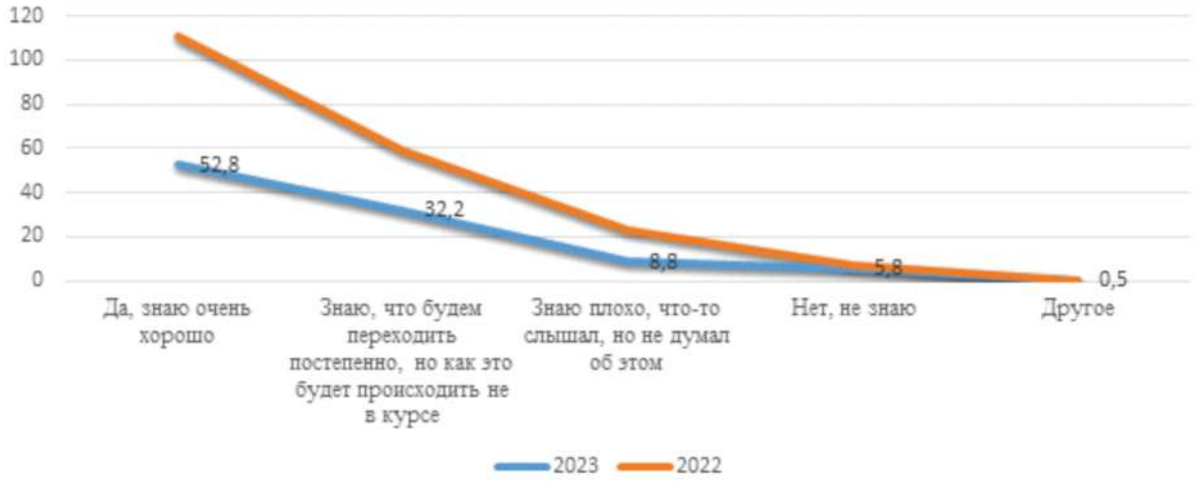

Рисунок. Распределение ответов респондентов на вопрос: «Скажите, насколько Вы информированы об основных аспектах перехода казахского языка на латиницу?», %*

**Примечание.* Составлен авторами на основе данных Комитета языковой политики МНиВО РК, 2023.

Если говорить о непосредственном использовании латиницы в онлайн-общении, то статистика показывает, что 48,5 % опрошенных редко используют латинскую графику, в то время как 40,6 % респондентов совсем не используют латинский алфавит для казахского языка (табл. 1). Данную динамику можно отметить положительной, так как Правительство нацелено на постепенный переход населения на латиницу. Согласно Концепции, процент населения, использующий латиницу для казахского языка, в письменном общении должна будет составить всего 5 % в 2027 г., 10 % в 2028 г. и 15 % в 2029 г.

Таблица 1. Ответы респондентов на вопрос: «Как часто Вы используете казахский алфавит на основе латинской графики в письме?», %*

Варианты ответов	Постоянно	Часто	Редко	Совсем не использую
В социальных сетях	0,5	18,3	48,5	32,8
В мессенджерах	0,5	18,3	40,6	40,6
В сообщениях	3,2	15,6	40,6	40,6
**Примечание.* Составлена авторами на основе данных Комитеа языковой политики МНиВО РК, 2023.				

Касательно общественного мнения исследование сообщает, среди населения нет противостояния переходу казахского языка на латиницу, напротив 24 % поддерживают данную инициативу. Тем не менее достаточно большой процент ответивших «Особой поддержки среди людей не наблюдается, так же, как и яростного несогласия», что может негативно сказаться на низком уровне интереса граждан к обучению нового алфавита (табл. 2).

Таблица 2. Ответы экспертов на вопрос: «Как Вы думаете, каково отношение населения к переходу казахского алфавита на латинскую графику?», %*

Варианты ответов	%
Население осознает, что его роль и мнение в данном вопросе не являются решающими, поэтому относится к нововведению в целом индифферентно	28,0
Большинство поддерживает языковую реформу	24,0
Поддерживает нововведение только малая часть	12,0
Особой поддержки среди людей не наблюдается, так же как и яростного несогласия	36,0
Затрудняюсь ответить	-
**Примечание. Составлена авторами на основе данных Комитета языковой политики МНиВО РК, 2023.*	

Анализируя ответы экспертов о факторах, влияющих на успешную реализацию языковой реформы, мнения пропорционально распределились на такие факторы, как: демографические (18 %), социально-политические (16 %), национальные (16 %), экономические (14 %) и др. (табл. 3).

В рамках научной работы также выявлены такие проблемы, как:

- правила казахского алфавита и орфографии не утверждены соответствующими нормативными документами;
- некоторые ученые, представители общественности сталкиваются с разногласиями по поводу некоторых знаков алфавита;
- из-за языковой неоднородности общества введение латинского алфавита может занять много времени;
- вокруг введения латинского алфавита в СМИ существует множество субъективных мнений о негативных сторонах его восприятия.

Таблица 3. Ответы экспертов на вопрос: «По Вашему мнению, от каких факторов во многом зависит успешная реализация языковой политики в стране?», %

Варианты ответов	%
Зависит от количества людей и демографических факторов	18,0
От политико-социальных и ценностных факторов	16,0
В зависимости от политического, социального, геополитического фактора, происходящего в обществе	2,0
Национальное сознание зависит от чувства. Язык — это внутренний принцип личности, он должен начинаться с детей	16,0
От готовности народа и государства к переменам	14,0
Зависит от экономических факторов	14,0
Все это связано с политическими, социальными, психологическими факторами и т.д.	14.0
Затрудняюсь ответить	6,0
Примечание. Составлена авторами на основе данных Комитета языковой политики МНиВО РК, 2023.	

Таким образом, мы видим, что Правительством ведется активная работа по переходу казахского языка на латинскую графику по всем направлениям. Со стороны общественности, согласно социологическому исследованию, также не наблюдается значительных препятствий, напротив, наблюдается

положительная динамика информированности о языковой реформе и положительного отношения к ней.

Тем не менее существуют некоторые недостатки и риски процесса перехода государственного языка на латиницу, а именно:

- отсутствуют нормативно-правовые акты о правилах новой орфографии казахского языка;
- некоторые эксперты и часть общественности расходятся во мнениях относительно некоторых знаков алфавита и правил перевода иностранных слов;
- из-за языковой неоднородности реформа имеет риск продлиться более запланированных сроков;
- возможен низкий интерес граждан к освоению нового алфавита;
- риск нехватки соответствующих кадров для переобучения широких масс населения;
- не разработана система обучения и коммуникации для казахов, проживающих за пределами Казахстана.

Заключение

Резюмируя все сказанное выше, можно заключить, что языковая политика является одним из архиважных механизмов национальной стратегии экономического и политического развития страны. На сегодняшний день Казахстан находится в историческом процессе трансформации казахского языка на латиницу. Эта реформа должна будет интегрировать Казахстан в цифровое мировое пространство, так как, по разным оценкам, примерно 40 % от населения Земного шара, или около 80 % стран мира, используют латиницу («Акмолинская правда», 2018), а также данный переход приближает казахский язык, общество к инновациям науки и технологиям.

Более того, будущему поколению будет проще и легче обучаться казахскому языку и в целом упростит образование, а также облегчит изучение казахского языка иностранцам. Вместе с тем перед Правительством и обществом стоит большая задача по переводу всего исторического наследия на новый алфавит, чтобы не утратить, а сохранить и передать его следующему поколению.

Помимо прочего, переход казахского языка на латиницу поспособствует сближению с тюркоязычными странами, которые все, за исключением Киргизстана, перешли или официально объявили о переходе на латиницу (Центр политико-правовых исследований, 2023).

Однако, помимо плюсов, есть также минусы данной языковой реформы, к которым относятся:

- большие экономические затраты, которые оцениваются экспертами от $ 500 млн до $ 1 млрд. (Зарина Ахматова, 2017), в том числе затраты на переиздание всей литературы и документации на новом алфавите;
- риск потери части культурного наследия при некачественном, неграмотном переводе казахского языка на латиницу;
- низкий интерес и мотивированность граждан к обучению и использованию нового алфавита, для того, чтобы реформа прошла успешно, необходимо, чтобы как минимум половина населения страны использовала при общении латинскую графику для казахского языка;
- слабая материально-техническая подготовка, а также нехватка кадров.

Таким образом, в рамках научного исследования авторы предлагают следующие рекомендации:

- разработать и принять соответствующие нормативные акты о правилах казахского алфавита и орфографии на латинской графике;
- сформировать, обучить и подготовить кадровый резерв специалистов для качественного и грамотного перевода казахского языка на латинскую письменность, а также обучить преподавателей, которые будут обучать широкие массы населения на базе центров изучения языков;
- разработать и внедрить систему мотивации, поощрения и пропаганды изучения государственного языка на латинском алфавите не только граждан Казахстана, но и для казахов и наших соотечественников, проживающих за пределами Казахстана.

В результате научного исследования подтвердилась первая гипотеза, которая заключается в том, что переход казахского языка на латиницу укрепит национальную идентичность, сблизит с группой тюркских языков и поспособствует интеграции Казахстана в мировое цифровое пространство при качественной и успешной реализации данной языковой реформы.

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Қазақстан Республикасының тіл саясатын реттеу тетіктерін талдау

Аңдатпа:

Мақсаты: Қазіргі уақытта Қазақстанда қазақ әліпбиін латын әліпбиіне көшірудің тарихи сәті өтуде, бұл еліміздің жаһандық цифрлық кеңістікке интеграциялануына, сондай-ақ оны басқа түркітілдес елдермен жақындастыруға мүмкіндік береді. Осыған байланысты Үкімет, ғылыми қоғамдастық және бүкіл ел алдында сәтті өтудің күрделі міндеті тұр, бұл таңдалған тақырыптың өзектілігін анықтайды. Мақаланың мақсаты — тіл саясатын реттеудің мемлекеттік тетіктерін талдау және оларды жетілдіру бойынша кейбір ұсыныстар әзірлеу. Мақаланың тақырыбы — қазақ тілінің латын графикасына көшу мәселесі бойынша жүргізілген тіл саясатының аралық нәтижесін зерделеу.

Әдісі: Мақаланы жазу барысында келесі әдістер қолданылды: материалды жинау; өңдеу; индуктивті; салыстырмалы талдау; сипаттамалық; статистикалық және мазмұнды талдау әдісі.

Қорытынды: Үкімет барлық бағыттар бойынша қазақ тілін латын графикасына көшіру бойынша белсенді жұмыс жүргізуде. Қоғам тарапынан да, әлеуметтік зерттеулерге қарағанда, айтарлықтай кедергілер жоқ, керісінше, тіл реформасынан хабардар болуда және оған деген дұрыс көзқараста оң үрдіс байқалады.

Тұжырымдама: Зерттеу нәтижесінде авторлар келесі ұсыныстарды ұсынады: қазақ әліпбиі мен латын графикасындағы емле ережелері туралы тиісті нормативтік құқықтық актілерді әзірлеу және қабылдау; мамандардың кадрлық резервін қалыптастыру, оқыту және дайындау; тек Қазақстан азаматтары үшін ғана емес, сондай-ақ Қазақстаннан тысқары жерде тұратын қазақтар мен қандастарымыз үшін де мемлекеттік тілді латын әліпбиінде үйренуді ынталандыру, көтермелеу және насихаттау жүйесін әзірлеу және енгізу.

Кілт сөздер: тіл саясаты, қазақ тілі, ауысу, латын әліпбиі, тіл реформасы, ынталандыру жүйесі.

A.K. Moldabayeva, A.B. Zeynelgabdin

Analysis of the mechanisms of regulation of the language policy of the Republic of Kazakhstan

Annotation

Object: Currently, Kazakhstan is passing the historical moment transformation of the Kazakh language into the Latin alphabet, which will allow the country to integrate into the global digital space, as well as to bring it closer to other Turkic-speaking countries. In this regard, the Government, the scientific community and the whole country face the difficult task of a successful transition, which determines the relevance of the chosen topic. The purpose of this study is to analyze the state mechanisms for regulating language policy and develop some recommendations for their improve-

ment. The subject of the scientific work is an intermediate result of the language policy in the issue of the transition of the Kazakh language to the Latin script.

Methods: Within the framework of scientific work, the following methods were used: methods of collecting material; methods of processing it; inductive method; method of comparative analysis; descriptive method; statistical method and method of content analysis.

Findings: The Government is actively working on the transition of the Kazakh language to the Latin script in all directions. According to the sociological research, there are also no significant obstacles on the part of the public, on the contrary, there is a positive trend in awareness of language reform and a positive attitude towards it.

Conclusions: As a result of the scientific research, the authors propose the following recommendations: to develop and adopt appropriate regulations on the rules of the Kazakh alphabet and spelling in Latin script; to form, train and prepare a personnel reserve of specialists; to develop and implement a system of motivation, encouragement and promotion of learning the state language in the Latin alphabet not only for citizens of Kazakhstan, but also for Kazakhs and our compatriots living outside Kazakhstan.

***Keywords**:* language policy, Kazakh language, transition, Latin alphabet, language reform, motivation system.

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Қазақстанның көлік-логистикалық жүйесін корреляциялық талдау

Аңдатпа:

Мақсаты: Қазақстанның халықаралық рейтингтегі көрсеткіштеріне және көлік-логистикалық жүйесінің даму жағдайына талдау жүргізу, соның негізінде оның дамуына ықпал ететін факторларды анықтау.

Әдісі: Жұмыста Қазақстандағы логистиканың рейтингтік көрсеткіштері мен көлік-логистикалық жүйесінің статистикалық көрсеткіштері арасындағы корреляциялық талдау әдісі пайдаланылды.

Қорытынды: Мақалада Қазақстан Республикасының көлік-логистикалық жүйесін талдау ұсынылған. Қазақстанның әлемдік рейтингтердегі ұстанымдары (Logistics Performance Index, Transport infrastructure/the Global Competitiveness Index, Emerging Market Logistics Index) талданды. Рейтингті талдау негізінде Қазақстан көліктік-логистикалық жүйесін дамытудың ұйымдастырушылық-экономикалық құралдарының тиімділігіне баға берілді.

Тұжырымдама: Қазақстан экономикасы үшін транспорттық-логистикалық жүйе маңызды құрамдас бөлік болып табылады. Географиялық орналасуы Қазақстанға халықаралық логистикаға қатысу үшін үлкен артықшылық береді, өйткені ол Еуразия құрлығының дәл орталығында орналасқан. Бұл Қазақстанға шығыс-батыс және солтүстік–оңтүстік бағыттарындағы жүктердің транзитін қамтамасыз ете отырып, Азия мен Еуропа арасындағы байланыстырушы буын ретінде дамуға мүмкіндік береді. КЛЖ қызметі ел үшін өте маңызды. Қазақстанның көлік-логистикалық жүйесінде алдағы уақытта экономиканың өсу қарқынына теріс әсер етуі мүмкін бірқатар жүйелі проблемалар бар.

Зерттеуде авторлар көлік-логистикалық жүйелердің тұрақты даму факторларын жүйелеп, көлік-логистикалық салаға әсер ететін тенденцияларды қарастырды. Сондай-ақ, Қазақстанның көліктік-логистикалық жүйесін дамытудың негізгі көрсеткіштері мен EMLI индексі арасында корреляциялық байланыс анықталды, бұл өз нәтижесінде логистиканың неғұрлым дамыған елдердің нәтижелерімен салыстырудың маңыздылығын айқындайды.

Кілт сөздер: көлік, көлік-логистикалық жүйе, логистикалық тиімділік индексі, көлік инфрақұрылымының көрсеткіштері, рейтинг, Қазақстан.

Кіріспе

Кез келген елдің экономикалық өсуі мен өркендеуі көлік-логистикалық жүйенің (КЛЖ) жағдайына байланысты. Сондықтан КЛЖ-ні қалыптастыру және дамыту міндеттері жекелеген компаниялар деңгейінде де, экономика салалары, экономикалық аумақтар және тұтастай алғанда мемлекет деңгейінде де стратегиялық маңызды болып табылады. Көлік-логистикалық жүйенің қалыптасуы мен дамуы мүмкіндіктер мен қауіптердің әсерінен болады.

Әлемдік тәжірибе көрсеткендей, порттарға, теміржолдарға, көлік магистральдарына, логистикалық орталықтарға және КЛЖ-нің басқа да объектілеріне инвестициялар тиімді болып табылады және басқарудың инновациялық жүйелерін дұрыс жоспарлау және енгізу кезінде бірнеше жыл ішінде өзін-өзі ақтай алады. Тікелей артықшылықтардан басқа жанама артықшылықтар да бар: КЛЖ-нің өткізу қабілетін арттыру экономикадағы шығындарды азайтуға мүмкіндік береді және іскерлік белсенділікті жандандыруға ықпал етеді. Экономикалық әсерлер көбінесе көлік тораптары мен логистикалық орталықтардың тиімді жұмысымен анықталады (Kongkiatpaiboon, 2019).

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Әр жылдары елдің көлік саласын дамыту мақсатында көлік жүйесі инфрақұрылымын дамыту және интеграциялаудың мемлекеттік бағдарламалары қабылданып, іске асырылды. Атап айтсақ 2014 жылғы 11 қарашадағы «Нұрлы жол — болашаққа бастар жол», 2017 жылғы 31 қаңтардағы «Қазақстанның үшінші жаңғыруы: жаһандық бәсекеге қабілеттілік», Қазақстан Республикасының көлік-логистикалық әлеуетін дамытудың 2030 жылға дейінгі Тұжырымдамасы, «Күшті аймақтар — ел дамуының драйвері» ұлттық жобасы.

Осы бағдарламалық құжаттар шеңберінде ұлттық жүк тасымалдаушылар мен жолаушылардың бәсеке қабілетін арттыру және дамыту үшін жағдайлар жасалды.

Қазақстанның көлік-логистикалық кешенін және тасымалдау әлеуетін арттыруға соңғы 15 жылдың ішінде 10 трлн теңге көлемінде инвестициялар жұмсалған. Бұл Қазақстан экономикасының инфрақұрылымын әлемдік көлік-логистикалық жүйеге енгізуге, жүктерді тасымалдауды жылдамдатып, құнын төмендетуге мүмкіндік береді және жаңа тасымалдау дәліздерін жасауға ықпал етеді. Мемлекеттік бағдарламаларды жүзеге асыруда осы салада 600 мың көлемінде жаңа жұмыс орындарын ашуға мүмкіндік берді. 2015–2021 жылдар аралығында барлық көлік түрлері бойынша транзиттік тасымалдау жылына орташа есеппен 14,8 % -ға артып отырған. Соның ішінде соңғы 3 жылда 13,4 % мөлшерінде өсу байқалады.

Қазақстан Республикасында жаңа буынның логистикалық орталықтарын дамыту перспективаларын айқындайтын аса маңызды факторларды еліміздің көлік-логистикалық жүйесін дамытудың маңыздылығын ескере отырып, бағалау маңызды.

Зерттеу гипотезасы — елдің көлік жүйесінің даму индикаторлары мен EMLI индексі арасында корреляциялық байланыс бар, бұл өз нәтижелерін халықаралық тәжірибенің үздіктерімен салыстыруға бағдарланудың негізділігін растай алады. Халықаралық рейтингтерге қатысу өз дамуының стратегиялық бағытын анықтау мақсатында қажет.

Әдебиетке шолу

Қазіргі кезде тұрақты даму тұжырымдамасына сәйкес экономикалық, әлеуметтік және экологиялық даму мен қоғамдық дамудың арасындағы тепе-теңдікке қол жеткізу маңызды мәселе болып табылады. Осы орайда көлік-логистикалық жүйені дамыту, тиімді пайдалану, тасымалдау көлемін арттыруға ықпал ететін факторларды зерттеу өзекті.

Отандық және шетелдік ғылыми әдебиеттерді талдау (Barysienė, Batarlienė, Bazaras, Čižiūnienė, Cheah, Kersten, Ringle, Wallenburg, 2023, Griškevičienė, Lazauskas, Mačiulis et al., 2015; McKinnon, Browne, Whiteing, Piecyk, 2015; Odeck, 2019, Shepherd, Sriklay, 2023, Syzdykbayeva, Mussina, Baimbetova, 2017, Soares et al., 2022) көлік-логистикалық жүйелердің тұрақты даму факторларын жүйелеуге мүмкіндік берді (1-сурет).

Көлік-логистика жүйесінің факторларын анықтауда құрылымдық-функционалдық және жүйелік әдістер қолданылады. Олар көлік-логистика жүйесін сипаттауда оның негізгі элементтерінің функцияларына негізделген (Polukhina, Mizanbekova, 2022; Park, 2020):

- кіру — логистикалық жүйеге материалдық және қызметтер ағынының келіп түсуі;
- көліктік–логистикалық жүйеде материалдық ағындарды тасымалдау;
- шығу — логистикалық жүйеден материалдық және қызметтер ағынының шығуы;
- басқару — ақпараттық және қаржылық ағындардың сипатын өзгерте отырып, материалдық және қызметтер ағындарын өңдеу және жылжыту мақсатында логистикалық жүйенің барлық құраушыларының өзара қызметін үйлестіру.

Факторларды анықтап, топтастыруда құрылымдық-функционалдық әдіс оларды екі негізгі топқа бөлуге мүмкіндік береді:

- негізгі функциялардың бірін атқаратын логистикалық элемент болып табылатындығы;
- логистикалық ағындарға факторлардың қалай әсер ететіндігі (материалдық, ақпараттық, қаржылық, қызметтер ағыны).

Осы қарастырылып отырған элементтерге де, тұтас көлік-логистика жүйесіне де оң ықпал ететін факторлар тұрақты дамуын қамтамасыз етеді. Олар тасымалдау буындарын жан-жақты бағалауға, олардың тиімділігін арттыратын құралдар мен әдістерді дайындауға және қолдануға мүмкіндік береді.

Авторлар ұсынған жеткізу тізбегінің тұрақты даму факторларының жүйесі көлік-логистикалық қызметті бағалау критерийлері мен көрсеткіштерін әзірлеу үшін негіз болып табылады. Көлік-логистикалық жүйелерді жобалау және жұмыс істеу процесінде анықталған факторларды есепке алу

жеткізу тізбектерін тұрақты даму қағидаттарына сәйкестікке бағалауға, логистикалық жүйелердің жұмыс істеу тиімділігін арттыру жөніндегі іс-шараларды әзірлеуге мүмкіндік береді.

1-сурет. Көлік-логистикалық жүйенің тұрақты даму факторларының схемасы

Ескерту — автормен құрастырылған

Әдістері

КЛЖ-нің халықаралық стандарттарға сәйкестігі халықаралық индекстер мен рейтингтер бойынша бағаланады.

Мұндай рейтингтер тізімінің біріншісі — көлік ағындарын жеткізу мен бөлудің ыңғайлылық дәрежесін бағалайтын арнайы индекс. Логистиканың тиімділігі Logistics Performance Index, Дүниежүзілік банктің LPI индексімен анықталады. Бұл индекс екі жылда бір рет есептеледі, бірақ 2018 жылдан бастап бұл рейтинг жүргізілмеді (LPI Aggregated Rankings. The World Bank). 2020 жылға қарай позицияларды одан әрі жақсарту, рейтингте 40-шы орынға ие болу күтілді. Индексті есептеу үшін келесі критерийлер қолданылды:

1) ҚР–дағы кеден органдары қызметінің тиімділігі;
2) КЛЖ объектілері арасындағы логистикадағы құзыреттер;
3) жеткізудің шарттық мерзімдерін сақтау;
4) логистикалық инфрақұрылым жай-күйінің сапасы;

5) бүкіл жеткізу тізбегін қадағалау мүмкіндіктері (клиенттер, қадағалау органдары және басқа да мүдделі тұлғалар үшін).

Сарапшылардың пікірінше индексті жақсарту бірнеше факторларға байланысты:

- ҚР КЛЖ-ға инвестициялар көлемін ұлғайту;
- көлік саласындағы ірі инфрақұрылымдық жобаларды іске асыру;
- шекарадан өту ұзақтығын қысқартуға мүмкіндік берген кейбір ұйымдастырушылық-техникалық іс-шараларды іске асыру;
- Қазақстандағы көлік-логистикалық жүйе құрылымында жеке кәсіпкерлік субъектілері көрсететін қызметтердің сапасын арттырудың белгіленген үрдісі.

Қазақстан Республикасындағы логистикалық нарықтың қарқынды және сенімді өсуін атап өту қажет. 2020 жылдың соңында ҚР-да 6000-нан астам КЛК болды, негізінен бұл компаниялардың барлығы Алматы қаласында орналасқан. Негізінен бизнесті шағын коммерциялық компаниялар, тар, нақты логистикалық операцияларға маманданған жеке кәсіпкерлер ұсынады **(**Sładkowski, Syzdykbayeva, Azatbek, Sharipbekova, 2022).

Қазақстан халқын тауарларды сақтау орындарымен қамтамасыз ету коэффициенті бойынша 1000 тұрғынға шаққанда Қазақстан еуропалық көрсеткіштерден 2 есе дерлік артта қалды — 227 м^2 (Еуропада 420 м^2). Айырмашылық объективті себептерге — сауда көлемінің аздығына және Қазақстандағы халықтың тығыздығының аздығына байланысты деп есептеледі. Қазақстандық нарықта 8 млн.м^2 жуық қойма үй-жайларының әлеуеті бар.

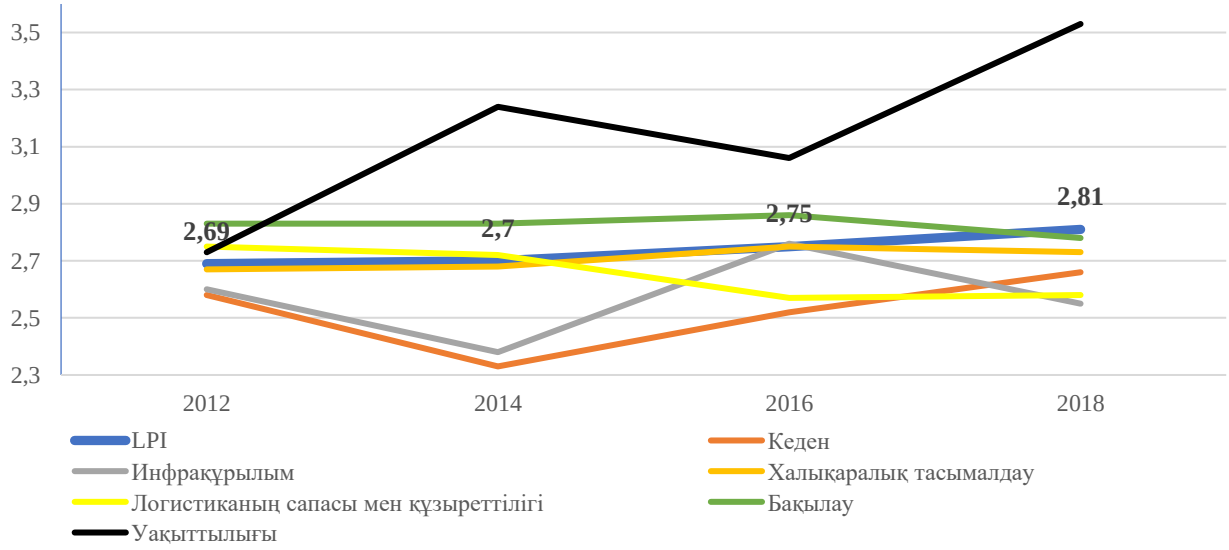
Ақпараттық технологиялар логистикадағы қағазсыз құжат айналымына көшуді қамтамасыз етуі, логистикалық орталық процестерінің кешенді мониторингін, сондай-ақ логистикалық инфрақұрылым объектілерінің жай-күйін қамтамасыз етуі тиіс деп болжанады. Қазіргі заманғы логистикалық жүйелердегі басты қозғаушы күш жоғары тиімді көлік пен клиенттерге қызмет көрсету бойынша логистикалық технологияларға деген қажеттілік болып табылады.

Нәтижелер

Жүргізілген зерттеу Қазақстан Республикасының көлік-логистика жүйесінің қазіргі жағдайына талдау жүргізу, көлік-логистика жүйесінің дамуына әсер ететін факторларды анықтау мақсатында болды.

Қолжетімді деректерге сүйене отырып, Қазақстанның логистикалық жүйесінің әлемдік рейтингтердегі орнын талдаймыз. Халықаралық тәжірибеде КЛЖ тиімділігі рейтингтермен бағаланады:

1) Logistics Performance Index (LPI) (2-сурет);
2) «Инфрақұрылым» компоненті бойынша жаһандық бәсекеге қабілеттілік индексі;
3) Дамушы нарықтардың логистикалық индексі.



2-сурет. Қазақстанның LPI көрсеткіштерінің динамикасы, 2012–2018 жж.

Ескерту –LPI Aggregated Rankings мәліметтерінің негізінде автормен құрастырған

Логистикалық жүйенің даму деңгейін анықтауда «Инфрақұрылым» компоненті бойынша 2020 жылғы жаһандық бәсекеге қабілеттілік индексі қолданылды. Бұл индексті Дүниежүзілік экономикалық форум анықтайды. Кейбір жақсартуларға, рейтингтегі позицияны жақсартуға қарамастан, «Нұрлы жол» мемлекеттік бағдарламасының негізгі жоспарланған көрсеткіштеріне ешқашан қол жеткізілген жоқ. Мұның себептерінің бірі — Қазақстанның көлік-логистикалық қызметтер нарығында бәсекелестіктің күшеюі. Қазақстан Республикасы бойынша «Transport infrastructure» субиндексі бойынша деректер 1-кестеде келтірілген.

Жаһандық бәсекеге қабілеттілік индексі *(GCI)* Дүниежүзілік экономикалық форумның (WEF) әдістемесіне сәйкес экономикалық бәсекеге қабілеттілік көрсеткіші бойынша әлем елдерінің рейтингісін анықтайды. Ол елдердің статистикалық мәліметтері мен компания басшыларының жаһандық сауалнамасының нәтижелеріне негізделіп жасалады. 1-кестеде GCI рейтингісінің кейбір көрсеткіштері келтірілген (бастапқы дереккөз бойынша нөмірлеу).

1-кесте. Қазақстанның жаһандық бәсекеге қабілеттілік рейтингісіндегі «Transport infrastructure» субиндексі бойынша орны, 2018–2019 жж.

Көрсеткіш	***2018***	***2019***
Жалпы рейтинг бойынша	59 (61,8)	55 (62,9)
2. Көлік инфрақұрылымы	69 (67,3)	73 (48,7)
2.01 Жол қатынасы	59 (69,0)	56 (79,3)
2.02 Жол инфрақұрылымының сапасы	106 (37,1)	93 (43,2)
2.03 ТЖ км тығыздығы / 1,000 км^2	64 (14,2)	66 (14,9)
2.04 Пойыздар қозғалысының тиімділігі	34 (55,5)	33 (53,4)
2.05 Әуежайлармен жарақтандыру	72 (46,4)	72 (46,4)
2.06 Автокөлік қызметтерінің тиімділігі	82 (55,9)	89 (54,0)
2.08 Теңіз порты қызметтерінің тиімділігі	92 (41,1)	99 (38,9)
Дереккөз: World Economic Forum. Reports		

Инфрақұрылымды дамыту 1989 жылдан бері жарияланып келе жатқан IMD World Competitiveness Yearbook (WCY) жыл сайынғы рейтингісінде де қарастырылуда. Бұл жыл сайынғы кешенді есеп және елдердің бәсекеге қабілеттілігі туралы дүниежүзілік анықтама. «Инфрақұрылым» субиндексінің критерийлері: авиатасымалдардың сапасы, жолдар (желінің тығыздығы, км жолдар/шаршы км жер алаңы), темір жолдар (желінің тығыздығы, км шаршы км-ге), әуе көлігі болып табылады. Қазақстан 2018–2022 жылдар ішінде өз позициясын 42-орыннан 46-орынға дейін төмендетті (2-кесте).

2-кесте. Қазақстанның IMD World Competitiveness Yearbook (WCY) рейтингіндегі «Infrastructure» субиндексі бойынша орны, 2018–2022 жж.

Көрсеткіш	***2018***	***2019***	***2020***	***2021***	***2022***
Жалпы рейтинг бойынша	38	34	42	35	43
4. Инфрақұрылым	42	43	51	47	46
Дереккөз: World Competitiveness Ranking					

Сонымен қатар елдегі логистикалық инфрақұрылымның даму жағдайын анықтауда дамушы нарықтар логистикасының индексі қолданылады (рейтингке 50 ел кіреді) (EMLI), ол 2010 жылы британдық «Transport Intelligence» зерттеу институтымен (Agility Emerging Markets Indices) құрылған.

2019 жылға дейін EMLI есептеу үшін индикатордың 3 компоненті қолданылды:

- нарықтың көлемі мен сипаттамалары;
- нарықтардың үйлесімділігі;
- көліктік-логистикалық коммуникацияларды дамыту.

2019 жылдан бастап EMLI индексін есептеу әдістемесі өзгерді — есептеудің негізіне 3 индикатор алынды:

- ел ішіндегі логистикалық мүмкіндіктер;
- елден тыс логистикалық мүмкіндіктер;
- кәсіпкерлікті дамыту.

2022 жылдан бастап тағы бір көрсеткіш қосылды — цифрлық технологияларға жалпы дайындық.

Жаңартылған мағынада EMLI индексі болашақта мүмкіндіктер мен әлеуетті нарықтық ұсыныстарды өлшеуге мүмкіндік береді. Қазақстанның EMLI индексі рейтингісіндегі орны 2017 жылға

дейін тұрақты түрде өсті (3-кесте). Содан кейін басқа елдердің бәсекелестік позицияларының нығаюына байланысты біршама төмендеу байқалды.

3–кесте. Қазақстанның Agility Emerging Markets рейтингіндегі көрсеткіштері, 2012–2023жж.

Жыл	Рейтингтегі орны	EMLI индексі	Субиндекстер						
			Нарықтың ауқымы және оның даму тенденциялары	Нарықтың үйлесімділігі	Көлік байланысын жетілдіру	Ішкі логистикалық мүмкіндіктер	Халықаралық логистикалық мүмкіндіктер	Бизнес негіздері	Цифрлық технологияларға жалпы дайындық
2012	25	4,55	4,03	5,76	4,62	-	-	-	-
2013	18	4,99	4,36	6,60	5,00	-	-	-	-
2014	16	5,07	4,47	6,62	4,99	-	-	-	-
2015	6	5,08	4,50	6,47	5,03	-	-	-	-
2016	5	5,28	4,60	6,94	5,14	-	-	-	-
2017	14	5,60	4,81	6,95	5,80	-	-	-	-
2018	20	5,41	4,60	6,91	5,52	-	-	-	-
2019	22	4,91	-	-	-	4,78	4,70	5,83	-
2020	21	5,03	-	-	-	4,73	4,68	6,39	-
2021	22	5,01	-	-	-	4,69	4,73	6,24	-
2022	22	4,97	-	-	-	4,67	4,70	6,20	4,93
2023	22	4,99	-	-	-	4.66	4.66	6.19	5.10
Дереккөз: Agility Emerging Markets Indices									

Қазақстанның 2018 жылғы жалпы рейтингте де, индекс деңгейі бойынша да төмен орындарға түскендігі анықталған. Бұл әлемдік логистикалық нарықтағы бәсекелестіктің күшейгендігін және елдердің өздерінің ұлттық логистикалық инфрақұрылымын дамыта отырып, тартымдылығын арттыруға ұмтылысын көрсетеді. Бұл жаһандық логистикалық жүйелерге елдің логистикалық жүйесін енгізу мүмкіндігі тек қана географиялық орналасуға байланысты емес екендігін көрсетеді. Қазақстанның транзиттік мүмкіндіктерін арттыру үшін алдымен елдің көлік-логистикалық жүйелері мен инфрақұрылымын дамыту қажет, көлік-логистика жүйесін дамыту арқылы Қазақстанның көлік жолдарының өткізу қабілетін арттырып, тасымалдау құнының ашықтығын және оларды бақылау мен реттеуді жүзеге асыру қажет.

Логистика индикаторларын жақсартуға ҚХР-ның «Belt & Road» жобасындағы негізгі ұстанымы, инфрақұрылымға қомақты инвестициялар, сондай-ақ бизнес-ортаны жақсарту және әсіресе АҚШ, Германия және Жапония елдері арасында тікелей шетелдік инвестицияларды ұлғайту ықпал етті.

Темір жол, автомобиль, ішкі су, әуе, көліктің құбыр түрлері республиканың көлік кешеніне шаруашылықаралық және мемлекетаралық байланыстарды жүзеге асыруда аса маңызды рөл беріледі. Республиканың ішкі жалпы өніміндегі көлік үлесі 2021 жылы 5,9 % -ды құрады.

2022 жылғы 1 қаңтардағы жағдай бойынша Қазақстанның жалпы пайдаланымдағы көлік желісі 16,6 мың км темір жолдан; 95,4 мың км автомобиль жолынан; 2,2 мың км ішкі су кеме қатынасы жолдарынан; 24,4 мың км магистральдық құбырлардан тұрды.

Талқылау

Зерттеу мақсатында Қазақстанның аталған рейтингтердегі орындарын негіздеу үшін көлік-логистика жүйесінің тиімділік индексі мен 2012–2021 жылдардағы көлік жүйесінің даму көрсеткіштерінің арасындағы корреляциялық байланыс анықталды.

Корреляциялық талдау үшін бастапқы деректер ҚР Стратегиялық жоспарлау және реформалар агенттігінің Ұлттық статистика бюросының ашық деректерінен алынған (4-кесте).

Қолжетімді статистикалық ақпарат негізінде PSPP пакетін қолдана отырып, статистикалық талдау әдістерімен EMLI логистика индексіне факторлардың әсерін зерттеу жүргізілді.

4–кесте. Корреляциялық талдау үшін бастапқы деректер

Жыл	EMLI индексі	Жолаушылар айналымы, млн. жолаушы-км	Жүк айналымы, млрд. ткм	Көлік түрлері бойынша негізгі капиталға инвестициялар, млн теңге	Жүктерді тасымалдау, млн тонна	Темір жолдардың ұзындығы, км	Автожолдардың ұзындығы, км	Магистральдық құбырлардың ұзындығы, км	Су кеме қатынасы жолдарының ұзындығы, км
2012	4,55	213 036	478,0	660 891	3 231,8	15 333	97 418,0	20 238,1	4 150,9
2013	4,99	235 738	495,4	963 170	3 508,0	15 341	96 873,0	20 238,1	4 150,9
2014	5,07	246 959	554,9	639 336	3 749,8	15 341	96 421,0	23 196,4	4 150,9
2015	5,08	251 251	546,3	557 231	3 733,8	15 341	96 529,0	23 275,7	4 150,9
2016	5,28	266 784	518,6	557 231	3 729,2	16 104	96 353,0	23 271,0	4 150,9
2017	5,60	273 193	564,0	659 821	3 946,1	16 614,3	95 409,6	23 268,4	4 150,9
2018	5,41	281 484	609,5	783 883	4 103,8	16 634,8	96 245,7	23 334,3	4 080,9
2019	4,91	295 517	597,6	564 350	4 222,7	16 634,8	95 629,0	23 438,8	4 106,1
2020	5,03	108 711	584,0	579 744	3 944,8	16 636,7	95 767,8	23 445,0	3 533,3
2021	5,01	107 759	607,7	710 658	4 013,7	16 579,6	95 443,0	27 437,1	2 169,3
Дереккөз: Bureau of national statistics agency for strategic planning and reforms of the Republic of Kazakhstan									

Әрі қарай бағалау үшін EMLI-мен байланысты 5 айнымалыны анықтауға мүмкіндік беретін корреляциялық матрица құрылды (5-кесте).

5-кесте. EMLI-мен байланысты айнымалылар

Көрсеткіштер	Корреляция коэффициенті
Жолаушылар айналымы, млн. жолаушы, км	0,472
Жүк айналымы, млрд. ткм	0,409
Жүктерді тасымалдау, млн тонна	0,518
Автожолдардың ұзындығы, км	-0,535
Магистральдық құбырлардың ұзындығы, км	0,309
Ескерту: авторлар есептеген	

Тәуелсіз айнымалылардың (X) өзгеруінің логистикалық индекске (Y) әсер ету дәрежесін анықтау үшін жұптық сызықтық регрессия әдісі қолданылды (6-кесте).

6-кесте. Жұптық регрессия моделінің параметрлері

Айнымалылар	R square	B
Жолаушылар айналымы, млн. жолаушы, км	0,472	1,44
Грузооборот, млрд. ткм	0,409	0,002
Жүк айналымы, млрд. ткм	0,518	0,0005
Автожолдардың ұзындығы, км	-0,535	0,0002
Магистральдық құбырлардың ұзындығы, км	0,309	0,000045
Ескерту: авторлар есептеген		

Модельдеу нәтижесінде жұптық регрессияның келесі теңдеулері алынды:
Y = 4,76 + 1,44X, мұндағы X — жолаушылар айналымының көлемі
Y = 3,684 + 0,002X, мұндағы X — жүк айналымының көлемі
Y = 3,155 + 0,0005X, мұндағы X — жүктерді тасымалдау көлемі
Y = 27,78 – 0,0002X, мұндағы X — автожолдардың ұзындығы
Y = 4,06 + 0,000045X, мұндағы X — магистральдық құбырлардың ұзындығы

Зерттеу барысында логистика индексіне жүктерді тасымалдау (корреляция коэффициенті — 0,518), автожолдардың ұзындығы (корреляция коэффициенті — 0,535), жолаушылар айналымының көлемі (корреляция коэффициенті — 0,472) сияқты факторлар барынша әсер ететіні анықталды.

Аталған көрсеткіштерді жақсарту арқылы берілген рейтингтік көрсеткіштерге қол жеткізуге болады. Бұл көрсеткіштердің іске асырылуы көлік-логистикалық жүйенің әртүрлі стейкхолдерлерінің қызметіне байланысты: мемлекеттік билік институттары, жергілікті өзін-өзі басқару органдары, сондай-ақ логистикалық орталықтар. Аталған көрсеткіштерді жақсартудың перспективалық бағыты ҚР-да логистикалық кластерлер құру. Ол үшін мемлекет деңгейінде КЛЖ-ні дамыту, логистикалық кластерлерді дамыту бойынша белгілі бір заңнамалық, ұйымдастырушылық және институционалдық бастамалар талап етіледі.

PwC компаниясының талдауына сәйкес, жақын арада көлік-логистика саласына негізгі әсер ететін 5 негізгі фактор болады (PwC):

1. цифрландыру;
2. халықаралық саудадағы өзгерістер;
3. жаңа бағдарламалық қамтамасыз етуді енгізуге байланысты негізгі процестердегі өзгерістер;
4. ішкі нарықтардың динамикасын өзгерту;
5. жаңа техниканы енгізуге байланысты негізгі процестердегі өзгерістер.

1. Цифрландыру қазірдің өзінде көлік пен логистикаға ең күшті әсер етеді. Жаңа технологиялар таныс өндірістік, әкімшілік және коммерциялық процестерді цифрлық ортаға аударады, бұл жаңа бизнес-модельдер жасауға мүмкіндік береді.

2. Орта мерзімді перспективада көлік пен логистикаға негізгі әсер Қытайдан ЕО елдеріне теміржол тасымалы көлемінің өсуі болады. Бұл жаңа инвестициялық жобалардың пайда болуын және жаңа маршруттардың дамуын алдын-ала анықтайды. Көлік компаниялары үшін ынталандыру «Бір белдеу — бір жол» жобасына инвестициялар болуы тиіс. Бұл қатынас жолдарын жаңғыртуға, тасымалдау шығындарын төмендетуге және қызметтердің жаңа түрлерін дамытуға әкеледі деп болжануда.

3. Негізгі технологиялар мен бағдарламалық шешімдерді дамыту бизнесті жаңа артықшылықтармен қамтамасыз ете отырып, көлік-логистика саласына барған сайын әсер ететін болады. Уақыт бойынша әр түрлі перспективада мыналар жетекші болады:

- интеллектуалды көлік жүйелері;
- бизнес-процестерді роботтандыру (RPA);
- алдын алу үшін техникалық қызмет көрсету, дрондармен қадағалау және бақылау;
- блокчейн шешімдері;
- жасанды интеллект негізіндегі шешімдер.

4. Көлік-логистикалық компаниялар өндірушілермен, жеткізушілермен, іргелес ойыншылармен және тіпті бәсекелестермен ынтымақтастықтың үлкен деңгейін талап етеді. Жаңа интеграциялық тізбектердің жақын арада дамуы бірігу мен жұтып алудың артуына, кейбір шоғырландырылған альянстарға әкеледі. Тек осылай ғана сала уақыт талаптарына жауап бере алады. Артта қалмау үшін компаниялар өз жұмысында келесі бағыттарды күшейтуі керек:

- онлайн-сауданы дамыту;
- өз логистикасына инвестиция салу;
- онлайн-коммерцияға арналған арнайы курьерлік шешімдер (CEP-Courier, Express and Parcel);
- ортақ тұтыну экономикасы қағидаттарына негізделген шешімдер;
- логистиканы шоғырландыру.

5. Жұмысты автоматтандыруға және бизнестің тиімділігін арттыруға көмектесетін бағыттар:

- роботтандыру;
- электромобильділік;
- виртуалды және толықтырылған шындық жүйелері (ВШ және ТШ);
- жоғары жылдамдықты теміржол магистральдары;
- «соңғы миль» учаскесінде жеткізуді оңтайландыру.

Аталған факторлар тұтастай алғанда көлік-логистикалық жүйеге айтарлықтай әсер ететіні анық. Қызмет ауқымына және қатысу аймағына қарамастан, көлік қызметкерлері инновацияларға мұқият назар аударуы керек және табысты бизнестің кепілі болып табылатын шешімдерге қаражат жұмсаудан қорықпауы керек.

Қорытынды

Қазақстанның жаһандық логистикалық жобаларға қатысушысы ретінде өзін Орталық Азияның тиімді дамып келе жатқан транзиттік хаб ретінде көрсетуге мүмкіндіктері бар. Қазіргі уақытта Қазақстан Республикасында логистикалық нарықты дамыту үшін қолайлы жағдайлар қалыптасқан. Алға қойылған мемлекеттік даму міндеттерін орындау үшін көлік-логистикалық жүйені жаңғырту маңызды. Бүгінгі кезеңде экономиканың көлік-логистикалық секторында қалыптасқан қолайлы нарықтық жағдайлар нарыққа қатысушыларды осы мүмкіндікті жіберіп алмау үшін белсенді дамуға мәжбүр етеді.

Қосымша мәліметтер:

Мақаланы Қазақстан Республикасы Ғылым және жоғары білім министрлігінің Ғылым комитеті қаржыландырған (грант № AP19677634).

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А.А. Рахметулина, А.С. Кулмаганбетова, Ж.С. Раимбеков

Корреляционный анализ транспортно-логистической системы Казахстана

Аннотация:

Цель: Провести анализ показателей международного рейтинга и состояния развития транспортно-логистической системы Казахстана, на его основе выявить факторы, способствующие ее развитию.

Методы: В работе использован метод корреляционного анализа между рейтинговыми показателями логистики в Казахстане и статистическими метриками транспортно-логистической системы Республики Казахстан.

Результаты: В статье представлен анализ транспортно-логистической системы Республики Казахстан. Проанализированы позиции Казахстана в мировых рейтингах (Logistics Performance Index, Transport infrastructure/The Global Competitiveness Index, Emerging Market Logistics Index). На основе анализа рейтинга дана оценка эффективности организационно-экономических инструментов развития транспортно-логистической системы Казахстан.

Выводы: Для экономики Казахстана транспортно-логистическая система (ТЛС) является важной составляющей. Географическое расположение дает Казахстану огромное преимущество для участия в международной логистике, так как находится в самом центре Евразийского континента. Это позволяет Казахстану развиваться в качестве связующего звена между Азией и Европой, обеспечивая транзит грузов в направлениях «Восток–Запад» и «Север–Юг». Деятельность ТЛС очень важна для страны. В ней есть ряд системных проблем, которые в дальнейшем могут негативно повлиять на темпы роста экономики.

В исследовании авторы систематизировали факторы устойчивого развития транспортно-логистических систем; рассмотрели тенденции, которые окажут влияние на транспортно-логистическую отрасль в ближайшем будущем. Также установлена корреляционная зависимость между основными показателями развития транспортно-логистической системы и индексом EMLI Казахстана, что определяет важность сравнения собственных результатов с результатами наиболее развитых стран в логистике.

Ключевые слова: транспорт, транспортно-логистическая система, индекс эффективности логистики, показатели транспортной инфраструктуры, рейтинг, Казахстан.

A.A. Rakhmetulina, A.S. Kulmaganbetova, Zh.S. Raimbekov

Correlation analysis of the development of the transport and logistics system of Kazakhstan

Abstract

Object: to analyze the indicators of the international rating and the state of development of the transport and logistics system of Kazakhstan, on the basis of which to identify the factors contributing to its development.

Methods: The paper uses the method of correlation analysis between the rating indicators of logistics in Kazakhstan and statistical metrics of the transport and logistics system of the Republic of Kazakhstan.

Findings: The article presents an analysis of the transport and logistics system of the Republic of Kazakhstan. The positions of Kazakhstan in the world rankings (Logistics Performance Index, Transport infrastructure / The Global Competitiveness Index, Emerging Market Logistics Index) are analyzed. Based on the analysis of the rating, an assessment of the effectiveness of organizational and economic instruments for the development of the transport and logistics system of Kazakhstan is given.

Conclusions: The transport and logistics system is an important component for the economy of Kazakhstan. The geographical location gives Kazakhstan a huge advantage to participate in international logistics, as it is located in the very center of the Eurasian continent. This allows Kazakhstan to develop as a link between Asia and Europe, providing transit of goods in the East-West and North-South directions. The activities of the TLS are very important for the country. There is a number of systemic problems in the transport and logistics system of Kazakhstan, which may negatively affect the growth rate of the economy in the future.

In the study, the authors systematized the factors of sustainable development of transport and logistics systems, considered the trends that will affect the transport and logistics industry in the near future. A correlation has also been established between the main indicators of the development of the transport and logistics system and the EMLI index of Kazakhstan, which determines the importance of comparing their own results with the results of the most developed countries in logistics.

Keywords: transport, transport and logistics system, logistics efficiency index, transport infrastructure indicators, rating, Kazakhstan.

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Аграрный сектор экономики Казахстана: проблемы и пути их решения

Аннотация:

Цель: Отражение реального состояния агарной отрасли Республики Казахстан, раскрытие основных проблем развития, в частности растениеводства в целом по стране, а также в разрезе регионов.

Для достижения поставленной цели были поставлены следующие *задачи:* отражение роли аграрного сектора экономики в современных условиях хозяйствования; проведение анализа основных количественных и качественных показателей растениеводства; определение основных проблем в аграрной отрасли и путей их решения.

Методы: При проведении исследования в работе применялись различные способы и методы: индукция и дедукция, анализ и синтез, экономико-статистический анализ экономических показателей.

Результаты: По результатам проведенных исследований определен комплекс мер по росту и развитию аграрного сектора экономики: проведение работ по повышению инвестиционной привлекательности отрасли, применение диверсификации посевных площадей сельскохозяйственных культур как одного из путей повышения урожайности сельскохозяйственных культур и др.

Выводы: Применение всех мер в комплексе будет способствовать росту и развитию аграрного сектора экономики, поднятию престижа сельских территорий, повышению уровня инвестиционной привлекательности, уровня и качества жизни сельского населения.

Ключевые слова: экономическое развитие, диверсификация посевных площадей, валовая продукция, урожайность культур, экстенсивный путь, интенсивное развитие, уровень жизни, доходы населения.

Введение

Аграрный сектор относится к одной из важных отраслей народного хозяйства и обеспечивает население всей страны необходимыми и доступными продуктами питания, а также сырьем для таких отраслей, как пищевая, легкая, перерабатывающая.

Казахстан относится к аграрно-индустриальной стране, где, наряду с развитием различных отраслей промышленности, особую роль играет сельское хозяйство.

Сельское хозяйство Казахстана так же, как и другие сферы экономики, имеет свои специфические особенности, присущие только данной отрасли экономики.

Основными специфическими особенностями сельского хозяйства являются следующие:

1. Основным средством производства в сельском хозяйстве является земля. Производственный процесс в сельском хозяйстве невозможен без использования земельных угодий как одного из важных компонентов национального богатства страны;

2. В сельском хозяйстве в качестве основных средств производства участвуют живые организмы: растения и животные.

3. Особенностью сельскохозяйственного производства является сезонность производства, которая заключается в том, что в течение года сельскохозяйственная продукция производится неравномерно, то есть зависит от сезона и времени года.

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4. *Пространственная рассредоточенность* сельскохозяйственного производства, техники, материальных ресурсов. Данная особенность заключается в том, что сельскохозяйственное производство осуществляется в различных природно-климатических регионах и зонах, которые надо учитывать при выборе сельскохозяйственной техники, районированных сортов растений, пород животных и др.

5. *Продукция получаемая в сельском хозяйстве* во многих случаях продолжает использоваться в самой отрасли, например, семена, корма, приплод скота, органические удобрения в виде навоза и компоста, тогда как в промышленность получает сырье для своей деятельности от других предприятий.

6. *Высокая фондоемкость отрасли*, которая отражает стоимость использованных основных средств на один тенге произведенной продукции (Костяев, 2023).

На рисунке 1 наглядно отражены специфические особенности сельского хозяйства.

Рисунок 1. Специфические особенности сельского хозяйства*

Примечание. Составлен авторами на основе проведенных исследований.

Традиционными отраслями сельского хозяйства являются растениеводство и животноводство, для развития которых у страны имеются необходимые условия, основными из которых является наличие земельных угодий. Отрасль сельского хозяйства состоит из двух ведущих секторов экономики: растениеводство и животноводство.

Растениеводство представлено выращиванием различных сельскохозяйственных культур: зерновых и зернобобовых культур, технических культур, сахарной свеклы, кормовых культур, плодоовощных культур и многих других. Выращивание сельскохозяйственных культур зависит от территориальной расположенности регионов, а также от природных и климатических условий. Так, в северных регионах занимаются преимущественно выращиванием зерновых и зернобобовых культур, масличных культур.

В южных регионах Казахстана занимаются выращиванием таких культур, как сахарная свекла, хлопчатник, плодоовощные культуры, табак, риса, выращивание виноградников и др.

В западных регионах страны занимаются выращиванием зерновых культур: яровая и озимая пшеница, рожь, просо, ячмень и др.

В восточных регионах страны растениеводство представлено выращиванием таких сельскохозяйственных культур, как пшеница, овес, подсолнечник, горох, овощные культуры и др.

Животноводство также занимает значительный удельный вес в производстве сельскохозяйственной культуры и представлено такими отраслями, как скотоводство, овцеводство, свиноводство, коневодство, верблюдоводство, птицеводство и др.

Вопросы роста и развития аграрного сектора всегда были и остаются на первом месте у государства в связи с тем, что, по сравнению с другими сферами экономики, данная отрасль является наиболее зависимой от различных факторов: природно-климатических, экологических, географических, экономических. Для поддержания агарной отрасли на уровне государства оказывается всесторонняя

помощь и поддержка сельскохозяйственным производителям, в частности разработана Концепция развития агропромышленного комплекса Республики Казахстан на 2021–2030 годы (Концепция развития агропромышленного комплекса Республики Казахстан на 2021–2030 годы).

Гипотеза исследования

Одним из основных приоритетных направлений развития экономики Казахстана является рост и развитие сельского хозяйства как одной из сфер агропромышленного комплекса, обеспечивающих население страны всеми необходимыми и доступными продуктами питания. В стране проводится комплекс мер по поддержке сельскохозяйственных производителей.

Но, несмотря на принимаемые меры, в настоящее время все еще остаются основные проблемы в развитии сельского хозяйства, в частности в растениеводстве. Научная гипотеза исследования заключается в том, что развитие аграрного сектора экономики, являющегося одним из основных подсистем социально-экономической политики страны в целом, а также регионов, обеспечивается при помощи и поддержке государства.

Проблемы исследования

К основным проблемам, сдерживающим рост и развитие сельского хозяйства, в частности растениеводческой отрасли, относятся следующие:

1. Применение экстенсивного ведения растениеводства, которое заключается в том, что для роста продукции растениеводства увеличивают размеры посевных площадей. Данный способ ведения сельского хозяйства в современных условиях является неперспективным и неэффективным, так как бесконечное увеличение посевных площадей не гарантирует эффективности деятельности сельскохозяйственных производителей.

2. При выращивании сельскохозяйственных культур необходимо придерживаться научно-обоснованных подходов, одним из которых является применение научно обоснованных севооборотов. В сельском хозяйстве основным средством производства является земля, и ее наличие в достаточном количестве — одно из условий осуществления деятельности сельхозпроизводителей. Но при чрезмерном использовании земли она имеет свойство терять свои качества, то есть снижается плодородие почвы. В связи с этим необходимо чередовать сельскохозяйственные культуры, чтобы земля отдохнула и накопила необходимые питательные веществ. И поэтому предприятиям необходимо разработать политику грамотного использования сельскохозяйственных угодий.

3. Увеличение объема продукции растениеводства зависит от различных факторов, одним из которых является использование некачественных семян и семенного материала, что заключается в недостаточном развитии семеноводства и несоответствии требованиям мировых стандартов. В связи с этим большое внимание необходимо уделять развитию селекции и семеноводству, созданию новых районированных сортов сельскохозяйственных культур.

4. Одной из проблем в настоящее время предстает сбыт произведенной продукции, так как вовремя нереализованная сельскохозяйственная продукция теряет потребительские свойства, что отражается на качестве продукции и соответственно на стоимости. В связи с этим предприятиям необходимо при разработке плана производства продукции изучить рынок сбыта и наладить связи с покупателями и заказчиками, тем самым наладить рынок сбыта сельхозпродукции (Абенов, Хасенова, Ыдырыс, 2023).

5. Низкий уровень заработной платы сельскохозяйственных работников. Размер заработной платы работников в аграрной сфере намного ниже, чем в других секторах экономики, таких как промышленность, обрабатывающая промышленность, оптовая и розничная торговля, финансовая деятельность, сфера недвижимости и др. В связи с этим остро стоит вопрос кадрового обеспечения сельских территорий, так как многие специалисты не хотят работать в селе и др.

6. Слабая мотивация труда в сельской местности, на которую влияют различные факторы: низкий уровень заработной платы, отсутствие необходимой инфраструктуры на селе, перспектив для дальнейшего карьерного роста для молодых специалистов, низкая инвестиционная привлекательность сельских территорий.

Литературный обзор

Проблемами развития аграрного сектора экономики занимаются многие ведущие зарубежные и казахстанские ученые. Так, вопросы организационно-экономического развития конкурентоспособного сельского хозяйственного производства на основе кооперативных отношений отражены в работе

A.A. Junaydullaevich, & Q.H. Jamshedovna (Junaydullaevich A.A. & et al., 2021). В последние годы большое внимание уделяется агроиндустриализации в сельском хозяйстве через индустриальные инновации, транзакционные издержки, кооперативы и развитие сельскохозяйственной продукции, в частности развитие рынка молока и молочных продуктов, что оказывает влияние на уровень продовольственной безопасности стран (Holloway G. & et al.,2020). E. Jerhamre, C.J.C. Carlberg, & van V. Zoest в связи с применением массовой автоматизации и цифровизации практически во всех сферах экономики в своих исследованиях изучили возможности интеллектуального земледелия, выявленные возможности и возникшие проблемы (Jerhamre E. & et al., 2022). S.Namani & B. Gonen также в своей работе большое внимание уделили вопросам интеллектуального сельского хозяйства, основанного на информационных технологиях и облачных вычислениях (Namani S. & et al., 2020). Повышение уровня продовольственной безопасности оказывает большое влияние на уровень и качество жизни населения. Одной из основных видов продукции растениеводческой отрасли являются зерновые культуры, способствующие обеспечению средств к существованию и доступности продовольствия (Hassan, Z.M. & et al., 2021). Большое влияние на развитие аграрной отрасли, а также на уровень продовольственной безопасности в целом всех стран влияют природно-климатические условия. Учитывая эти особенности, сельскохозяйственные предприятия, домашние хозяйства разрабатывают стратегию адаптации, включающую приоритетные направления своей деятельности для активного приспособления к меняющимся условиям среды (Mekonnena A. & et al., 2021).

Изучение современных вызовов мировой нестабильности и социально-экономической реальности необходимо для определения уровня системного риска, которое оказывает большое влияние на уровень продовольственной безопасности (Raymond A.B. & et al., 2021).

Авторы M. Toader и Gh.V. Roman в процессе исследования раскрыли проблемы развития семейного фермерства как основы развития сельского хозяйства. Семейное фермерство во многих развивающихся и развитых странах составляют преобладающую форму ведения сельского хозяйства (Toader M. & et al., 2015). O. Debauche, S. Mahmoudi, P. Manneback, & F. Lebeau, учитывая применение массовой цифровизации, отметили применение в современных условиях различных облачных и распределенных архитектур для управления данными в сельском хозяйстве (Debauche O. & et al., 2021). Авторы J.B. Cole, S.A. Eaglen, C. Maltecca, H.A. Mulder & J.E. Pryce в своей работе большое внимание придали применению передовых технологий в животноводстве, которое позволит увеличить количество и качество сельскохозяйственной продукции, рост уровня жизни населения и людей (Cole J. & et al.,2020). Влияние субсидий на эффективность фермерских хозяйств разного размера отражено в работе авторов J. Staniszewski & M. Borychowski (Staniszewski J. & et al., 2020). Порядок формирования организационно-экономического механизма государственного регулирования системы сельскохозяйственного кредитования является одним из глобальных проблем для развития и совершенствования аграрного сектора экономики (Zoria O. & et al., 2020).

Методы и материалы

При проведении исследований в работе применялись различные способы и методы: индукция и дедукция, анализ и синтез, абсолютные и относительные показатели, сравнительная оценка статистических данных, экономико-статистический анализ экономических показателей.

Источниками проведения анализа и динамики показателей явились данные Национального бюро статистики Агентства Республики Казахстан по стратегическому планированию и реформам за 2018–2022 годы, а также научные публикации ведущих ученых экономистов, занимающихся проблемами развития и совершенствования аграрной отрасли страны в целом, а также регионов.

Результаты

В процессе выполнения исследования были использованы статистические данные по таким показателям, как валовый выпуск сельскохозяйственной продукции в Казахстане за последние пять лет. На основании данных проведенного анализа выявлены основные проблемы развития аграрного сектора экономики, в частности растениеводства и животноводства, а также пути их решения.

В таблице 1 отражена динамика изменения валового выпуска сельскохозяйственной продукции в стране за 2018–2022 годы.

Валовая продукция сельскохозяйственной продукции в 2018 году составила 4 474 088,1 млн тенге, тогда как в 2022 году — 9 481 179,8 млн тенге, то есть увеличение в отчетном году составило 5 007 091,7 млн тенге, или 212,0 %, по сравнению с 2021 годом увеличение валовой продукции с/х составило 1 965 746,3 млн тенге, или 126,2 %.

Объем валовой продукции растениеводства в 2018 году составил 2 411 486,7 млн тенге, тогда как в 2022 году — 5 808 259,8 млн тенге, то есть в отчетном году увеличение составило 3 396 773,1 млн.тенге, или 240,9 %, с 2021 годом объем производства продукции увеличился на 1 421 023,3 млн тенге, или 132,4 %.

Стоимость валовой продукции животноводства за последние годы имеет тенденцию к увеличению. Так, в 2018 году объем валовой продукции животноводства составил 2 050 455,8 млн тенге, тогда как в 2022 году — 3 658 757,6 млн тенге, то есть увеличение составило 1 608 301,8 млн тенге, или 178,4 %, с 2021 годом — 541 784,1 млн тенге, или 117,4 %.

Незначительную долю в объеме валовой продукции сельского хозяйства занимают услуги в области сельского хозяйства. За последние годы можно увидеть увеличение объема услуг, оказываемых в сельском хозяйстве с 12 145,6 млн. тенге в 2018 году до 14 162,5 млн. тенге в 2022 году, то есть увеличение составило 2 016,9 млн. тенге, или 166,6 %.

Если проанализировать долю выпуска валовой продукции, то можно увидеть, что в 2018 году производство растениеводческой продукции в 2018 году по сравнению с животноводческой продукцией больше на 361 030,9 млн. тенге, в 2022 году — на 2 149 502,2 млн. тенге (табл. 1).

Таблица 1. Валовый выпуск продукции (услуг) сельского хозяйства, млн тенге (все категории хозяйств)*

	2018	2019	2020	2021	2022	Темп роста в 2022 году по сравнению с	
						2018	2021
Валовый выпуск продукции (услуг) сельского хозяйства, в том числе	4 474 088,1	5151 163,0	6 334 668,8	7 515 433,5	9481179,8	212,0	126,2
Валовая продукция растениеводства	2 411 486,7	2 817 660,6	3 687 310,3	4 387 236,5	5808259,8	240,9	132,4
Валовая продукция животноводства	2 050 455,8	2 319 496,7	2 637 460,7	3 116 973,5	3658757,6	178,4	117,4
Услуги в области сельского хозяйства	12 145,6	14 005,7	9 897,9	11 223,4	14162,5	166,6	126,2

**Примечание.* Данные Национального бюро статистики Агентства Республики Казахстан по стратегическому планированию и реформам за 2018–2022 годы.

Растениеводство относится к одним из основных приоритетных отраслей сельского хозяйства, для развития которого в стране имеются в достаточном количестве сельскохозяйственные угодья, пахотные земли.

Казахстан обладает значительными земельными площадями для выращивания сельскохозяйственных культур и животных (данные Национального бюро статистики Агентства Республики Казахстан по стратегическому планированию и реформам).

В целях создания конкурентоспособного агропромышленного комплекса, обеспечивающего продовольственную безопасность и рост экспорта продукции, а также сохранение и развитие природных ресурсов страны путем эффективного формирования и реализации политики государства в агропромышленном комплексе были предусмотрены средства по бюджетным программам Министерства сельского хозяйства Республики Казахстан.

Министерство сельского хозяйства Республики Казахстан за исследуемый нами период осуществляло свою деятельность в рамках Стратегического плана на 2017–2021 годы, утвержденного приказом от 30 декабря 2016 года № 541, а также в рамках Плана развития на 2020–2024 годы, утвержденного приказом от 31 декабря 2019 года № 476.

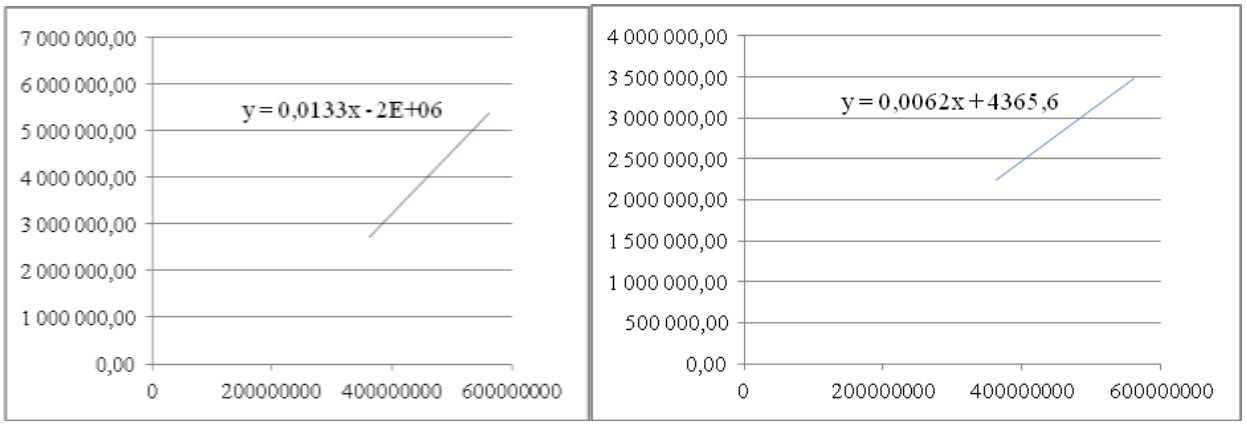
Ежегодно Министерству сельского хозяйства необходимо было достичь порядка 15–20 целевых индикаторов. Министерство сельского хозяйства Республики Казахстан ежегодно предоставляет аналитическую информацию о реализации стратегических целей и достижении целевых индикаторов во взаимосвязи с бюджетными средствами для формирования аналитического отчета.

Ежегодно в республиканском бюджете Министерству сельского хозяйства предусматриваются средства в сумме: в 2018 году — 362980924,2 тыс. тенге, в 2019 году — 469 353 964,30 тыс. тенге, в

2020 году — 423 308 417,30 тыс. тенге, в 2021 году — 407 042 745,20 тыс. тенге, в 2022 году — 561 896 128,50 тыс. тенге.

Авторами рассмотрена корреляционно-регрессионная модель зависимости объема валовой продукции растениеводства и валовой продукции животноводства от бюджетных средств, направленных на осуществление деятельности Министерства сельского хозяйства Республики Казахстан.

Нами была выявлена сильная положительная связь объема валовой продукции растениеводства (0,75), валовой продукции животноводства (0,73) с выделяемыми из государственного бюджета средствами, коэффициент детерминации в обоих случаях превышает 50 %. На рисунке 2 представлены линии тренда.



Валовая продукции растениеводства Валовая продукция животноводства

Рисунок 2. Поле корреляции (линия тренда)*

**Примечание.* Составлен авторами на основе проведенных исследований.

Таким образом, в корреляционной модели коэффициент корреляции свидетельствует о наличии сильной связи между выбранными факторами и результативным показателем. При этом связь объема валовой продукции растениеводства от бюджетных средств более сильная, чем валовой продукции животноводства.

Казахстан занимается выращиванием различных сельскохозяйственных культур, которые сосредоточены в различных регионах в зависимости от природных и климатических условий.

Общая посевная площадь сельскохозяйственных культур имеет тенденцию к увеличению, то есть если в 2018 году данный показатель составил 21 899,4 тыс. гектаров, то в отчетном 2022 году — 23 162,1 тыс. га, то есть произошло увеличение на 1 262,7 тыс. га, или на 105,8 %, в сравнении с 2021 годом увеличилась на 236,4 тыс. га, или на 101,0 %.

Увеличение посевных площадей произошло по таким видам сельскохозяйственных культур, как зерновые и зернобобовые культуры с 15 150,0 тыс. га в 2018 году до 16 114,4 тыс. га (+ 964,4 тыс. га, или 106,4 %), масличные культуры увеличилась с 2 834,2 тыс. га в 2018 году до 3 461,8 тыс. га в 2022 году (+627,6 тыс. га, или 122,1 %).

Увеличение посевных площадей произошло также по таким сельскохозяйственным культурам, как картофель, овощи открытого грунта, бахчевые культуры.

Снижение посевных площадей произошло по таким видам сельскохозяйственных культур, как сахарная свекла с 17,4 тыс. га, в 2018 году до 10,2 тыс. га в 2022 году, то есть снижение составило 7,2 тыс. гектаров, в сравнении с 2021 годом — на 4,3 тыс. га.

Посевная площадь кормовых культур снизилась с 3 323,2 тыс. га в 2018 году до 2 978,0 тыс. га в 2022 году, то есть снижение составило 345,2 тыс. гектаров, или на 10,4%, в сравнении с 2021 годом — 136,6 тыс. га, или на 4,4 %.

Основными показателями производства сельскохозяйственной продукции является валовый сбор сельскохозяйственных культур, динамика изменения которых отражена в таблице 2.

Таблица 2. Валовый сбор основных сельскохозяйственных культур, тыс. т*

	2018	2019	2020	2021	2022	Отклонение в 2022 год от	
						2018	2021
Зерновые (включая рис) и бобовые культуры	20 273,7	17 428,6	20 065,3	16 375,9	22 030,5	1 756,8	5 654,6
Подсолнечник	847,7	838,7	844,3	1 031,8	1 304,3	456,6	272,5
Хлопок	343,6	344,4	326,6	290,4	361,8	18,2	71,4
Свекла сахарная	504,5	485,5	466,3	332,2	305,7	-198,8	-26,5
Табак	1,6	1,2	1,2	1,1	1,2	-0,4	0,1
Картофель	3 807,0	3 912,1	4 006,8	4 031,6	4 080,5	273,5	48,9
Овощи	4 081,9	4 355,2	4 590,9	4 768,5	4 792,6	710,7	24,1
**Примечание.* Данные Национального бюро статистики Агентства Республики Казахстан по стратегическому планированию и реформам за 2018–2022 годы.							

На основании данных таблицы 2 можно сделать следующий вывод: по таким видам сельскохозяйственных культур, как зерновые и зернобобовые культуры, подсолнечник, хлопок, картофель, овощи за последние годы произошло увеличение объема выпуска продукции.

Так, валовый сбор зерновых и зернобобовых культур увеличился с 20 273,7 тыс. т в 2018 году до 22 030,5 тыс. т в 2022 году, то есть увеличение составило 1 756,8 тыс. т, в сравнении с 2021 годом — 5 654,6 тыс. т.

Валовый сбор подсолнечника в 2018 году составил 847,7 тыс. т, тогда как в отчетном 2022 году —1 304,3 тыс. т, то есть увеличение составило 456,6 тыс. т.

Объем выпуска сахарной свеклы в стране снизился с 504,5 тыс. т в 2018 году до 305,7 тыс. т, то есть снижение составило 198,8 тыс. т, в сравнении с 2021 годом — 26,5 тыс. т.

Значительное увеличение объема выпускаемой продукции можно увидеть по овощам и картофелю, в 2022 году по сравнению с 2018 году увеличение составило 710,7 тыс. т и 273,5 тыс. т соответственно.

Одним из основных качественных показателей, влияющих на объем выпускаемой валовой продукции, является урожайность сельскохозяйственных культур величина которой меняется в зависимости от различных объективных и субъективных факторов.

На урожайность сельскохозяйственных культур оказывают влияние различные факторы: природно-климатические условия, качество семян, обеспеченность качественными минеральными удобрениями и питательными веществами, применение рационально обоснованных севооборотов, применение достижений современной техники и технологии и т.д.

Выращиванием сельскохозяйственных культур занимаются сельскохозяйственные производители, относящиеся к следующим категориям: сельскохозяйственные предприятия, крестьянские и фермерские хозяйства, хозяйства населения.

Объем валовой продукции сельского хозяйства в 2022 году составил 5 808 259,8 млн тенге, в разрезе отдельных категория можно увидеть следующее: сельскохозяйственные предприятия- 2 152 686,2 млн тенге, крестьянские и фермерские хозяйства — 2 448 103,5 млн тенге, хозяйства населения — 1 207 470,1 млн тенге.

В таблице 3 отражена динамика изменения урожайности отдельных видов сельскохозяйственных культур за 2018–2022 годы.

Таблица 3. Урожайность основных сельскохозяйственных культур, ц/га*

	2018	2019	2020	2021	2022	Отклонение 2022 г. от 2018 г.	Темп роста 2022 г. от 2018 г.
Зерновые (включая рис) и бобовые культуры	13,5	11,4	12,8	10,4	13,8	0,3	102,2
Семена подсолнечника	10,0	10,3	11,3	11,0	12,0	2,0	120,0
Хлопок	25,9	26,2	25,9	26,4	28,7	2,8	110,8
Свекла сахарная	305,3	324,5	323,2	275,5	341,4	36,1	111,8
Табак	31,7	33,7	32,9	34,1	35,6	3,9	112,3
Картофель	197,9	203,4	206,7	207,4	205,4	7,5	103,8
Овощи открытого грунта	257,3	260,5	265,9	268,0	271,3	14,0	105,4
**Примечание.* Данные Национального бюро статистики Агентства Республики Казахстан по стратегическому планированию и реформам за 2018–2022 годы.							

На основании данных таблицы 3 можно увидеть, что урожайность по анализируемым видам сельскохозяйственных культур за последние годы увеличилась.

Выращиванием сельскохозяйственных культур занимаются практически во всех регионах страны, при этом учитываются территориальные, природно-климатические условия каждого региона

Объем валовой продукции в целом по стране увеличился с 2 411 486,7 млн тенге в 2018 году до 5 808 259,8 млн тенге в 2022 году, то есть произошло увеличение на 3 396 773,1 млн тенге, или 241 %, то есть увеличилось в 2,4 раза.

К регионам, где преобладает растениеводческая отрасль, относятся Северо-Казахстанская, Алматинская, Акмолинская, Костанайская, Туркестанская, Восточно-Казахстанская, Павлодарская области, где занимаются выращиванием зерновых и зернобобовых культур, масличных и технических культур, сахарной свеклы. Практически по всем регионам произошло увеличение выпуска растениеводческой продукции. Так, в Северо-Казахстанской области производство продукции растениеводства увеличилось с 366 165,6 млн.тенге в 2018 году до 909 326,2 млн тенге в 2022 году, то есть увеличение составило 543 160,7 млн тенге, или 248,3 %.

В Акмолинской области занимаются в основном выращиванием зерновых и зернобобовых культур. В 2022 году объем валовой продукции растениеводства составил 770 299,9 млн тенге, тогда как в 2018 году — 268 785,9 млн тенге, то есть произошло увеличение на 501 514 млн тенге, или 286,6 %. Наименьший объем валовой продукции растениеводства можно увидеть в таких регионах, как Мангистауская и Атырауская области, так как эти регионы относятся к промышленным регионам по добыче нефти.

Также небольшую долю валовой продукции растениеводства составляют города-мегаполисы — Астана, Алматы, Шымкент.

Производством растениеводческой продукции занимаются все категории хозяйств: сельскохозяйственные предприятия, крестьянские и фермерские хозяйства, хозяйства населения.

Обсуждения

Сельское хозяйство является одним из основных отраслей экономики обеспечивающей население страны необходимыми и доступными продуктами питания, а также сырьем для отдельных отраслей. Казахстан обладает огромной территорией, позволяющей заниматься производством сельскохозяйственной продукции. Земельные ресурсы Казахстана составляют 270,1 млн га, из них 222,6 млн га занимают земли сельскохозяйственного назначения, которые включают в себя пашни (24,0 млн га), предназначенные для посева сельскохозяйственных культур; сенокосы (5,0 млн га), представляющие земельные угодья, покрытые травянистой растительностью, пастбища (189,0 млн га) — земельные угодья, предназначенные для выпаса скота.

Казахстан относится к одним из крупных поставщиков пшеницы и муки в мире и входит в десятку лучших производителей зерновых культур. В связи с этим сельское хозяйство является приоритетной для устойчивого развития экономики страны. В последние годы практически во всех сферах экономики в том числе и в аграрном секторе наблюдается процесс всеобщей цифровизации, который позволит в будущем показать рост и развитие агропромышленного комплекса (Рыскелды О., Шеломенцева В.П., Нарынбаева А.С., 2023.).

Конечным результатом деятельности сельскохозяйственных производителей является выпуск валовой продукции сельского хозяйства. Одним из основных приоритетных направлений развития экономики Казахстана является рост и развитие сельского хозяйства как одной из сфер агропромышленного комплекса, обеспечивающей население страны всеми необходимыми и доступными продуктами питания. В стране проводится комплекс мер по оказанию помощи и поддержке сельскохозяйственных производителей (Концепция развития агропромышленного комплекса Республики Казахстан).

Но, несмотря на принимаемые меры, в настоящее время все еще остаются основные проблемы в развитии аграрного сектора как в растениеводстве, так и в животноводстве.

Для роста и совершенствования агарного сектора необходимо дальнейшее развитие перерабатывающей отрасли, которое позволит предоставить сельскохозяйственным производителям создавать условия для трудоустройства людей, возможность привлечения как отечественных, так и зарубежных инвестиций, обеспечить социально-экономическую стабильность, повышение уровня качества жизни населения страны и регионов (Кирдасинова К.А., Серикбаев Р.Т., Калияскарова Э.А., 2023).

Выводы

Таким образом, выдвинутая нами гипотеза исследования подтверждается: развитие аграрного сектора экономики, являющегося одним из основных подсистем социально-экономической политики страны в целом, а также регионов обеспечивается при помощи и поддержке государства.

Для решения проблем роста и развития сельского хозяйства необходимо проведение комплекса мер, к основным из которых относятся следующие:

- *необходимо проводить работу по повышению инвестиционной привлекательности* аграрной отрасли путем применения достижений современной техники и технологии; цифровизации, автоматизации, роботизации производственных и технологических процессов. Повышение инвестиционной привлекательности аграрной отрасли будет способствовать привлечению в отрасль как отечественных, так и иностранных инвестиций, что окажет непосредственное влияние на рост и развитие предприятий аграрной сферы. Вложение инвестиций в сельскохозяйственную отрасль позволит сельхозпроизводителям повысить эффективность деятельности, рост производительности сельскохозяйственного труда, снижение внепроизводственных и непроизводительных расходов и т.д.;

- *повышение качества сельскохозяйственной продукции.* Качество сельскохозяйственной продукции выражено в таких показателях, как урожайность сельскохозяйственных культур, продуктивность животных, приплод и привес молодняка животных, жирность молока, наличие питательных веществ в произведенной продукции и др. На повышение качества сельскохозяйственной продукции влияют различные факторы, к которым относятся природно-климатические условия, географические условия, условия ухода за растениями и животными, условия уборки и транспортировки сельскохозяйственной продукции. Для решения данной проблемы необходимо применение качественных органических и минеральных удобрений, семян и семенного материала, средств защиты растений, применение питательных веществ в растениеводстве.

Повышение качества сельскохозяйственной продукции влияет на уровень и качество жизни населения, на здоровье и благополучие людей, в связи с чем данная проблема является актуальной;

- *одним из основных путей повышения урожайности сельскохозяйственных культур является применение диверсификации посевных* площадей сельскохозяйственных культур, которая широко применяется в экономически развитых странах. Применение данного способа заключается в том, что предприятиям необходимо пересмотреть применение посевных площадей под посевы различных культур и выращивать такие культуры, которые дадут более высокий экономический эффект с минимальными затратами. В качестве примера можно привести применение пилотной программы в 2019 году, когда в стране запустили программу «Северная соя» в северных регионах Казахстана.

Согласно данной программе, многие сельскохозяйственные производители перепрофилировали свои предприятия на выращивание сои, которая относится к масличным культурам и может быть использована в качестве продуктов питания. Результатом перепрофилирования явился высокий урожай сои и повышение эффективности деятельности сельхозпроизводителей.

Исходя из этого примера можно предположить, что сельскохозяйственные предприятия, изучив возможности каждого региона, особенности природно-климатических и географических условий могут рассмотреть условия и результаты применения диверсификации земельных угодий под посевы таких культур, выращивание которых даст больший экономический эффект;

- *дальнейшая работа по развитию и формированию эффективных систем водоснабжения и* землепользования для производства сельскохозяйственной продукции, в связи с тем, что недостаток воды оказывает непосредственное влияние на объем и качество производимой продукции;

- *рост доходов сельского населения.* Одним из приоритетных направлений нашего государства является повышение уровня и качества жизни населения. Особое внимание уделяется проблеме роста уровня жизни и благосостояния сельского населения в связи с низким уровнем заработной платы работников сельских местностей, невысоким уровнем инфраструктуры, что является основной причиной оттока сельского населения в крупные города в поисках достойно оплачиваемой работы и, как следствие, дефицитом сельскохозяйственных кадров. Для закрепления людей, особенно молодых специалистов, в 2022 году был разработан и запущен проект «Ауыл аманаты», целью которого является оказание помощи сельским жителям для улучшения качества их жизни, а также привлечению специалистов в села;

- *немаловажная роль должна отводиться также логистической работе,* которая заключается в своевременной транспортировке произведенной сельскохозяйственной продукции от производителей до конечных потребителей. В том случае если не налажена ритмичная транспортировка и поставка

произведенной продукции от одного пункта до потребителей ухудшается качество сельскохозяйственной продукции, порча продукции что скажется на качестве и, следовательно, на окончательной стоимости продукции, которая влияет на финансовый результат деятельности сельскохозяйственных производителей;

- *повышение качества сельскохозяйственной продукции* за счет применения достижений инновационных технологий, в частности в растениеводстве и др.

Применение всех мер в комплексе будет способствовать росту и развитию аграрного сектора экономики, поднятию престижа сельских территорий, повышению уровня инвестиционной привлекательности, уровня и качества жизни сельского населения.

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Қазақстан экономикасының аграрлық секторы: проблемалары және оларды шешу жолдары

***Аңдатпа*:**

Мақсаты: Қазақстан Республикасының аграрлық саласының нақты жай-күйін көрсету, жалпы ел бойынша, сондай-ақ аймақтық бөлінісінде өсімдік шаруашылығын дамытудың негізгі мәселелерін ашу. Алға қойылған мақсатқа жету үшін мынадай міндеттер қойылды: экономиканың аграрлық секторының қазіргі шаруашылық жағдайындағы рөлін көрсету; өсімдік шаруашылығының негізгі сандық және сапалық көрсеткіштеріне талдау жүргізу; аграрлық саладағы негізгі проблемаларды және оларды шешу жолдарын айқындау.

Әдісі: Зерттеуді жүргізу кезінде әртүрлі әдістер мен тәсілдер қолданылды: индукция және дедукция, талдау және синтез, экономикалық көрсеткіштердің экономикалық және статистикалық талдауы.

Қорытынды: Жүргізілген зерттеулердің нәтижелері бойынша экономиканың аграрлық секторының өсуі мен дамуы бойынша шаралар кешені айқындалды: саланың инвестициялық тартымдылығын арттыру жөніндегі жұмыстарды жүргізу, ауыл шаруашылығы дақылдарының өнімділігін арттыру жолдарының бірі ретінде ауыл шаруашылығы дақылдарының егіс алқаптарын әртараптандыруды қолдану және т.б.

Тұжырымдама: Барлық шараларды кешенді қолдану экономиканың аграрлық секторының өсуіне және дамуына, ауылдық аумақтардың беделін көтеруге, инвестициялық тартымдылық деңгейін, ауыл халқының өмір сүру деңгейі мен сапасын арттыруға ықпал ететін болады.

Кілт сөздер: экономикалық даму, егіс алқаптарын әртараптандыру, жалпы өнім, дақылдардың өнімділігі, экстенсивті жолы, қарқынды даму, өмір сүру деңгейі, халықтың табысы.

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Agricultural sector of Kazakhstan's economy: problems and ways to solve them

Abstract

Object: The purpose of the study is to reflect the real state of the agar industry, to reveal the main problems of development, in particular crop production in the whole country, as well as in the context of regions. To achieve this goal, the following tasks were set: reflection of the role of the agricultural sector of the economy in modern economic conditions; analysis of the main quantitative and qualitative indicators of crop production; identification of the main problems in the agricultural sector and ways to solve them.

Methods: During the research, various methods were used in the work: induction and deduction, analysis and synthesis, economic and statistical analysis of economic indicators.

Findings: Based on the results of the conducted research, a set of measures for the growth and development of the agricultural sector of the economy has been determined: work to increase the investment attractiveness of the industry, the use of diversification of agricultural acreage as one of the ways to increase crop yields, etc.

Conclusions: The application of all measures in a complex will contribute to the growth and development of the agricultural sector of the economy, raising the prestige of rural areas, increasing the level of investment attractiveness, the level and quality of life of the rural population.

Keywords: economic development; diversification of acreage; gross output; crop yield; extensive path; intensive development; standard of living; income of the population.

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Проблемы и перспективы развития туристского бизнеса в Казахстане

Аннотация:

Цель: Основной целью статьи является анализ макроэкономических условий, оказывающих влияние на сектор туристического предпринимательства в Казахстане.

Методы: Выполнен статистический анализ активности участников рынка туристических услуг, выявлены важные количественные параметры, оказывающие наибольшее влияние на динамику развития туристической индустрии. Исследование подчеркивает роль экономических, социальных, технологических и инфраструктурных факторов как детерминант роста и эффективности сектора туризма.

Результаты: Данное исследование подтверждает, что существует сильная взаимосвязь между развитием туристического бизнеса и объемом услуг в области развлечений в Республике Казахстан, которая играет важную роль в стимулировании туристического спроса и улучшении качества обслуживания туристов. Для обоснования этого вывода авторы провели анализ и прогнозирование показателя «Объем услуг в области развлечений» на период с 2023 по 2025 годы. Была построена трендовая модель, которая позволила выявить тенденции роста данного показателя в будущем и определить дальнейшие пути развития туристического бизнеса в РК. Проблемы и перспективы развития туристского бизнеса в Казахстане зависят от комплекса факторов, включая состояние инфраструктуры, качество услуг, маркетинговые стратегии, а также экономические и политические условия в стране.

Выводы: Ограничения в развитии туристической отрасли, связанные с нехваткой гостиничных объектов или недостаточным уровнем обслуживания, препятствуют привлечению туристов и увеличению потока туристических посетителей, поэтому необходимо проводить анализ текущего состояния гостиничного бизнеса, инфраструктуры и предоставляемых услуг при разработке стратегий и принятии управленческих решений в сфере туризма. В качестве рекомендаций по развитию туристского бизнеса необходимо применение современных технологий в сфере туризма, таких как мобильные приложения, виртуальные туры и интерактивные платформы, помогающие сделать информацию о казахстанских туристических достопримечательностях более доступной и привлекательной для потенциальных посетителей.

Ключевые слова: туристская отрасль, субъекты предпринимательства, предпринимательская активность, факторы развития, диверсификация, устойчивость, туроператор, инфраструктура.

Введение

Исследование проблем и перспектив развития туристского бизнеса в Казахстане является важным в контексте стремления к улучшению экономического развития, повышению международного престижа страны и обеспечению устойчивости индустрии туризма. Туризм является значимым источником доходов для многих стран и регионов, и правильное управление ресурсами в туристическую инфраструктуру, и продвижение туристического продукта могут значительно повысить эффективность использования этих средств. Растущий вклад индустрии туризма в экономическое развитие повышает необходимость привлечения различных субъектов из государственного, частного и социального секторов на всех уровнях к производству услуг в целях достижения консенсуса и взаимодополняемости с точки зрения возможностей и ресурсов. Туризм на данном этапе развития значится динамичным развивающимся сектором и имеет весомое значение в экономическом процветании

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национальной экономики. Основываясь на анализе статистических данных, исследование подчеркивает значимость туристического предпринимательства как катализатора экономического роста и развития. Влияние туризма на экономику проявляется через различные направления, включая прямое и косвенное создание рабочих мест, увеличение внутреннего и внешнего дохода, а также стимулирование инвестиций в инфраструктуру и услуги.

Исследование подтверждает, что предпринимательская активность в сфере туризма способствует устойчивому экономическому развитию, повышая уровень занятости, содействуя диверсификации экономики и укреплению местных сообществ. Следует отметить, что эффективность туристического сектора зависит от ряда факторов, включая инновационные подходы в управлении и маркетинге, качество предоставляемых услуг, доступность и устойчивость туристической инфраструктуры, а также способность адаптироваться к изменяющимся требованиям и предпочтениям потребителей.

Согласно анализу статистических данных, туристская индустрия Казахстана демонстрирует восходящую траекторию роста, основанную на развитии въездного и внутреннего туризма. Позитивные изменения в секторе туризма обусловлены эффективным использованием природных и культурных ресурсов, что в совокупности способствует формированию благоприятного имиджа страны.

Улучшение качества и расширение туристической инфраструктуры вносит большой вклад в увеличение привлекательности Казахстана как туристического направления.

Интенсификация внутреннего туризма, вызванная улучшением доступности и комфортности туристических услуг, подчеркивает тенденцию к предпочтению отдыха внутри страны перед зарубежными поездками.

Выводы подтверждают, что комплексные меры по развитию туристической отрасли, в том числе улучшение инфраструктуры, повышение качества обслуживания и активное продвижение туристического потенциала на международном уровне, значатся первостепенными факторами успеха. Данные меры не только способствуют росту доходов от туризма, но и значительно улучшают общее восприятие Казахстана как привлекательного туристического направления.

Анализ тенденций в туристической отрасли на международном и региональном уровнях указывает на значимую роль предпринимательской активности в развитии сектора туризма. Предпринимательство в туризме демонстрирует траекторию в сторону увеличения, что способствует экономическому прогрессу и созданию новых рабочих мест. Тем не менее существует консенсус о том, что туристический потенциал страны еще не раскрыт в полной мере, что говорит о возможности для дальнейшего углубления и расширения туристической деятельности.

С учетом анализа макроэкономических условий, оказывающих воздействие на сферу туристического предпринимательства в Казахстане, исследование выявило, что туризм составляет существенную роль в экономическом развитии страны, способствуя улучшению инфраструктуры, созданию новых рабочих мест и увеличению национального дохода. Данные факторы подтверждают важность туризма как инструмента экономического стимулирования и развития.

Исследование подчеркивает, что макроэкономические факторы, такие как политическая стабильность, экономическая политика, социокультурные аспекты, технологическое развитие, экологическая устойчивость и правовая рамка, оказывают значительное влияние на привлекательность и конкурентоспособность туристического сектора. Взаимодействие указанных факторов определяет потенциал для привлечения инвестиций в туристическую инфраструктуру, повышения качества услуг и расширения туристического предложения.

Литературный обзор

Туризм является важной движущей силой экономического роста и восстановления (Dogruand Bulut, 2018). Обеспеченность туристическими ресурсами играет ключевую роль, поскольку наличие привлекательных мест и объектов может привлечь больше туристов и инвесторов (Li и другие, 2019).

Оптимальное распределение финансовых ресурсов и их умелое направление способствуют более эффективному использованию социальных ресурсов, означая, что правильное управление финансами в туристической индустрии может способствовать увеличению доходов и улучшению качества туристических услуг (Chen, W., 2023; Tian, 2021).

Индустрия туризма входит в число приоритетных направлений развития Республики Казахстан. Ведущая роль в развитии национального туризма отводится системе отечественных туристических кластеров. Однако казахстанский туризм пока не вносит значимого вклада в экономику страны, на его долю приходится менее 1 % мирового туристского потока (Pritvorova, Abzalbek, 2019),

(Aubakirova, 2019; Vechkinzova, 2019).

А.Т. Тлеубердинова, Ж.М. Шаекина анализируют роль макроэкономических факторов в развитии туристического предпринимательства в Казахстане, акцентируя внимание на важности рыночного развития и предпринимательской активности для экономического роста (Тлеубердинова А., Шаекина Ж., 2020). Основываясь на регрессионном анализе, выделяется значимость заработной платы и доступности кредитов как ключевых стимулов для стимулирования предпринимательской активности в секторе. Результаты подчеркивают необходимость более стратегического подхода к использованию ограниченных ресурсов и инновационного развития для укрепления экономического потенциала страны через туризм.

Е.А. Вечкинзова, А.С. Дарибекова в своих исследованиях также освещают важные аспекты развития туристической отрасли Казахстана, акцентируя внимание на проблемах и перспективах, связанных с текущим состоянием и будущим потенциалом сектора (Вечкинзова Е., Дарибекова А., 2021).

Анализируется влияние макроэкономических условий, инфраструктурных ограничений и качества услуг на туристический поток. Прогнозируется воздействие технологических инноваций и изменения потребительских предпочтений на развитие отрасли. Рекомендации направлены на повышение конкурентоспособности и устойчивое развитие туризма через государственную поддержку, инвестиции в качество услуг и инфраструктуру.

В работе Д.А. Рахметовой, А.А. Нургалиевой «Направления развития туристской предпринимательской деятельности в Республике Казахстан» приведены результаты анализа туристической отрасли Казахстана, выявлены основные направления для её развития, включая модернизацию инфраструктуры, маркетинговые инициативы для промоции страны как туристического направления и упрощение бюрократических процедур (Рахметова Д., Нургалиева А., 2023).

Рассматриваются стратегии для диверсификации туристических маршрутов и поддержки туристических предпринимателей. Предложения направлены на создание благоприятной среды для устойчивого роста туризма, учитывая интересы и потребности предпринимателей, для укрепления экономического вклада отрасли в развитие страны (Асетова А.А., 2020).

Проблемы и перспективы развития туристского бизнеса в Казахстане имеют прямую связь с различными секторами экономики, так как туризм влияет на многие аспекты экономической деятельности (табл. 1).

Таблица 1. **Вызовы и потенциал туристской отрасли в Казахстане, связанные с экономическими сегментами***

№	Сектор экономики	Проблема	Перспектива
1	Транспортный сектор	Ограниченный доступ для туристов, посещающих туристские места, что обусловлено слабой инфраструктурой	Финансирование улучшения транспорта повышает привлекательность для туристов и стимулирует экономическое благосостояние в данной сфере
2	Гостиничный бизнес	Ограниченный выбор и низкое качество отельных услуг снижают привлекательность регионов для потенциальных посетителей и туристов	Развитие гостиничного бизнеса привлечет больше туристов, создаст новые рабочие места и стимулирует рост инвестиций в сфере гостеприимства
3	Культурный и исторический туризм	Слабая реклама и защита культурных ценностей уменьшает интерес туристов и вредит идентичности и привлекательности местности	Финансирование восстановления культурных достопримечательностей и организация событий повышает туристическую привлекательность и способствует экономическому росту региона
4	Экологический туризм	Слабое внимание к сохранению окружающей среды в туристических местах приводит к ухудшению природных условий и потере туристического интереса	Популяризация эко-туризма в Казахстане поощряет экологически ответственные инновации в аграрной и производственной сферах, улучшая общую экологическую ситуацию

**Примечание.* Составлена авторами.

Проблемы и перспективы развития туристского бизнеса в Казахстане и их взаимосвязь с секторами экономики, представленные в таблице 1, демонстрируют лишь часть того, как развитие тури-

стического бизнеса может способствовать распространению экономических эффектов и стимулировать развитие различных секторов экономики в РК.

Результаты

Исследование статистических данных показывает, что в 2022 году туристическая отрасль Республики Казахстан демонстрирует значительный рост, с увеличением количества туристов до более 9 миллионов, что представляет собой увеличение на 20 %, по сравнению с предыдущим годом. С учетом наличия 2851 гостиницы, включая 228 объектов международного класса, и средней загрузки в 70 %, очевидно, что существует потенциал для расширения и улучшения гостиничного сегмента. Рассматриваемые данные подчеркивают необходимость стратегического планирования и инвестирования в развитие инфраструктуры и улучшение качества услуг для поддержания устойчивого роста туристической индустрии и увеличения ее вклада в экономику страны. (Денисов И.В., Дарибекова А.С., 2020).

Особое внимание следует уделить устранению дефицита высококачественных гостиничных услуг в ключевых городах для привлечения большего числа международных туристов и повышения общей привлекательности региона как туристического направления (табл. 2).

Таблица 2. **Анализ текущего состояния туристической инфраструктуры Республики Казахстан***

Направление	Анализ
Инфраструктура размещения	Существует дефицит качественных гостиниц в крупных городах Казахстана
Инфраструктура для активного отдыха	Требуется модернизация инфраструктуры для активного отдыха, такого как горнолыжный туризм
Инфраструктура для экскурсионного туризма	Требуется развитие инфраструктуры для экскурсионного туризма
**Примечание.* (Рахметова Д., Нургалиева А., 2023).	

Исследование деятельности туроператоров, турагентов и прочих организаций, предоставляющих услуги в сфере туризма, показали значительные изменения между 2017 и 2021 годами в Казахстане. В 2017 году объем оказанных услуг составил 75,571.2 млн тенге, тогда как к 2021 году данный показатель возрос до 88,936.2 млн. тенге, а на начало 2023 года этот показатель составил 98,7 млрд.тенге (рис. 1).

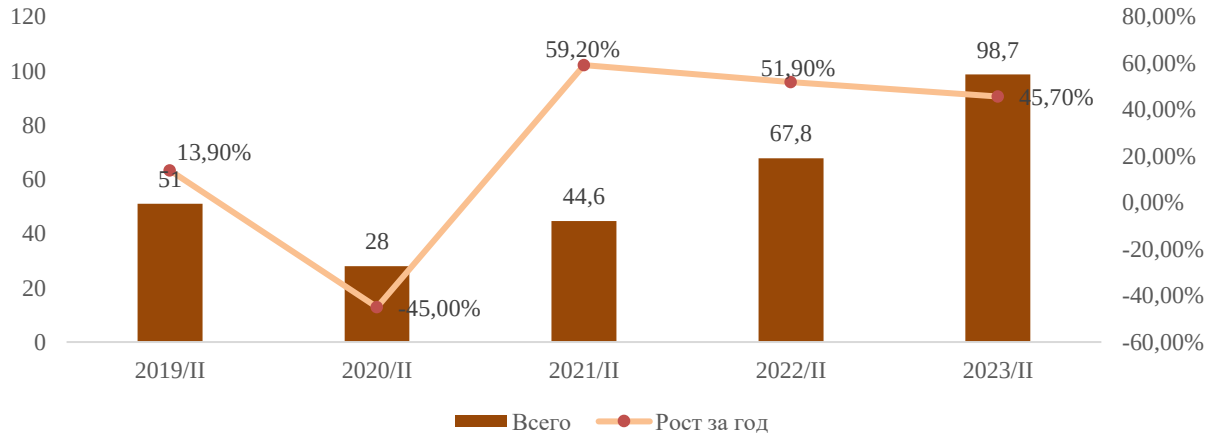

Рисунок 1. Объем услуг, оказанных местами размещения, млрд тенге*

**Примечание.* http:www.stat.gov.kz

Абсолютное увеличение по состоянию на 01.01.2022 г. составило 13,365 млн тенге, что в процентном соотношении выражается как прирост на 17,69 % (рис. 2) (Бюро национальной статистики Агентства по стратегическому планированию и реформам РК).

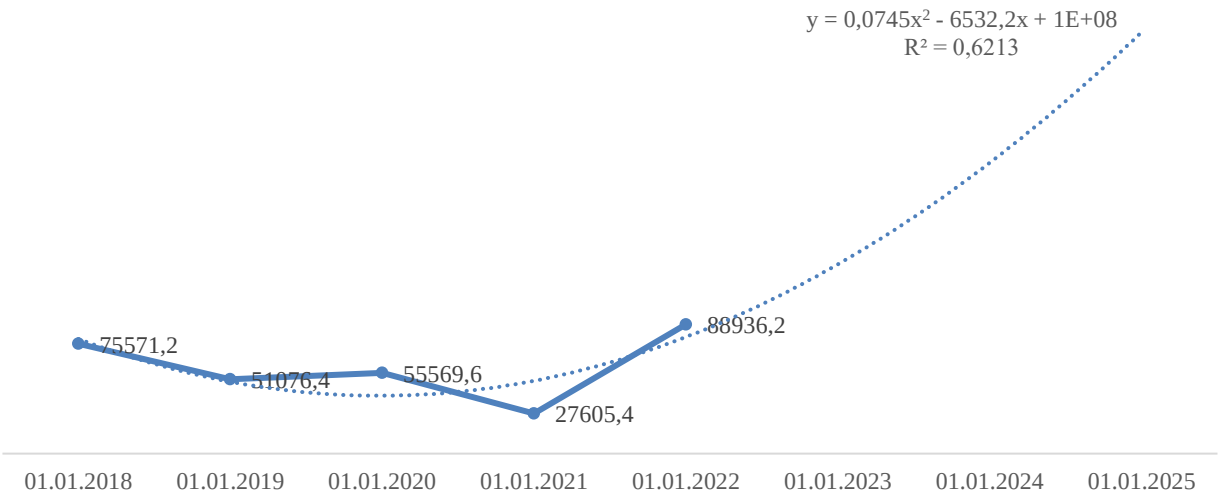

Рисунок 2. Экономическая активность туроператоров и агентств, млн тенге*

**Примечание.* http:www.stat.gov.kz

В соответствии с представленными данными мы можем предполагать, что с каждым годом количество турфирм в РК повышается на 10 % и свидетельствует о повышении величины значимости въездного и выездного туризма, а также качества услуг, предоставляемых турфирмами РК (табл. 3) (Бюро национальной статистики Агентства по стратегическому планированию и реформам РК).

Таблица 3. Показатели туристической деятельности в РК по состоянию на 01.01.2022 г.*

Показатель	Количество обслуженных, тысяч человек				Доход от туристской деятельности, млн тенге	Налоги и другие обязательные платежи в бюджет, млн тенге
	Всего	в том числе				
		въездной	выездной	внутренний		
Всего из них	16598,6	4712,6	7412,3	4473,7	122004,3	40491,1
Туристическими организациями	486,5	39,7	274,6	172,2	21450,7	3277,9
Объектами размещения	2458,9	594,2	-	1954,7	62082,2	33039,2
Санаторно-курортными учреждениями	218,9	65,7	-	153,2	13607,0	957,8
Особо охраняемыми природными территориями	537,9	162,0	-	375,1	-	-
Учреждениями культуры	3304,9	1486,3	-	1816,9	24863,6	3215,9

**Примечание.* http:www.stat.gov.kz

Рассматриваемый рост свидетельствует о восстановлении и дальнейшем развитии туристической отрасли после периода спада, вызванного глобальными экономическими и социальными вызовами, включая пандемию COVID–19, ситуация которой серьезно повлияла на отрасль в 2020 году. Несмотря на сложности, туристский сектор показал устойчивость и способность к восстановлению, подтверждая значимость туристической индустрии для экономики страны.(Арынова Ж.З., Нурмаганбетова А.Ж., 2022).

Анализ динамики в сфере туристических услуг подтверждает позитивные тенденции развития туристической отрасли в Казахстане, выражающиеся в устойчивом росте объемов предоставляемых услуг и укреплении экономического потенциала отрасли (рис. 3).

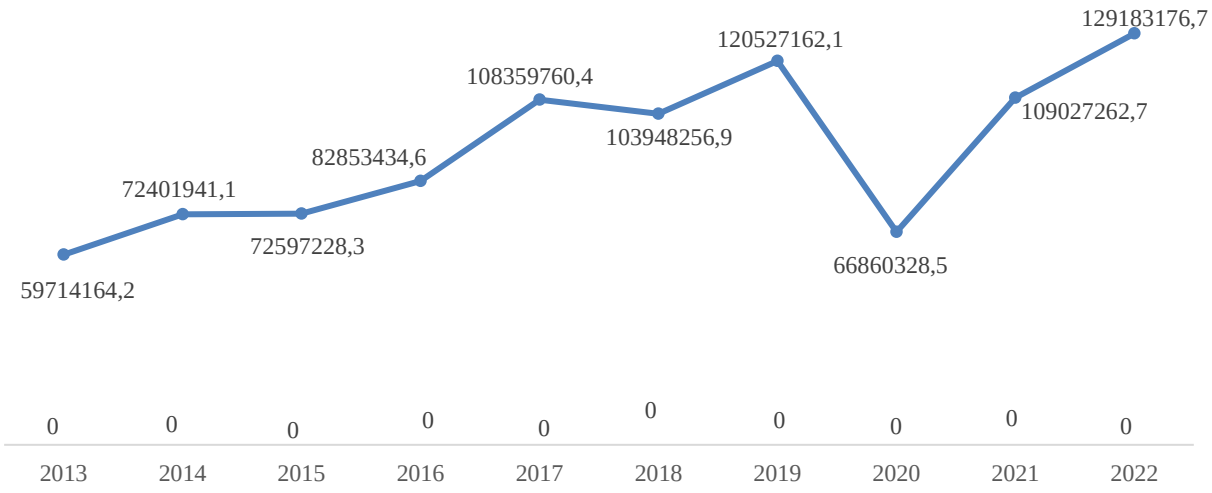

Рисунок 3. Объем услуг, оказанный местами размещения РК, тыс. тенге*

**Примечание*. http:www.stat.gov.kz

Развитие индустрии туризма и сопутствующей инфраструктуры определено основным направление в рамках реализации Государственной программы развития туристской отрасли Республики Казахстан на 2019–2025 годы (Государственная программа развития туристской отрасли Республики Казахстан на 2019–2025 годы).

Отрасль туризма демонстрирует устойчивое развитие и расширение, что обусловлено различными факторами, включая увеличение спроса на туристические услуги, расширение предложения туристических продуктов, а также государственную поддержку и стимулирование отрасли.

Взаимосвязь между развитием туристического бизнеса и объемом услуг в области развлечений в Республике Казахстан довольно сильна и важна для стимулирования туристического спроса и улучшения качества обслуживания туристов, поэтому авторами были рассмотрены прогнозные значения показателя «Объем услуг в области развлечений, млн. тенге» на 2023–2025 гг. была построена трендовая модель, в процессе чего были выполнены следующие этапы:

1. Проверка временного ряда на наличие аномальных наблюдений, с помощью критерия Ирвина (рис. 4).

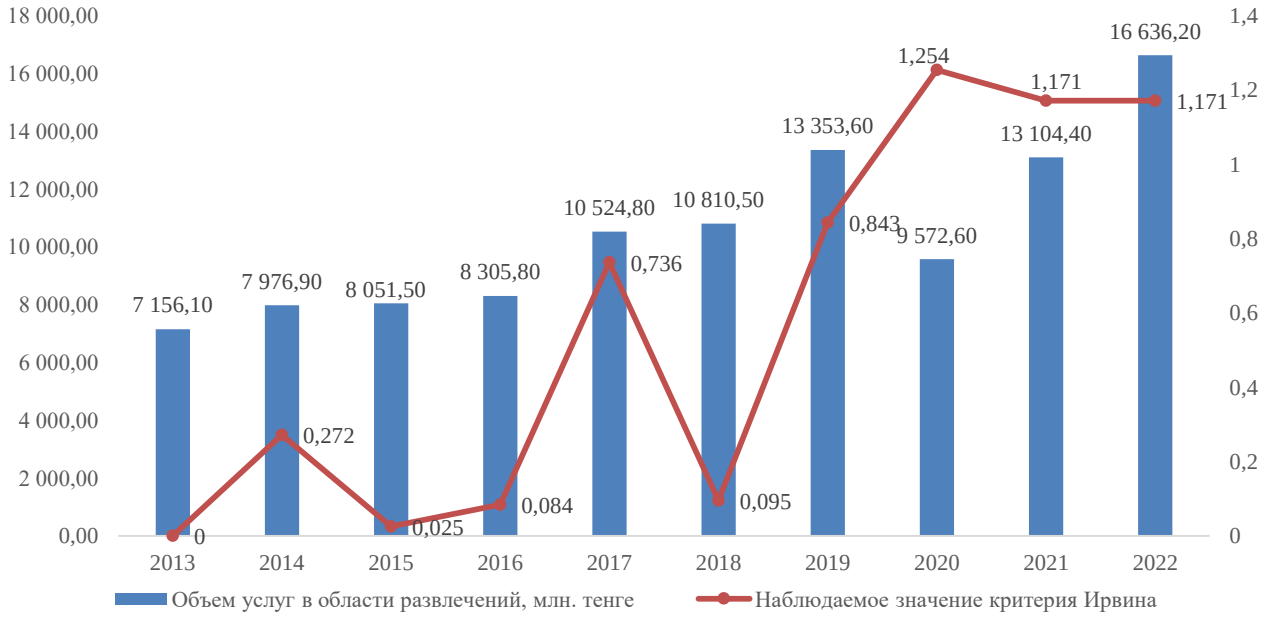

Рисунок 4. Проверка наличия аномальных наблюдений во временном ряду*

**Примечание.* Составлен автором на основе источника: http:www.stat.gov.kz.

При этом были применены расчетные формулы:

- наблюдаемое значение критерия Ирвина $\lambda_t = \frac{|y_t - y_{t-1}|}{\sigma_y}$, $t = \overline{2,10}$;

- критическое значение критерия Ирвина $\lambda_{0,05} = 1,5$.

С высокой уверенностью в 95 % можно утверждать, что в исходном временном ряду отсутствуют аномальные наблюдения, поскольку все значения, наблюдаемые по критерию Ирвина, оказались меньше критического порога.

2. Далее были рассмотрены критерии «восходящих» и «нисходящих» серий для оценки присутствия тренда в ряду:

$\nu(n) > \left[\frac{2n-1}{3} - 1,96\sqrt{\frac{16n-29}{90}}\right]$ при расчетном значении с вероятностью ошибки $0,05 < \alpha < 0,0975$ (3=3);

$K_{\max} < [K_0(n)]$ при расчетном значении с вероятностью ошибки $0,05 < \alpha < 0,0975$ (6 > 5).

3. Рассмотрим применение метода наименьших квадратов для приближения исходных данных

$$y_t = 5740,97 + 874,23t$$

4. Для оценки качества модели были выполнены две задачи:

- проверка ее адекватности;

- оценка точности.

Для проверки адекватности модели проведен анализ ряда остатков, который представляет собой разницу между прогнозными значениями, полученными с использованием модели и реальными наблюдениями. Важными характеристиками остатков являются их математическое ожидание, случайность и соответствие нормальному распределению. Результаты анализа остатков, направленного на проверку адекватности модели, приведены в таблице 4.

Таблица 4. Проверка адекватности модели для выявления прогнозных*

Проверяемое свойство	Используемая статистика	
	наименование, расчетная формула	полученное значение
Случайность	Критерий «пиков» (поворотных точек) $p > \left[\frac{2}{3}(n-2) - 1,96\sqrt{\frac{16n-29}{90}}\right]$	5 > 2 при границе 2
Нормальность	RS-критерий $RS = \frac{e_{\max} - e_{\min}}{S}$	3,68 при границе 2,67-3,69
Равенство математического ожидания уровней ряда остатков нулю	*t*-статистика Стьюдента $t_{набл} = \frac{\left\|\overline{e}\right\|}{S}\sqrt{n}$	0 при границе 2,31
**Примечание.* Составлена авторами на основе произведенных расчетов.		

Средняя относительная ошибка аппроксимации при этом имеет следующее значение: $E_{отн.} = \frac{1}{n}\sum_{i=1}^{n}\frac{|e_t|}{y_t} \cdot 100\% = 9,53\%$, что свидетельствует об адекватности и точности модели.

5. Точечный и интервальный прогнозы показателя «Объем услуг в области развлечений» на 2025 год при уровне значимости $\alpha = 0,05$ имеет следующие значения (рис. 5).

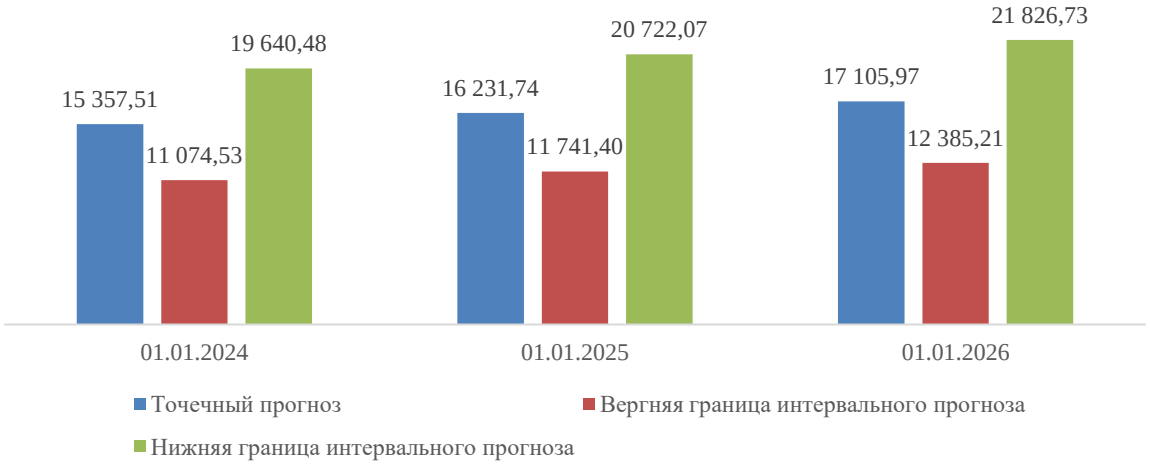

Рисунок 5. Точечный и интервальный прогнозы показателя «Объем услуг в области развлечений» по состоянию на 01.01.2026 г., млн тенге*

**Примечание.* Составлен авторами на основе произведенных расчетов.

Исследование позволяет сделать вывод, что эффективность реализации управленческих решений, направленных на развитие туристической отрасли, напрямую зависит от уровня развития гостиничной индустрии, инфраструктуры и сферы услуг в конкретном регионе страны.

Заключение

Анализируя туристический потенциал Республики Казахстан, можно выделить значительные ресурсы, которые имеют потенциал для развития и вклада в экономику страны. В частности более 40 горнолыжных курортов, включая 10 международных, и свыше 200 охраняемых природных территорий, таких как национальные парки и заповедники, представляют собой важные активы для развития туризма. Однако текущее состояние инфраструктуры туризма подчеркивает наличие существенных недостатков и потребность в модернизации. Улучшение качества горнолыжных трасс, создание дополнительных объектов, таких как канатные дороги и подъемники, а также улучшение доступности и условий на охраняемых природных территориях требуют стратегических инвестиций.

Принимаемые действия не только повысят привлекательность страны как туристического направления, но и способствуют устойчивому развитию туристической индустрии, увеличивая ее вклад в экономику страны. Анализ данных по деятельности туроператоров, турагентов и прочих организаций, предоставляющих услуги в сфере туризма, свидетельствует о росте объема оказанных услуг, отражая положительную динамику в секторе туризма, что подтверждает его потенциал в качестве важного элемента экономического роста в Казахстане.

Таким образом, современная тенденция развития туризма подтверждает его возрастающее воздействие на мировую экономику в целом, так и на экономику определенных государств. Исследование подтверждает, что успешное внедрение и реализация стратегий развития туризма требуют учета множества факторов, включая состояние гостиничного сектора, доступность инфраструктуры и уровень предоставляемых услуг в определенном регионе. Так, развитие туристической отрасли может быть ограничено отсутствием достаточного количества гостиниц или недостаточным качеством обслуживания, что препятствует привлечению туристов и росту туристического потока, в связи с чем важно проводить анализ данных о состоянии гостиничного бизнеса, инфраструктуры и сферы услуг при разработке стратегий и принятии управленческих решений в сфере туризма. Это подчеркивает необходимость уделения внимания развитию инфраструктуры и повышению качества обслуживания в туристическом секторе Казахстана путем анализа данных о состоянии гостиничного бизнеса и общей туристической инфраструктуры для выявления основных проблемных моментов и разработки стратегии для их решения, что позволит сделать туристическую отрасль более привлекательной для посетителей и способствовать ее устойчивому развитию.

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Қазақстандағы туристік бизнестің даму мәселелері мен болашағы

Аңдатпа:

Мақсаты: Мақаланың негізгі мақсаты Қазақстандағы туристік кәсіпкерлік секторына әсер ететін макроэкономикалық жағдайларды талдау. Туризм секторының өсуі мен тиімділігінің детерминанты ретінде экономикалық, әлеуметтік, технологиялық және инфрақұрылымдық факторлардың рөлін баса көрсете отырып, Қазақстандағы туристік кәсіпкерлік секторына әсер ететін макроэкономикалық жағдайларды бағалауды зерделеу.

Әдісі: Туристік қызметтер нарығына қатысушылардың белсенділігіне статистикалық талдау жүргізілді, туризм индустриясының даму динамикасына барынша әсер ететін маңызды сандық параметрлер анықталды. Зерттеу туризм секторының өсуі мен көрсеткіштерінің детерминанттары ретінде экономикалық, әлеуметтік, технологиялық және инфрақұрылымдық факторлардың рөлін көрсетеді.

Қорытынды: Зерттеу туристік сұранысты ынталандыруда және туристік қызмет көрсету сапасын арттыруда маңызды рөл атқаратын Қазақстан Республикасындағы туристік бизнестің дамуы мен ойын-сауық қызметтерінің көлемі арасында тығыз байланыс бар екенін растайды. Бұл тұжырымды негіздеу үшін авторлар 2023-2025 жылдар аралығындағы «Ойын-сауық қызметтерінің көлемі» көрсеткішін талдап, болжам жасады. Болашақта осы көрсеткіш бойынша өсу тенденцияларын анықтауға және Қазақстан Республикасындағы туристік бизнесті одан әрі дамыту жолдарын анықтауға мүмкіндік беретін тренд моделі құрылды. Қазақстандағы туристік бизнесті дамытудың мәселелері мен келешегі бірқатар факторларға, соның ішінде инфрақұрылымның жай-күйіне, қызмет көрсету сапасына, маркетингтік стратегияларға, сондай-ақ елдегі экономикалық және саяси жағдайларға байланысты.

Тұжырымдама: Қонақ үй нысандарының жетіспеушілігімен немесе қызмет көрсету деңгейінің жеткіліксіздігімен байланысты туристік саланы дамытудағы шектеулер туристерді тартуға және туристік келушілер ағынын арттыруға кедергі келтіреді, сондықтан туризм саласындағы стратегияларды әзірлеу және басқару шешімдерін қабылдау кезінде қонақ үй бизнесінің, инфрақұрылымның және көрсетілетін қызметтердің ағымдағы жай-күйіне талдау жүргізу қажет. Туристік бизнесті дамыту бойынша ұсыныстар ретінде Қазақстанның туристік көрікті жерлері туралы ақпаратты әлеуетті келушілер үшін қолжетімді және тартымды етуге көмектесетін мобильді қосымшалар, виртуалды турлар және интерактивті платформалар сияқты туризм саласындағы заманауи технологияларды пайдалану қажет.

Кілт сөздер: туристік сала, кәсіпкерлік субъектілері, кәсіпкерлік белсенділік, даму факторлар, диверсификация, тұрақтылық, туроператор, инфрақұрылым.

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Issues and Prospects of Tourism Business Development in Kazakhstan

Abstract

Object: The main purpose of the article is to analyze the macroeconomic conditions affecting the sector of tourism entrepreneurship in Kazakhstan.

Methods: The statistical analysis of the activity of participants of the tourism services market was performed, important quantitative parameters that have the greatest impact on the dynamics of the tourism industry development were identified. The study emphasizes the role of economic, social, technological and infrastructural factors as determinants of growth and efficiency of the tourism sector.

Findings: This study confirms that there is a strong relationship between the development of tourism business and the volume of entertainment services in the Republic of Kazakhstan, which plays an important role in stimulating tourism demand and improving the quality of services for tourists. To substantiate this conclusion, the authors analyzed and forecasted the indicator “Volume of services in the field of entertainment” for the period from 2023 to 2025. A trend model was built, which allowed to identify the growth trends of this indicator in the future and determine further ways of development of tourism business in the Republic of Kazakhstan. Problems and prospects of tourism business development in Kazakhstan depend on a set of factors, including the state of infrastructure, quality of services, marketing strategies, as well as economic and political conditions in the country.

Conclusions. Limitations in the development of the tourism industry related to the lack of hotel facilities or insufficient level of service hinder the attraction of tourists and increase the flow of tourist visitors, so it is necessary to analyze the current state of the hotel business, infrastructure and services provided when developing strategies and making management decisions in tourism. As recommendations for the development of tourism business, it is necessary to apply modern technologies in the field of tourism, such as mobile applications, virtual tours and interactive platforms that help to make information about Kazakhstan's tourist attractions more accessible and attractive to potential visitors.

Keywords: tourism industry, business entities, entrepreneurial activity, development factors, diversification, sustainability, tour operator, infrastructure.

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ҚАРЖЫ, ЕСЕП ЖӘНЕ АУДИТ
ФИНАНСЫ, УЧЕТ И АУДИТ
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The concept of professional judgment of accountant: concept, essence and content

Abstract

Object: The study aims to consider one of the accounting tools — the professional judgment of an accountant and to generate the most suitable definition from the point of the authors` view for this economic category.

Methods: The studies have used comparative, logical analysis, typology and grouping, methods of induction and deduction. To ensure the reliability of the study, the literature review utilized the works of various renowned authors on accounting. The comparison of various findings of different studies were scrutinized and based on the analysis of professional judgment resources, a definition of the phenomenon was proposed. IFRSs, which require professional judgment of an accountant, have also been studied and the rationale for the study of the essence of this economic category has been provided.

Findings: Various approaches of authors related to the concept and classification of accountant's professional judgment were analyzed, and the author's definition of this economic category was formed. The question of the place and role of professional judgment as one of the accounting tools in the accounting system is considered. Justifications are given about its use for measuring accounting objects, reflecting the facts of economic activity of subjects and presenting financial information to users for correct decision making within the framework of the current accounting standards. The need to analyze the accountant's professional judgment as the main category of accounting theory and develop the concept of professional judgment was justified.

Conclusions: Professional judgment of the accountant is one of the important economic categories of accounting, which in the current realities plays an important role in the preparation of financial statements of the company and its disclosure, which depends on education, special knowledge of the specialty, experience and other personal characteristics, also on the information on the situation to be solved.

Keywords: accounting, accounting professional judgment, uncertainty, risk, accounting policy, financial reporting.

Introduction

After gaining independence, the Republic of Kazakhstan (RK) began reforming its accounting system. After the approval of the Decree of the President of the Republic of Kazakhstan “On Accounting” in December 1995, the RK gradually began to implement IFRS. The transition to IFRS implies the use of new accounting tools, in particular, the professional judgment of the accountant.

Professional judgment of an accountant is when an accountant, based on his experience, awareness of regulations, standards, qualification knowledge, makes a decision about objects, situations and phenomena of economic activity of the company and provides information to a wide range of users.

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The use of professional judgment is a means of reducing uncertainty and reducing information risks in the field of accounting. All of the above leads to the creation of the concept of professional judgment of the accountant.

The current legal framework does not specify the definition of the concept of "professional judgment in accounting", however, in practice, unexpected situations often arise that require the accountant's immediate intervention, that is, his or her qualified opinion, to solve the problem. Reasoning is necessary to accurately determine the mechanism of solving certain problems in unexpected situations. Professional judgment plays an important role in the formation of financial statements. An accountant cannot successfully control the activity of the enterprises and its financial results based only on accounting rules.

In such cases, management and specialists of the organization should evaluate the degree of impact of the chosen method on the usefulness of financial information and decide which requirement should be prioritized. That is, today the accountant is forced to use professional judgment, because even within the framework of many IFRSs, you must choose one or another accounting method. For example, according to IAS 2 Inventories, you need to choose a method of accounting for inventories using FIFO, or weighted average cost, or specific identification.

Moreover, the interpretation of an accountant in relation to the management of a company's profit is always an acute angle for the world community, since using certain methods when forming a transaction, he will be able to present that information to interested parties in order to mislead them and for himself to obtain a favorable result from the decision of these interested parties. This demonstrates the close relationship between ethical issues and an accountant's professional judgment (Heinz et al., 2013).

In this regard, perhaps some accounting scholars argue that accounting is an art. However, accounting is most likely a combination of science and art (Al-Adeem, 2021), where the application of professional judgment in accounting is an art.

Methods

Qualitative research methods such as content analysis, comparative and logical analysis were used during the research. To ensure the reliability of the study, the literature review relied on the works of various renowned accounting authors. A comparison of the various findings from different studies was carefully examined and a definition of this phenomenon was proposed based on a review of professional judgment resources.

The analysis of some IFRS in which there is a need to apply professional judgment as one of the main methods of accounting is made, examples are given.

Literature Review

Many foreign and domestic scientists have studied the phenomenon of professional judgment in accounting. In writing this paper we studied the works of the following authors: foreign scientists R. K. Mautz, A. Riahi-Belkaoui, S. Cormona, M. Ezzamel and F. Gutierrez, E. S. Hendriksen, M. F. Van Breda, M. Gaffikin, N. McGee, Kh. Al- Adeem; Russian scientist-economists N. V. Generalova, T. Yu. Druzhilovskaia, T. N. Korshunova, S. A. Rasskazova-Nikolaeva and others. F.S. Seydakhmetova, S.A. Sultanova, and others dealt with these issues in Kazakhstan.

With the development of accounting, the science of accounting theory, which consists of interrelated principles and methods, also undergoes changes. In this case, the improvement of accounting is directly affected by the activities of the accountant, which is the driving force behind this trend. R. K. Mautz in his works justified that accounting belongs to social science (Mautz, 1963). Later, his view was shared by A. Riahi-Belkaoui (Riahi-Belkaoui, 2004; 2018; 2019), S. Cormona, M. Ezzamel and F. Gutierrez (Cormona et al., 2004; 24–53).

However, E. S. Hendriksen and M. F. Van Breda disagree with this worldview, as they believe that accounting depends on the ethical culture and personal characteristics of the accountant, in this regard should be attributed to social, applied science (Hendriksen et al., 2000).

Professor M. J. Gaffikin supplements this view by saying that due to the influence of human aspects on accounting methodology, subjectivity takes place, so it is a social science that assists users to make decisions (Gaffikin, 2006). According to Professors N. McGee and Kh. Al- Adeem there are contradictions between the theoretical aspects of accounting based on objective scientific position and the work of the accountant based on professional judgment (McGee, 2000; Al- Adeem, 2023).

Published studies provide the main characteristics of an accountant that have a significant role on his/her professional judgment. Of course, the main indicators are education or knowledge and experience in

the professional field. Also, one of the main parameters affecting professional judgment are as the level of uncertainty, awareness of the situation. Some authors argue that the accountant's gender and religion are not left out (Mainul et al., 2023; Zeev Shtudiner et al., 2020).

Moreover, the works of colleagues emphasize different types of professional judgment as one of the important tools in the accounting system. Scholars-economists offer different classifications according to multiple attributes and try to reveal from different angles this economic phenomenon, which helps to understand the essence of it. Although there is no unambiguous opinion here, we analyze the points of view of different authors on the topic "Professional judgment of the accountant" (Table).

Table. Explanation of the concept of "professional judgment of an accountant" in various publications

Authors/sources	Category characteristics
IFRS 1 (Opisanie standarta MSFO 1 Predstavlenie finansovoi otchetnosti), Shneidman L. Z. (Shnejdman, 2001)	Professional judgment is an opinion or conclusion that is used to make a decision in the face of uncertainty.
Sokolov Ya. V., Terentyeva T. O. (Sokolov et al., 2001)	They understood by professional judgment an opinion expressed in good faith by a professional accountant about a business situation and useful both for its description and for making effective management decisions.
Rasskazova-Nikolaeva S. A. (Rasskazova-Nikolaeva, 2008).	Professional judgment is understood as the ability to make and respond to decisions in the face of uncertainty, as well as the professional accountant's reasonable judgment regarding the professional accountant's professional approach and disclosure of true information about the entity's financial position, financial results and changes in them.
Generalova N. V. (Generalova, 2005)	Professional judgment in a broad sense is the accountant's matching of all the facts of economic life; in the narrow sense — the accountant's matching of the facts of economic life in the absence of specific regulatory guidelines, in conditions of uncertainty and in disagreement with specific regulatory guidelines.
Tuiakova Z. S., Satalkina E.V. (Tuiakova et al., 2010)	Professional judgment is a reasonable, independent judgment of a specialist in the field of accounting, based on special knowledge, experience, established experience of showing economic operations in the conditions of uncertainty, regarding the objects of accounting, ways of forming the report.
Druzhilovskaya T. Yu., Korshunova T. N. (Druzhilovskaya et al., 2013)	Professional judgment is considered as the opinion of a professional accountant regarding the methods of accounting in cases where it is necessary to take into account the specifics of a specific organization in order to record the objects and facts of economic activity and show them in the report.
Sultanova B. B. (Sultanova, 2012)	Accountant's professional opinion is not the written norms of the law, but an honest opinion about the economic situation that is useful both for its description and for making management decisions.
Note – compiled by the author on the basis of the sources given in the References	

Research economists have written about the need for a professional accountant's opinion. According to Prof. Ya.V. Sokolov, an accountant can express his reasoning at the initial consideration of normative documents and the absence of errors on these documents does not exclude the possibility of expressing his thoughts on these aspects (Sokolov, 2005).

Prof. S.A. Rasskazova-Nikolaeva notes that the accounting policy is recommended to describe the interpretation of the methods used, as there may be contradictions between legislative acts on the norms of the same principle of accounting. In this regard, the system of normative regulation should allow such an approach in accounting, as in this case the determining factor will be the professional judgment of the accountant (Rasskazova-Nikolaeva, 2008).

An interesting point of view was expressed by Associate Professor M. A. Tsigelnik, he believes that professional judgment is inherent in all participants of the market economy in many aspects. Based on this fact, it is necessary to expand the range of reports of economic activity of the enterprise, as accounting is a source of information for decision-making. In this regard, without touching accounting methods to systematize the logic of approaches for making professional judgments (Tsigelnik, 2003).

Professional judgment is used by the accountant mainly in certain non-standard situations, in situations of uncertainty, when there are no instructions to resolve this current situation and the accountant himself has to take certain measures based on his professional and personal qualities, such as honesty, education, experi-

ence and awareness. The more competent he is as an accountant, the more correct the solution to the problem will be.

American economist F. Knight in his work "The concept of uncertainty and risk" for the first time introduced the concept of uncertainty, when due to lack of knowledge about a certain phenomenon, one should act based on judgment (Knight, 2003).

According to Professor S. A. Rasskazova-Nikolaeva, the consequence of the lack of unified rules and standards, which would establish order in the accounting system, causes uncertainty in this area. She explains the ability to make decisions in the face of uncertainty as the accountant's professional (Rasskazova-Nikolaeva, 2008).

Results

One of the main concessions in IFRS is the professional judgment of the accountant, which plays a crucial role in accounting and is reflected in the entity's Accounting Policies (IAS 8). Many accounting standards require the use of professional judgment in the best way to select the most appropriate option from a variety of options given or, as in the case of IAS 1 Presentation of Financial Statements, for the accountant to prepare the optimal financial statements for the company under consideration. Other standards also indicate the need to use professional judgment in forming an entity's financial statements.

With the introduction of IFRS into our lives, the professional judgment of an accountant has advanced by leaps and bounds, although there is still no conceptual apparatus. Due to the lack of a comprehensive definition of this terminology, having studied many scientific works on this topic, the authors of this paper offer their own, but at the same time not excluding the possibility of formulating a definition of the term professional judgment by the association of accountants.

Discussions

In our opinion, professional judgment in accounting is the accountant's reasonable opinion regarding the accounting and reporting of objects and economic activity facts, taking into account the peculiarities of the entity in a situation of uncertainty.

English people perceive professional opinion as a reflection of a certain accountant about a real economic situation. And that accountant should find its description. Accountants in Kazakhstan, on the other hand, even in unexpected situations, want to look for the real solution to the situation in regulatory documents. However, this is only one and not the most important data for forming a professional opinion. There is also common sense, based on knowledge and experience, the easiest path that a true professional should follow.

Professional judgment plays an important role in the first place when reflecting a transaction and preparing the company's financial statements. To reflect the fact of economic activity of an entity in accounting, an accountant measures the value of assets, liabilities, income and expenses, chooses methods of depreciation of fixed assets, write-off of inventories, etc. He also decides where and in which element of the statement of financial position of the enterprise or statement of comprehensive income of the enterprise to include accounting objects.

Based on the above, we can draw the following conclusions, which should be guided by the accountant:

- if there is a possibility of reliable reflection of the fact of economic reality on the basis of normative acts or standards, where the procedure of this economic phenomenon is described, the accountant should do so.

- if in the opinion of the accountant there is no possibility of reliable reflection of the fact of economic reality on the basis of normative acts or standards, although the procedure of this economic phenomenon is described in normative acts, the accountant should reflect this fact of economic life on the basis of his professional judgment.

- if the accountant cannot reliably reflect the fact of economic reality due to the lack of description of this situation in normative acts, the accountant should reflect this fact of economic life in accordance with his professional judgment truthfully.

The scheme of application of professional judgment on the basis of accounting standards is given, as the Republic of Kazakhstan maintains accounting on the basis of IFRS (Fig. 1).

Figure 1. Scope of application of an accountant's professional judgment
Note - developed based on sources (Gubaidullina, 2014; Druzhilovskaia, 2013).

Professional judgment is necessary when measuring the value of an object, determining future economic benefits, damages, expenses from the object, how reliably these indicators can be measured. It is also used in the formation and disclosure of the company's financial statements.

Considering the great variety of situations requiring professional judgment, it is appropriate to classify them.

Professors Z.S. Tuiakova and E.V. Satalkina (Tuyakova et al., 2010) presented a classification of accountant's professional judgments according to the following features:

- By type of uncertainty of accounting regulation rules;
- In relation to the object of judgment;
- By the term of realization;
- By purpose of professional judgment;
- By areas of application;
- By influence on the efficiency of entrepreneurial activity of an economic entity;
- By category of specialists;
- By purpose of information;
- On the basis of preparation;
- By realization.

This classification is expedient and covers many aspects of economic life. According to the first attribute, the group of professional judgments “In conditions of vagueness and presence of uncertainty boundaries” is written for this group. The authors of this work believe, it can be added, that the responsibility belongs entirely to the specialist who makes the decision, since there is no normative regulation on this issue.

In turn, A. R. Gubaidullina (Gubaidullina, 2014) proposed her classification by attributes from a different perspective, and she suggests the following attributes:

- Eliminated risk of distortion or non-disclosure of information;
- The degree of influence on the indicators characterizing the financial position;
- Frequency of accounting judgment formation;
- Belonging to reporting periods.

This classification is informative with respect to the company's financial statements. However, the authors of this work suggest that for full coverage by the attribute “Belonging to reporting periods” the group of professional judgment “In relation to past events” should be added.

Currently, the use of professional judgment is justified by IFRS, but this does not ease the burden of the accountant, as the responsibility for the reflection of accounting objects, the formation of financial statements lies entirely on the accountant. Sometimes there is uncertainty in the situation and difficulty in applying correct judgment due to the nature of the company. Because the situation that has arisen is not regulated by regulations and is not described in standards.

As a field of application of professional judgment, the authors traditionally indicate the conditions of regulatory uncertainty. At the same time, in this uncertainty they emphasize the following (Davydova, 2017):

- the boundaries of uncertainty are set in the standards, within which there is a possibility of choosing an alternative option. There is no risk of erroneous choice and the optimality of the decision depends on the accountant (the choice of the method of writing off inventories, depreciation of fixed assets, etc.).

- There are no specific methods of accounting for a certain situation in standards and regulations. There is a risk of making the wrong decision, since the professional judgment of the accountant is based on his knowledge, experience and other personal characteristics.

Thus, the use of professional judgment is fully realized in the development of an entity's accounting policy based on IFRS, the formation of the entity's financial statements and the disclosure of the entity's financial statements in accordance with IFRS (Fig. 2).

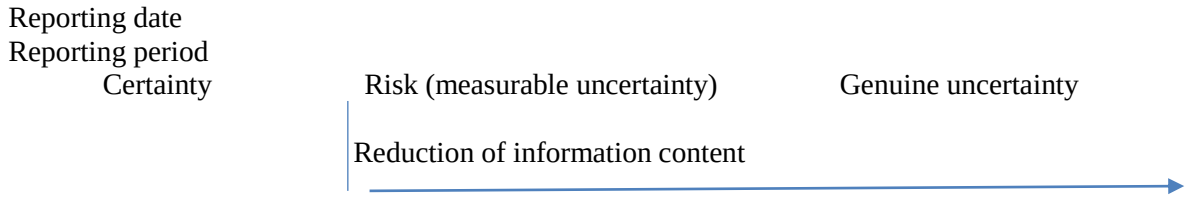

Figure 2. Circumstances in which an accountant should use professional judgment

Note – based on sources (Gubaidullina, 2014; Modrov,2017)

Given the important role in determining estimates and presenting changes in estimates in the financial statements, each entity should establish certain procedures for making, documenting and recording professional judgment. As an example, let's consider options for reporting in accordance with IFRS (Modrov, 2017).

For example, IAS 1, the first standard, is characterized by the absence of requirements for the format of the statement of financial position and statement of comprehensive income of a company and corporation. In IAS 1, only items of reporting forms are given and the recommendations provide examples of reporting forms. The accountant will have some freedom in determining the forms of reporting and will have the opportunity to prepare those forms which, in his opinion, are more suitable for the company. However, in Kazakhstan there are approved standard forms of company financial statements, and "corporate reporting models are constantly proposed by professional accounting organizations, academic organizations and individual accountants and specialists" (Riahi-Belkaoui, 2019).

For IAS 2, which was mentioned above, the choice of the accountant may be as follows: to use the FIFO method or the weighted average cost method to determine the cost of inventories (paragraph 25). Also, an interesting exception from the general principles of stock valuation in the standard is the need for possible fair value valuation for stocks owned by commodity broker-traders (item 3). In addition, the accountant should collect and analyze information to determine the net selling price of inventories (or "fair value of inventories less costs to complete and costs to sell") (IAS 2, paragraphs 30 and 31).

For IAS 7, freedom for the accountant can be considered the ability to present flows on a net basis or on an open (without balance) cash flow statement (cash flow statement) (paragraph 21). In addition, the standard includes interest and dividends paid either as part of operating activities and "if it is advocating that it is better to attribute it to financial activity as "property financing" considers the possibility of choosing to display. The appropriate choice is provided in paragraph 31(IAS 7).

In terms of IFRS 12, an accountant may select and justify a tax rate for calculating deferred taxes based on the expected method of settlement or recovery of timing differences (IFRS 12, paragraph 51).

In IAS 16, the most important thing for accounting for fixed assets is the choice of using the actual cost or fair value accounting model for classes of fixed assets (IAS 16, paragraph 29). For organizations with a large number of fixed assets, such a choice has a fundamental impact on the net assets and depreciation rate in financial statements, and thereby on the company's performance during the period. Also, an accountant (or other professional valuer) is involved in determining the fair value selected as the basis for valuation (paragraphs 31 and 34). Depreciation (or amortization) of property, plant and equipment will be carried out based on the estimated useful life, residual value or consumption structure through accounting policies and taking into account management's judgment (IAS 16, paragraphs 50, 51 and 60). This is also typical of accounting standards for intangible assets and investment property.

In IAS 19, calculation of pension liabilities takes into account mortality rate, final salary, etc. based on assessment that is, the theory of probabilities is taken into account. There is a form of service for the accountant — to select and justify the use of relevant data (IAS 19, paragraph 64).

The choice for IAS 20 is that government subsidies attributable to assets are presented in the statement of financial position either by showing the subsidy as deferred income (revenue of future periods) or by deducting it from the carrying amount of the asset, and this balance sheet currency can be "opened" or "closed" affects (IAS 20, paragraph 24).

An accountant has to prepare many justifications and judgments when applying IAS 36. He (as well as the appraiser, the financier of the organization) participates in the determination of discounted cash flows or net realizable value for impairment testing (IAS 36, paragraph 18).

For IAS 38, as for fixed assets, the choice consists of using either the actual cost or fair value accounting model for the types of intangible assets (paragraph 72). IAS 40 provides for the possibility of choosing the model of accounting for investment property for the organization either according to actual costs or according to fair value (IAS 38, paragraph 30).

IFRS 3 provides a choice for the calculation of goodwill in the context of non-controlling interests — at fair value (the "full" goodwill method, in which goodwill belongs to both the controlling shareholders and the non-controlling shareholders) or the fair value of the net assets of the subsidiary by share in cost (IFRS 3, paragraph 19).

It is also possible to mention a number of examples of professional judgment or selection from IFRS standards, but expressed in a more closed way or used in certain situations, for example, in testing for impairment.

Such examples include the large number of options for calculating materiality for different purposes and the lack of even quantitative guidelines for its determination in IAS 8 (IAS 8, paragraph 5).

IFRS 12 provides for the recognition of a deferred tax asset related to unused tax losses carried forward to future periods only if it is probable that future taxable profits will be realized (IFRS 12, paragraph 34), that is, the standard contains "impairment testing of deferred tax assets". Future taxable profit is estimated by the accountant based on expectations and professional judgment. In addition, the standard indicates that the recognition of a deferred tax liability for all taxable temporary differences related to investments in subsidiaries is possible only if it is possible to receive dividends in the foreseeable future (IFRS 12 paragraph 39).

From the point of view of IAS 21, the definition of functional currency is based on the set of features specified in paragraphs 9–12. It should be noted that simplified functional currency is the "currency of the organization's economy". Accordingly, it is necessary to use some professional judgment of the accountant to determine the functional currency (that is, the currency in which the accounts are conducted and in which exchange differences are calculated).

In IAS 23, professional judgment will have to be used to determine when capital financing of debt costs in the original cost of a classified asset ceases, as such capital financing must cease "when all work to prepare the asset is complete" (IAS 23, paragraph 22).

In terms of IAS 37, recognition of reserves is carried out on the basis of the probability of resource withdrawal (IAS 37, item 14). Who, in the absence of an accountant, can show that the outflow of resources with economic benefits is "most likely" and recognize a provision-liability related to this probable outflow. According to the standard, the best estimate of the reserve is based on the percentage probability of exit (paragraph 40), which means that a modern specialist in the field of accounting and financial reporting should have the theory of utilitarianism in his arsenal and should apply it. Thus, the accountant provides for the recognition of a more probable (more than 50%) amount to recognize the provision in the most probable amount of future cash flows.

When it comes to the recognition of intangible assets under IAS 38, the capitalization of development costs only begins when the period of creation of an intangible asset is "in development" and all the signs of the beginning of capitalization of costs are fulfilled — paragraph 57 (for example, technical that allows the completion of the relevant development and six characteristics such as availability of financial resources). In addition, the judgment allows the accountant to amortize the intangible assets when the accountant determines that the intangible asset has a "definite" ("finite") useful life (paragraph 88). An accountant has the confidence to see that an organization has intangible assets with an undeterminable useful life (indefinite), which are tested annually for impairment instead of amortization.

In IFRS 5, discretion and the application of professional judgment can be exercised by classifying assets as held for sale if they are expected to be disposed of within one year (paragraph 8). An accountant can indicate whether or not such an asset is expected to be sold in the next 12 months.

According to IFRS 8, the definition of accounting segments is based on various factors (item 11), mainly based on which segments and in what form they are presented to top management (persons responsible for resource allocation, strategy, etc.). Thus, the employees working in the enterprise are in the best position to represent and justify the business segments.

In IFRS 10, identification of investments as investments in a subsidiary is carried out on the basis of the sign of "control" (IFRS 10, paragraph 4). Having a control involves gathering some evidence, and this can be done consciously by an accountant.

Similar to the consolidation of subsidiaries, in IAS 28 and IFRS 11, the identification of investments as investments in associates is based on the criterion of "significant influence".

Elkhashen M. Emad and Ntimb G. Collins point out that there is no end to the debate on the choice of an alternative method. As some selected options require more effort as in the choice of fair value. Also due to the differences between countries, there are conflicting views on convergence, which allows comparison of objects (Emad et al, 2018; 17).

Therefore, in the works of scientists there are conclusions and additional recommendations on IFRS, which improve the accuracy of the accountant's judgment. Also, accountants should thoroughly study all available interpretations of IFRS in order to improve their awareness of various situations of the company's economic activity (Mala et al, 2014).

Thus, the accountant's professional judgment is of particular importance in the context of the existing regulatory regulation of accounting, as well as in connection with the transition to IFRS. Today, professional judgment is implemented when creating accounting policies and when creating financial statements, because it is a tool for improving accounting, and allows to eliminate existing contradictions in legislation by accumulating practical experience. It is also actively considered by many scientists in the economic literature, but despite this, there is no final understanding of the meaning and content of the accountant's professional judgment.

Conclusions

In the current situation, when Kazakhstan's national accounting system is fully converged with IFRS and included in global integration processes, the need to use the professional judgment of accounting specialists is increasing. With the introduction of IFRS accounting policy of the enterprise and its financial statements are made through the prism of professional judgment of the accountant, because it is one of the tools of accounting. Although professional judgment has been a hot topic for many years and has been studied by many economists, there is still no uniform definition. In this regard, we proposed above our option of the definition, indicating that professional judgment is a reasonable opinion of the accountant regarding accounting and reporting on the objects and facts of economic activity of the company, taking into account the peculiarities of the company's activity in a situation of uncertainty.

The authors also proposed additions to the Classification of professional judgments of an accountant Z. S. Tuiakova, E. V. Satalkina and A. R. Gubaidullina, which will most fully reflect the essence of these characteristics.

Thus, as can be seen from the study, the influence of this economic category on the adoption of correct economic decisions by internal and external users is enormous. In this regard, in order to obtain quality data, it is necessary to increase the competence and awareness of accountants everywhere. Because quality information depends on the accountant's judgment. An accountant, within the limits of current standards, based on his knowledge and work experience, choosing valuation options, calculations, keeps company records and generates financial, tax and statistical reporting.

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Бухгалтердің кәсіби пайымдау тұжырымдамасы: түсінігі, мәні және мазмұны

Аңдатпа:

Мақсаты: Зерттеудің мақсаты — бухгалтерлік есеп құралдарының бірі бухгалтердің кәсіби пайымдамасын қарастыру және осы экономикалық категория үшін авторлардың көзқарасы бойынша ең қолайлы анықтаманы анықтау.

Әдісі: Зерттеу барысында келесі әдістер қолданылды: салыстырмалы, логикалық талдау, типология және топтастыру, индукция және дедукция әдістері. Зерттеудің сенімділігін қамтамасыз ету үшін әдебиеттерді шолуда бухгалтерлік есеп бойынша әртүрлі танымал авторлардың еңбектері қолданылды. Әртүрлі зерттеулерде жасалған әртүрлі тұжырымдарды салыстыру мұқият зерттелді және кәсіби пайымдама бойынша ресурстарды талдау негізінде бұл құбылыстың анықтамасы ұсынылды. Сондай-ақ бухгалтердің кәсіби пайымдамада талап ететін ХҚЕС зерттеліп, осы экономикалық категорияның мәнін зерттеудің негіздемесі келтірілді.

Нәтижесі: Авторлардың бухгалтердің кәсіби пайымдауының түсінігі мен жіктелуіне деген әртүрлі көзқарастары талданып, осы экономикалық категорияның авторлық анықтамасы тұжырымдалған. Бухгалтерлік есеп жүйесіндегі бухгалтерлік есеп құралдарының бірі ретінде кәсіби пайымдаманың орны мен рөлі туралы мәселе қарастырылды. Оны бухгалтерлік есеп объектілерін өлшеу, субъектілердің шаруашылық қызметінің фактілерін көрсету және қаржылық ақпаратты пайдаланушыларға қолданыстағы бухгалтерлік есеп стандарттары шеңберінде дұрыс шешім қабылдау үшін ұсыну үшін пайдалану негіздемесі келтірілген.

Қорытынды: Бухгалтердің кәсіби пайымдамасы бухгалтерлік есептің маңызды экономикалық категорияларының бірі, ол қазіргі жағдайда компанияның қаржылық есептілігін құруда және оны ашуда маңызды рөл атқарады және білімге, мамандық бойынша арнайы білімге, тәжірибеге және басқа да жеке сипаттамаларға, сондай-ақ шешілетін жағдай туралы ақпаратқа байланысты.

Кілт сөздер: бухгалтерлік есеп, бухгалтердің кәсіби пайымдамасы, белгісіздік, тәуекел, есеп саясаты, қаржылық есептілік.

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Концепция профессионального суждения бухгалтера: понятие, сущность и содержание

Аннотация:

*Цель***:** Цель исследования — рассмотреть один из инструментов ведения бухгалтерского учета — профессиональное суждение бухгалтера и сгенерировать наиболее подходящее определение с точки зрения авторов для данной экономической категории.

Методы: В ходе исследования использовались следующие методы: сравнительный, логический анализ, типология и группировка, методы индукции и дедукции. Для обеспечения надежности исследования в обзоре литературы применялись труды различных известных авторов по бухгалтерскому учету. Сравнение различных выводов, сделанных в различных исследованиях, было тщательно изучено и на основании анализа ресурсов по профессиональному суждению предложено определение этого феномена. Также были изучены МСФО, по которым требуется профессиональное суждение бухгалтера и дано обоснование исследования сущности данной экономической категории.

Результаты: Проанализированы разнообразные подходы авторов к понятию и классификации профессионального суждения бухгалтера, сформулировано авторское определение этой экономической категории. Рассмотрен вопрос о месте и роли профессионального суждения как одного из инструментов бухгалтерского учета в системе бухгалтерского учета. Даны обоснования об использовании его для измерения объектов учета, отражения фактов экономической деятельности субъектов и представлении пользователям финансовой информации для правильного принятия решения в рамках действующих стандартов бухгалтерского учета.

Выводы: Профессиональное суждение бухгалтера — одна из важных экономических категорий бухгалтерского учета, которая в нынешних реалиях играет важную роль при составлении финансовой отчетности компании и раскрытия его и зависит от образования, специальных знаний по специальности, опыта и других личностных характеристик, а также от информации по решаемой ситуации.

Ключевые слова: бухгалтерский учет, профессиональное суждение бухгалтера, неопределенность, риск, учетная политика, финансовая отчетность.

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Использование облачных платформ в бухгалтерском учете: сравнение 1С и Xero

Аннотация:

Цель: Исследовать эффективность использования облачных платформ, таких как 1С:Бухгалтерия и Xero в сфере бухгалтерского учета и сравнить количество и качество представленных инструментов.

Методы: В работе над статьей применялись общие методы научного познания: методы эмпирического исследования (наблюдение, сравнение, анализ, синтез (обобщение); методы теоретического исследования (восхождение от абстрактного к конкретному, от общего к частному и от явления к сущности, выделение отдельных частей объекта, выявление причинно-следственных связей); правила формальной логики; системный подход.

Результаты: Для того чтобы понять степень популярности и удовлетворенности пользователей платформы Xero, были изучены такие показатели, как средний доход на пользователя (ARPU); затраты на привлечение клиентов (CAC); пожизненная ценность (LTV) на одного подписчика; отток (%). Низкий уровень оттока является положительным индикатором, свидетельствующим о том, что клиенты склонны оставаться. Если уровень оттока остается стабильным или снижается, это может указывать на высокую удовлетворенность клиентов. Увеличение пожизненной ценности на одного подписчика говорит о том, что клиенты приносят больше выручки за время сотрудничества с компанией. Это может свидетельствовать о долгосрочной лояльности и удовлетворенности клиентов. Увеличение ARPU может свидетельствовать о том, что пользователи не только остаются, но и готовы платить больше за услуги, что может быть связано с повышением уровня удовлетворенности или предоставлением дополнительных ценностных услуг. 1С также обладает обширными возможностями, модульностью, предназначена для разных видов бизнеса, включая производство и торговлю. Имеет многофункциональный, локализированный интерфейс, предоставляет интеграцию с различными системами. Модульная структура обеспечивает гибкость в выборе необходимых компонентов. Исходя из представленного сравнительного анализа между Xero и 1С, можно констатировать, что обе бухгалтерские системы имеют свои особенности и характеристики, предназначенные для разных рынков и аудиторий.

Выводы: Проведенный SWOT-анализ выявил, что 1С и Xero обладают своими уникальными преимуществами и ограничениями. 1С, с обширными функциональными возможностями и широким распространением, является мощным инструментом для компаний, стремящихся к полному управлению бизнес-процессами. Однако, несмотря на регулярные обновления, ее высокая сложность может потребовать значительного времени и ресурсов для освоения. С другой стороны, Xero предлагает простоту использования, гибкость облачных решений и широкие возможности интеграции. Это делает его идеальным выбором для небольших и средних предприятий, особенно для тех, кто ценит мобильность и доступность данных в реальном времени.

***Ключевые слова*:** 1С:Бухгалтерия, Xero, бухгалтерский учет, автоматизация бухгалтерских процессов, интеграция программ, облачные технологии, отчетность и аналитика, эффективность учета.

Введение

В современном бизнес-мире эффективное управление финансами и бухгалтерией является ключевым элементом успешной деятельности компаний. В данной статье мы проведем сравнительный анализ двух популярных платформ в области бухгалтерского учета: 1С:Бухгалтерия и Xero. Обе эти программы предоставляют современные инструменты для автоматизации бухгалтерских процессов, однако они отличаются своей функциональностью, гибкостью и подходом к решению задач бухгалтерии.

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1С:Бухгалтерия занимает лидирующую позицию как мощный инструмент, охватывающий различные аспекты бухгалтерии и финансов. Ее универсальность позволяет использовать программу как в малом бизнесе, так и на крупных предприятиях. Одним из ключевых преимуществ является полная автоматизация бухгалтерских операций, что ускоряет процессы учета, снижает риск ошибок и обеспечивает высокую точность данных. Программа также предоставляет широкий функционал, включая учет основных и вспомогательных средств, расчет заработной платы и налоговый учет.

Важным аспектом 1С:Бухгалтерии является возможность интеграции с другими программами и системами, создавая единую информационную среду в компании. Это способствует упрощению процессов обмена данными и повышению общей эффективности бизнес-процессов. Программа также обеспечивает возможность генерации различных отчетов и аналитической информации, что является важным аспектом для принятия стратегических решений.

С другой стороны, Xero представляет собой современное облачное решение, ориентированное на автоматизацию бухгалтерских операций и обеспечение легкого доступа к финансовой информации. Одним из основных преимуществ Xero является доступность данных в режиме реального времени, что позволяет моментально отслеживать финансовое состояние компании и оперативно реагировать на изменения в экономической обстановке.

Платформа Xero предоставляет широкий спектр инструментов для анализа финансовой информации, включая гибкие отчеты, интеграцию с другими бизнес-приложениями и взаимодействие с банковскими операциями. Ее использование не только облегчает рутины бухгалтерского учета, но и предоставляет возможность анализа данных для принятия обоснованных решений в условиях быстро меняющегося рынка.

В условиях развития и продвижения цифровых технологий во многих сферах деятельности компании сталкиваются с новыми возможностями для автоматизации бухгалтерских процессов. Сравнение таких платформ в данной статье, как 1С:Бухгалтерия и Xero, позволяет понять, какие инструменты наилучшим образом соответствуют современным требованиям бизнеса. Существует постоянная дилемма между использованием локальных и мировых платформ в бухгалтерии. Статья может помочь читателям понять, какая из рассматриваемых платформ лучше соответствуют их потребностям в зависимости от географического положения и специфики бизнеса.

Таким образом, обе платформы — 1С:Бухгалтерия и Xero — представляют собой мощные инструменты для автоматизации бухгалтерских процессов. Однако выбор между ними зависит от конкретных потребностей компании, ее масштаба, специфики деятельности и предпочтений в использовании программного обеспечения. В данной статье мы рассмотрим ключевые особенности каждой платформы, их преимущества и недостатки, чтобы предоставить читателю информацию для обоснованного выбора между 1С:Бухгалтерией и Xero в контексте современного бизнес-управления.

Обзор литературы

Технологии произвели революцию в работе бухгалтеров. Основной движущей силой этих изменений является облачный учет. Использование онлайн-системы бухгалтерского учета считается серьёзным нововведением в бухгалтерском учете, на всех этапах работы предприятий.

Marsintauli, Novianti, Situmorang, Djoniputri в своих исследованиях анализируют процессы внедрения облачного учета, оценивают облачные системы бухгалтерского учета с точки зрения соответствия стандартам бухгалтерского учета и систем безопасности (Marsintauli, Novianti, Situmorang, Djoniputri, 2021).

По мнению Huang, облако бухгалтерского учета имеет значительное конкурентное преимущество: низкие затраты, которые могут снизить затраты бизнеса, и высокую эффективность, которая может значительно повысить эффективность работы управленческого и финансового учета предприятия (Huang, 2016).

Облачный учет предоставляет услуги бухгалтерского учета, управления и принятия решений для соответствующих подразделений, в том числе предприятий, на основе интернет-технологий. Таким образом, облачный учет имеет очень большое значение для информатизации бухгалтерского учета предприятия.

Облачные вычисления предоставляют высоко масштабируемые возможности, связанные с информационными технологиями, в качестве услуги для пользователей, использующих Интернет-технологии. На оперативном уровне такие технологии играют решающую роль в деятельности

бухгалтерских служб и дают возможности, такие как удаленный мониторинг или дистанционное управление (Eigner, Stary, 2023).

Облачные вычисления — это параллельная и распределенная система, состоящая из набора взаимосвязанных компьютеров, которые предоставляются динамически и представляются как один или несколько унифицированных вычислительных ресурсов на основе соглашений об уровне обслуживания. Zalazar, Ballejos, Rodriguez определили его как модель, целью которой является предоставление подходящей системы доступа к конечным точкам без необходимости приобретения программного обеспечения, платформы или физической инфраструктуры сети. Согласно предыдущим определениям, облачные вычисления — это система, доступ к которой можно получить где угодно, используя любое устройство, подключенное к Интернету (Zalazar, Ballejos, Rodriguez, 2017).

Dimitriu, Matei рассматривают облачный учет как новую бизнес-модель в сложных условиях. По их мнению, это приложение для обработки финансовых данных. Это программное обеспечение действует как бухгалтерские приложения, установленные на компьютерах пользователей, но существуют существенные различия между облачным бухгалтерским учетом и другими локально управляемыми информационными системами бухгалтерского учета, включая пакеты бухгалтерского программного обеспечения. Например, облачный учет осуществляется на серверах, предлагающих онлайн-сервисы, и пользователи могут получить доступ к серверам через веб-браузеры. Это широко известно как «Программное обеспечение как услуга» (SaaS), которое также используется большинством общедоступных облачных сервисов (Dimitriu, Matei, 2015).

Одновременный доступ к учетным записям в режиме реального времени позволяет пользователям обеспечить лучший обмен данными и свести к минимуму ненужное изменение ключей и связанные с этим ошибки при вводе данных, что помогает улучшить управление временем, производительность и гибкую практику работы.

В исследованиях Ma Fisher, T. Nesbit было обнаружено, что, благодаря внедрению облачных технологий на предприятиях, увеличились доходы от бизнес-консультирования. Также были отмечены улучшения в отношениях с клиентами и осознание ценности услуг бухгалтеров. Типология внедрения спрогнозировала и обнаружила положительное влияние, в частности, на инициаторов облачных технологий. Результаты имеют значение для владельцев малых и средних предприятий, их клиентов малого и среднего бизнеса, а также для профессиональных организаций по бухгалтерскому учету (Ma, Fisher, Nesbit, T., 2021).

Методы

В работе над статьей применялись общие методы научного познания: методы эмпирического исследования (наблюдение, сравнение, анализ, синтез (обобщение); методы теоретического исследования (восхождение от абстрактного к конкретному, от общего к частному и от явления к сущности, выделение отдельных частей объекта, выявление причинно-следственных связей); правила формальной логики; системный подход.

Результаты

Компания Xero была основана в 2006 году и заняла одно из лидирующих мест в области создания облачных инструментов бухгалтерского учета для малого бизнеса во всем мире. Запуск Xero означал, что бухгалтеры могут сотрудничать со своими клиентами из числа малых предприятий в режиме реального времени с помощью открытой платформы для контроля их финансовых показателей, упрощения соблюдения основных требований и ведения бизнеса.

С момента запуска Xero превратилась в глобальную платформу для малого бизнеса, которая обслуживает бухгалтеров, а также непосредственно клиентов малого бизнеса. В дополнение к основному бухгалтерскому решению данная платформа включает в себя функции расчета заработной платы, управления персоналом, расходами, проектами, платежами и другие решения в зависимости от региона. Xero обладает обширной экосистемой подключенных приложений и связей с банками и другими финансовыми учреждениями, что позволяет малым предприятиям получать доступ к различным решениям в рамках данной платформы.

Платформа Xero для малого бизнеса включает в себя ряд интегрированных продуктов, таких как:

- программное обеспечение для ведения бухгалтерского учета и соблюдения нормативных требований — основное программное обеспечение для ведения бухгалтерского учета и соблюдения нормативных требований для малых предприятий и их консультантов, обеспечивающее надежной

цифровой системой учета, упрощающее ведение бухгалтерского, налогового и других видов учета и позволяющее владельцам малого бизнеса получить больше контроля и наглядности;

- программное обеспечение для малого бизнеса — программное обеспечение для малого бизнеса, позволяющее упростить повседневные операции для более эффективного ведения бизнеса в областях, выходящих за рамки бухгалтерских и нормативных требований, таких как управление, инвентаризация, расчет заработной сотрудников;
- доступ к финансовым услугам для малого бизнеса — программное обеспечение для малых предприятий по управлению денежными средствами. Денежные потоки, прием и проведение платежей, а также масштабирование бизнеса с большей уверенностью.

За последние годы платформа Xero для малого бизнеса расширилась за счет включения в нее функции расчета заработной платы, платежей, управления трудовыми ресурсами и др. Кроме того, Xero обладает обширной экосистемой, включающей более 1000 подключенных приложений и более 300 прямых подключений к банкам и другим финансовым учреждениям, в том числе к поставщикам API, которые затем предоставляют доступ к дополнительным банкам и финансовым учреждениям. Данная экосистема расширяет возможности взаимодействия с клиентами, предоставляя им доступ к ряду решений в рамках Xero, которые помогут пользователям эффективно и результативно вести свой бизнес. В 2023 году произошло углубление сотрудничества со Stripe, платформой финансовой инфраструктуры для бизнеса, и расширение партнерства с GoCardlless, мировым лидером в области прямых банковских платежей, для предоставления пользователям функции Instant Bank Pay.

Компания Xero ориентирована на долгосрочную перспективу и имеет амбициозные планы глобального роста. Стратегия Xero направления на реализацию их видения — стать самой надежной и интеллектуальной платформой для малого бизнеса. Она включает в себя три стратегических приоритета (табл. 1).

Таблица 1. Стратегические приоритеты компании*

Стратегические приоритеты		
Стимулирование внедрения облачного учета	Развитие платформы для малого бизнеса	Создание глобальных масштабов и инноваций
**Примечание.* Составлена авторами на основе данных.		

Стимулирование внедрения облачного учета. Во многих странах мира уровень внедрения облачной бухгалтерии в малом бизнесе остается низким. Компания стремится стимулировать внедрение Xero, обеспечивая ощутимые преимущества для малых предприятий и их консультантов за счет экономии времени, сокращения количества ошибок и предоставления полезной информации о бизнесе. Рыночные возможности, связанные с внедрением облачных технологий, превышают 45 млн малых предприятий на всех рынках, где работает Xero1.

Отрасль облачной бухгалтерии продолжает пользоваться преимуществами ряда тенденций, включая цифровизацию государственного управления, инновации в сфере финансовых услуг, а также продолжающиеся инновации в области облачных решений для малого бизнеса, которые стимулируют внедрение технологий. Эти инициативы и тенденции присутствуют на многих рынках и стимулируют спрос на решения для бухгалтерского учета и соблюдения нормативных требований, основанные на цифровых технологиях и облачных технологиях.

Как компания стимулирует внедрение:

- ознакомление малых предприятий, бухгалтеров с преимуществами облачной бухгалтерии с помощью маркетинга, образовательных материалов, тренингов и пробных версий подписки на Xero;
- важной частью подхода является общение с партнерами по бухгалтерскому учету, в частности, с помощью таких мероприятий, как выездные семинары и Xerocon, которые проводятся для лидеров облачной бухгалтерии;
- в соответствии с видением компания стремится стать самой глубокой и надежной платформой в мире, позволяющей бухгалтерам и малым предприятиям сотрудничать в режиме реального времени через единую бухгалтерскую книгу для управления своим бизнесом, контроля за финансовыми показателями и упрощения соблюдения основных требований. Это позволяет упростить, ускорить и повысить эффективность рутинных операций по ведению бизнеса;
- помогают клиентам использовать возможности данных, инвестируя в развитие возможностей искусственного интеллекта во всех своих продуктах. Это позволяет упростить основные бухгалтер-

ские задачи, такие как сверка банковских счетов, и сократить объем вводимых данных, а также помогает клиентам принимать более взвешенные решения с помощью искусственного интеллекта;

- постоянное совершенствование основного продукта и улучшение качества обслуживания клиентов, что делает продукт более удобным в использовании и удовлетворяет все больше потребностей клиентов;
- повышение качества обслуживания клиентов с менее сложными бухгалтерскими потребностями. Запуск Xero Go в Великобритании позволяет Xero быть более релевантной для таких клиентов, как в Великобритании. На основе полученного опыта будут рассмотрены и другие рынки в будущем;
- разработка практических и нормативных инструментов, помогающих партнерам по бухгалтерскому учету и бухгалтерским услугам лучше обслуживать существующих клиентов, находить и привлекать новых клиентов и вести свою деятельность. Ключевым направлением инвестиций является работа над созданием единого источника данных о клиентах для всех инструментов, что позволит сэкономить время, сократить количество ошибок и повысить удобство работы;
- помощь малым предприятиям в соблюдении требований законодательства. Xero облегчает малым предприятиям работу с соответствующими изменениями в государственном регулировании, включая вторую фазу Single Touch Payroll (STP) в Австралии, ставки GST в Сингапуре и соответствие требованиям Making Tax Digital (MTD) в Великобритании.

Развитие платформы для малого бизнеса. Облачная бухгалтерия — это лишь один из многочисленных цифровых инструментов, которыми могут воспользоваться малые предприятия. Существует множество других операционных и финансовых потребностей, таких как расчет заработной платы, платежи и выставление счетов, управление персоналом. Компания Xero имеет все возможности для создания единой интегрированной платформы, позволяющей интегрировать лучшие в своем классе продукты и услуги в единую бухгалтерскую книгу Xero, работающую в режиме реального времени.

Интегрированная платформа облегчает жизнь малому бизнесу и расширяет возможности бухгалтеров по консультированию и предоставлению более глубоких знаний своим клиентам, одновременно защищая и увеличивая ценность основного предложения.

Платформа открыта для сообщества партнеров экосистемы, обслуживающих малые предприятия, а не только для решений, принадлежащих компании Xero. Такой стратегический выбор позволяет лучше удовлетворять уникальные потребности малых предприятий, обеспечивая гибкость в выборе решений, которые наилучшим образом отвечают их потребностям.

Компания продолжает инвестировать в финансовые и операционные решения, в том числе в рабочие процессы платежей и выставления счетов, решения для расчета заработной платы и Planday.

Создание глобальных масштабов и инноваций — компания инвестирует в совершенствование бизнес-систем, технологий, кадрового потенциала и операционной структуры. Это дает возможность внедрять больше инноваций и, в свою очередь, быстрее и в большем количестве точек по всему миру реализовывать свою концепцию.

Таблица 2.Ключевые показатели прогресса развития технологий платформы*

KPIs	Производительность в сравнении с целевым показателем	Показатели за 23-й финансовый год
Инвестиции в проектирование и разработку продукции, включая НИОКР	N/A	597 млн долл.
Прохождение сотрудниками обучения по вопросам безопасности	Выше среднего	78,5 %
Ответственное использование данных: введена оценка риска непредвиденных последствий автоматизированного принятия решений	N/A	Да
Количество уведомляемых инцидентов, связанных с конфиденциальностью	N/A	1
**Примечание.* Составлена авторами на основе данных.		

На основе предоставленных данных таблицы 2 можно сделать следующие выводы:

1) инвестиции в проектирование и разработку продукции:

Фактические инвестиции в проектирование и разработку продукции, включая НИОКР, составили 597 млн долл. Отсутствие целевого показателя затрудняет оценку эффективности этих инвестиций;

2) прохождение обучения по безопасности:

Значение составляет 78,5 %, что говорит о достаточно высоком уровне осведомленности сотрудников в вопросах безопасности;

3) ответственное использование данных:

Отмечено, что в организации введена практика ответственного использования данных, что может подразумевать наличие мер и процессов для минимизации рисков при автоматизированном принятии решений;

4) количество уведомляемых инцидентов конфиденциальности:

За 23-й финансовый год был зарегистрирован 1 уведомляемый инцидент, что может указывать на относительно низкий уровень инцидентов в данной области.

Помимо данных показателей, были проведены продуктовые инициативы и основные направления поставок в 2023 году:

- продвинута работа по внедрению изменений во всех инструментах для работы с клиентами с целью обеспечения единого источника правды для данных о клиентах в Xero Practice Manager (XPM), Xero HQ и Xero Tax;
- расширение функциональности отчетов позволяет клиентам получать быстрый доступ к необходимым ответам, использовать мощные возможности настройки и оптимизировать анализ;
- внедрение машинного обучения в Hubdoc для определения того, когда документ может быть кредитной нотой, и отметки об этом для ознакомления;
- запущена новая бета-версия Xero Analytics Plus, которая использует возможности искусственного интеллекта для прогнозирования.

В 2023 финансовом году международный сегмент добавились 193 000 подписчиков, в результате чего общее число подписчиков достигло 1,6 миллиона. Во втором полугодии было добавлено 118 000 подписчиков по сравнению с 75 000 в первом полугодии 2023 финансового года, что отражает улучшение показателей на международном рынке.

Таблица 3. Число пользователей платформы Xero*

Пользователи	2023 год	2022 год
Австралия	1 566 000	1 344 000
Новая Зеландия	567 000	512 000
Австралия и Новая Зеландия (ANZ), всего	2 133 000	1 856 000
Великобритания	970 000	850 000
Северная Америка	384 000	339 000
Остальной мир	254 000	226 000
Международный итог	1 608 000	1 415 000
Всего платных подписчиков	3 741 000	3 271 000
**Примечание.* Составлена авторами на основе данных.		

Результаты таблицы 3 указывают на положительную динамику и рост числа платных подписчиков, причем регион ANZ является основным двигателем этого роста. Международный сегмент также вносит свой вклад в увеличение общего числа подписчиков. Эти данные могут служить индикатором успешной стратегии расширения и привлечения аудитории.

Определение «подписчика» следующее: каждая уникальная подписка на продукт, предлагаемый Xero, приобретенная пользователем (например, малым бизнесом или партнером по бухгалтерскому учету) и которая уже развернута или доступна для развертывания. Подписчики, имеющие несколько подписок на интегрированные продукты на платформе Xero, считаются одним подписчиком.

Для того чтобы понять степень популярности и удовлетворенности пользователей платформы Xero, были изучены такие показатели, как средний доход на пользователя (ARPU); затраты на привлечение клиентов (CAC); пожизненная ценность (LTV) на одного подписчика; отток (%).

Средний доход на пользователя (ARPU) рассчитывается как годовой доход, разделенный на количество подписчиков на тот момент и разделенный на 12.

Таблица 4. Средний доход на пользователя*

Средний доход на пользователя (ARPU) ($)	2023 год	2022 год
Австралия и Новая Зеландия	34,24	32,00
Международный	35,10	30,53
ARPU группы Xero	34,61	31,36
**Примечание.* Составлена авторами на основе данных.		

Из предоставленных данных таблицы 4 видно, что в 2023 году средний доход на пользователя (ARPU) в группе Xero увеличился и составил 34,61 доллара, в сравнении с 31,36 долларами в 2022 году. Этот рост может свидетельствовать о повышении эффективности бизнес-модели компании Xero или увеличении стоимости предоставляемых услуг.

В разбивке по регионам видно, что средний доход на пользователя в Австралии и Новой Зеландии также вырос с 32,00 долларов в 2022 году до 34,24 долларов в 2023 году. Столь положительная динамика может указывать на успешное проникновение Xero на рынки этого региона и/или увеличение спроса на их услуги.

С другой стороны, в международном сегменте ARPU также вырос с 30,53 доллара в 2022 году до 35,10 доллара в 2023 году. Это может быть связано с увеличением клиентской базы за пределами региона Австралии и Новой Зеландии или улучшением монетизации существующих клиентов в международных рынках.

Общий рост ARPU группы Xero свидетельствует о том, что компания успешно управляет своим бизнесом, обеспечивая увеличение доходности на одного пользователя в целом. Эти данные могут быть важными для инвесторов и стейкхолдеров, поскольку отражают финансовую устойчивость и успешность стратегии монетизации компании Xero.

Затраты на привлечение клиентов (CAC) — это расчет затрат на приобретение каждого нового абонента. В расчете представлены затраты на продажи и маркетинг за год, исключая капитализацию и амортизацию затрат на приобретение контрактов, за вычетом выручки Xero, разделенные на общее количество новых подписчиков, добавленных за тот же период, разделенное на ARPU.

Таблица 5. Затраты на привлечение клиентов (CAC)*

Затраты на привлечение клиентов (CAC), (тыс. $)	2023 год	2022 год
АНЗ	9,1	8,8
Международный	23,3	22,9
Xero Group CAC месяцев	15,9	15,5
**Примечание.* Составлена авторами на основе данных.		

Из предоставленных данных таблицы 5 видно, что затраты на привлечение клиентов (CAC) в группе Xero в 2023 году увеличились и составили 15,9 тысяч долларов, в сравнении с 15,5 тысяч долларов в 2022 году. Это может указывать на увеличение затрат на маркетинг и рекламу для привлечения новых клиентов или изменение стратегии привлечения, например, с увеличением акцента на международные рынки.

В разбивке по регионам видно, что затраты на привлечение клиентов в регионе Австралии и Новой Зеландии (АНЗ) увеличились с 8,8 тысяч долларов в 2022 году до 9,1 тысяч долларов в 2023 году. В то время как в международном сегменте затраты также выросли с 22,9 тысяч долларов в 2022 году до 23,3 тысяч долларов в 2023 году. Эти изменения могут отражать стремление компании укрепить свою позицию как на родных, так и на международных рынках в индустрии облачной бухгалтерии.

Отток (%) — значение ежемесячного регулярного дохода от подписчиков, покинувших Xero в течение месяца, в процентах от общего значения ежемесячного регулярного дохода на начало этого месяца. Указанный процент представляет собой средний ежемесячный отток за предыдущие 12 месяцев.

Таблица 6. Отток пользователей*

Отток (%)	2023 год	2022 год
АНЗ	0,68	0,66
Международный	1,21	1,23
Отток группы Xero	0,90	0,90
**Примечание.* Составлена авторами на основе данных.		

Из предоставленных данных таблицы 6 видно, что уровень оттока в группе Xero остался стабильным на уровне 0,90 % как в 2022, так и в 2023 году. Это означает, что компания успешно удерживает клиентов и сохраняет их в своей клиентской базе на стабильном уровне.

В разбивке по регионам видно, что отток в регионе Австралии и Новой Зеландии (АНЗ) незначительно увеличился с 0,66 % в 2022 году до 0,68 % в 2023 году. В международном сегменте отток также немного снизился с 1,23 % в 2022 году до 1,21 % в 2023 году. Эти изменения могут свидетельствовать о том, что компания эффективно управляет оттоком клиентов в различных регионах, принимая меры для удержания существующих клиентов. Это указывает о том, что подавляющая часть пользователей удовлетворена продуктом.

Пожизненная ценность (LTV) на одного подписчика — ожидается ли валовая прибыль от подписчика за время его существования. Это рассчитывается путем умножения среднего срока службы подписчика (деленного на отток), умноженного на ARPU, умноженного на процент валовой прибыли. LTV Xero Group рассчитывается как сумма LTV отдельного сегмента, умноженная на количество подписчиков соответствующих сегментов, разделенная на общее количество подписчиков Xero Group.

Таблица 7. Пожизненная ценность одного пользователя*

Пожизненная ценность (LTV) на одного подписчика ($)	2023 год	2022 год
АНЗ	4 374	4 225
Международный	2 542	2 164
LTV Xero Group на абонента	3 587	3 333
**Примечание.* Составлена авторами на основе данных.		

Из предоставленных данных таблицы 7 видно, что в 2023 году пожизненная ценность (LTV) на одного подписчика (абонента) в группе Xero увеличилась и составила 3 587 долларов, в сравнении с 3 333 долларами в 2022 году. Этот рост может быть положительным индикатором эффективности стратегий удержания клиентов и увеличения их стоимости для компании.

В разбивке по регионам видно, что пожизненная ценность на одного подписчика в регионе Австралии и Новой Зеландии (АНЗ) также выросла с 4 225 долларов в 2022 году до 4 374 долларов в 2023 году. В международном сегменте LTV также значительно увеличилась с 2 164 долларов в 2022 году до 2 542 долларов в 2023 году. Эти изменения говорят о том, что компания успешно повышает стоимость каждого подписчика в различных регионах.

Высокая пожизненная ценность на одного подписчика является положительным показателем для компании, поскольку это означает, что клиенты приносят значительную выручку за время своего сотрудничества с компанией. Это также может свидетельствовать о высокой степени лояльности клиентов.

Исходя из анализа предоставленных данных, можно резюмировать об общей удовлетворенностью клиентской базы облачной бухгалтерской платформы Xero.

Важные показатели, которые могут указывать на будущую устойчивость и удовлетворенность пользователей, включают в себя:

- уровень оттока: низкий уровень оттока является положительным индикатором, свидетельствующим о том, что клиенты склонны оставаться. Если уровень оттока остается стабильным или снижается, это может указывать на высокую удовлетворенность клиентов;
- пожизненная ценность (LTV): увеличение пожизненной ценности на одного подписчика говорит о том, что клиенты приносят больше выручки за время сотрудничества с компанией. Это может свидетельствовать о долгосрочной лояльности и удовлетворенности клиентов;
- рост среднего дохода на пользователя (ARPU): увеличение ARPU может свидетельствовать о том, что пользователи не только остаются, но и готовы платить больше за услуги, что может быть связано с повышением уровня удовлетворенности или предоставлением дополнительных ценностных услуг.

После рассмотрения системы Xero перейдем к рассмотрению еще одной важной платформы в мире бухгалтерии и управления предприятием — 1С.

1С:Бухгалтерия 8 для Казахстана представляет собой программное решение для автоматизации бухгалтерского и налогового учета в организациях, осуществляющих различные виды коммерческой деятельности в соответствии с законодательством Республики Казахстан. Программа обладает широ-

ким функционалом, охватывающим весь бухгалтерский процесс: от выписки первичных документов до формирования обязательной отчетности.

Основные особенности и функциональные возможности 1С:Бухгалтерии 8 для Казахстана включают:

- ведение бухгалтерского и налогового учета в соответствии с законодательством Казахстана;
- автоматизация задач бухгалтерской службы, включая выписку первичных документов и учет продаж;
- возможность совместного использования с другими прикладными решениями 1С:Предприятие 8;
- ведение учета деятельности нескольких организаций в одной или отдельных информационных базах;
- учет движения персонала, включая внутреннее совместительство и формирование унифицированных форм по трудовому законодательству;
- автоматизация начисления зарплаты, взаиморасчетов с работниками, депонирования, расчетов по исполнительным листам и учета налогов и взносов с заработной платы;
- учет НДС, включая операции, где НДС не зачтен, и автоматизированный учет начисленного НДС, включая услуги от нерезидентов.

Программа предоставляет гибкую настройку, позволяющую пользователям создавать дополнительные субсчета и разрезы аналитического учета. Кроме того, она обеспечивает возможность ведения учета нескольких организаций в общей информационной базе, что удобно при тесной связи хозяйственной деятельности этих организаций.

Использование программного продукта 1С:Бухгалтерия 8 для Казахстана обещает улучшение эффективности бухгалтерских процессов и соответствие всем требованиям законодательства при ведении учета в Казахстане.

Учет НДС и Налоговый учет:

- программа поддерживает методы определения налога на добавленную стоимость, включая раздельные и пропорциональные методы;
- заполнение формы 300.00 «Декларация по Налогу на добавленную стоимость» автоматизировано для целей учета НДС.

Налоговый учет (по налогу на прибыль):

- в конфигурации реализован общеустановленный порядок налогообложения, включая корпоративный подоходный налог;
- введен специальный налоговый план счетов для сопоставления бухгалтерских и налоговых данных;
- подсистема налогового учета расширена и реструктурирована с учетом требований МСФО 12 и главы 15 НК РК.

Завершающие операции месяца: автоматизированы регламентные операции, включая переоценку валюты, списание расходов будущих периодов, определение финансовых результатов и другие, выполняемые по окончании месяца.

Стандартные бухгалтерские отчеты:

- 1С:Бухгалтерия 8 для Казахстана предоставляет набор стандартных отчетов для анализа данных по остаткам, оборотам счетов и проводкам в различных разрезах;
- в отчетах налогового учета предусмотрена гибкая настройка, включая вывод сведений о показателях налогового учета и постоянных/временных разниц в одном отчете.

Регламентированные отчеты: конфигурация включает полный набор необходимых отчетов, включая финансовые, статистические и налоговые, с возможностью выгрузки в формате XML.

Сервисные возможности: включены сервисные возможности, такие как загрузка адресного классификатора, полнотекстовый поиск данных, подготовка писем в техподдержку, загрузка данных из предыдущих версий, двухсторонний обмен данными и другие.

Программа 1С:Бухгалтерия 8 для Казахстана предоставляет широкие функциональные возможности для эффективного ведения бухгалтерского и налогового учета, соответствуя стандартам и требованиям законодательства Республики Казахстан.

Таблица 8. Сравнительный анализ

Область сравнения	Xero	1С
Функциональность	Упор на простоту использования, основные бухгалтерские функции, фокус на облачных и легких для восприятия решениях	Обширные возможности, модульность, предназначена для разных видов бизнеса, включая производство и торговлю
Интерфейс и удобство использования	Интуитивно понятный, прост в освоении, частые обновления с улучшением интерфейса	Многофункциональный, но может быть сложен для новых пользователей; локализированный интерфейс
Целевая аудитория	Ориентирована на глобальный рынок, используется в различных странах, преимущественно в малых и средних предприятиях	Основная аудитория — компании в постсоветском пространстве, широко используемая в странах СНГ
Развитие и инновации	Активное внедрение новых технологий и функций, более гибкое внедрение инноваций	Регулярные обновления, активное развитие в соответствии с изменениями в законодательстве
Локализация	Глобальная, может потребовать дополнительной адаптации в зависимости от местных требований	Хорошая локализация, соответствие местному законодательству в странах СНГ
Тарифы и стоимость	Облачное решение с относительно низкими ежемесячными платежами, что может быть более привлекательным для малых предприятий	Часто требует значительных затрат на лицензии, обновления и обслуживание
Интеграция	Обширные интеграции с приложениями и сервисами, создавая гибкость для бизнес-процессов	Предоставляет интеграцию с различными системами, но может потребовать дополнительных настроек
Безопасность данных	Облачное решение, обеспечивает высокий уровень безопасности данных	Работающая на локальных серверах, безопасность зависит от внутренних мер предосторожности компании
Гибкость в использовании	Определенное ограничение функционала может сделать его менее гибким для крупных предприятий	Модульная структура обеспечивает гибкость в выборе необходимых компонентов
Сообщество и поддержка	Активная поддержка, обучение и регулярные вебинары для пользователей	Обширное сообщество пользователей и разработчиков
Примечание. Составлена авторами на основе данных.		

Исходя из представленного сравнительного анализа в таблице 8 между Xero и 1С, можно сделать следующий заключительный вывод.

Обе бухгалтерские системы Xero и 1С обладают своими уникальными характеристиками, предназначенными для разных рынков и аудиторий. Xero выделяется своим фокусом на глобальном рынке, легкостью использования, облачными технологиями и активным внедрением новых функций.

С другой стороны, 1С ориентирована в основном на компании в постсоветском пространстве, предоставляет обширные возможности, модульность и хорошо локализована под местные требования.

Основываясь на потребностях бизнеса, выбор между Xero и 1С может быть обоснованным. Xero представляет собой привлекательное решение для небольших и средних предприятий, особенно в тех случаях, когда важны простота использования и облачные технологии.

С другой стороны, 1С может быть предпочтительным выбором для компаний в постсоветском пространстве, где востребована модульность и хорошая локализация.

Решение о выборе между Xero и 1С должно быть принято на основе конкретных потребностей компании, предпочтений пользователей, географического положения и уровня сложности бизнес-процессов.

Также важно учесть долгосрочные перспективы развития бизнеса, так как выбор бухгалтерской системы — ключевой шаг в обеспечении эффективности финансовых процессов на долгосрочной основе.

Таблица 9. SWOT-анализ*

1С	
Strengths (Сильные стороны): Обширные возможности: 1С предоставляет широкий спектр функций, от бухгалтерии и управления складом до управления персоналом, что позволяет пользователям эффективно вести учет и управлять бизнесом. Адаптация к местным требованиям: Программы 1С локализованы и адаптированы к местным бухгалтерским и налоговым требованиям, что облегчает соблюдение законодательства. Широкое распространение: используется множеством компаний, что создает возможность обмена опытом и легкости в поиске квалифицированных специалистов. Регулярные обновления: 1С активно обновляется, что позволяет пользователям быть в курсе последних изменений в законодательстве и использовать новые возможности	Weaknesses (Слабые стороны): Сложность использования: для новых пользователей 1С может быть сложным для освоения из-за большого количества функций и настроек. Зависимость от квалификации персонала: эффективное использование 1С требует обучения и квалификации бухгалтеров и пользователей. Стоимость обновлений: обновления и поддержка могут быть затратными, что может создавать дополнительные расходы для пользователей
Opportunities (Возможности): Развитие облачных решений: возможность использования облачных версий программы может предоставить большую гибкость и доступность для пользователей. Интеграция с другими системами: расширение возможностей интеграции с другими системами может облегчить процессы и повысить эффективность использования. Улучшение интерфейса и опыта пользователя: улучшение пользовательского интерфейса и опыта работы с программой может сделать ее более доступной для широкого круга пользователей	Threats (Угрозы): Конкуренция от облачных решений: растущая популярность облачных бухгалтерских решений может представлять конкуренцию для традиционных программ, включая 1С. Серьезные изменения в законодательстве: быстрые и радикальные изменения в налоговом или бухгалтерском законодательстве могут потребовать быстрой адаптации программы. Безопасность данных: возможные угрозы в области кибербезопасности могут повлиять на доверие пользователей к безопасности и конфиденциальности их данных
Xero	
Strengths (Сильные стороны): Простота использования: Xero славится своим интуитивно понятным интерфейсом, что делает его легким в освоении и использовании для пользователей без специальных знаний в бухгалтерии. Доступность в облаке: поскольку Xero — облачное решение, пользователи имеют гибкий доступ к своим данным из любого места с подключением к интернету, что особенно важно для мобильных бизнес-пользователей. Интеграция: Xero предлагает широкий спектр интеграций с другими приложениями и сервисами, что обеспечивает более гладкую работу с другими инструментами, используемыми бизнесом. Обновления и инновации: пользователи могут рассчитывать на регулярные обновления и внедрение новых функций, что способствует актуальности и конкурентоспособности	Weaknesses (Слабые стороны): Ограниченный функционал для крупных предприятий: в сравнении с некоторыми другими решениями, Xero может оказаться менее подходящим для крупных компаний с более сложными бухгалтерскими требованиями. Недостаточная локализация: в некоторых странах, где местное законодательство требует специфичных настроек, Xero может не предоставлять достаточной локализации
Opportunities (Возможности): Расширение функционала: внедрение новых функций и улучшение существующих может сделать Xero еще более привлекательным для пользователей. Глобальное расширение: увеличение глобального присутствия и адаптация к различным региональным особенностям может привести к новым возможностям для пользователей. Большее количество интеграций: дополнительные интеграции с приложениями и сервисами, шире соответствующими потребностям бизнеса, могут улучшить пользовательский опыт	Threats (Угрозы): Конкуренция: в сфере облачных бухгалтерских решений конкуренция может быть интенсивной, что создает риск потери пользователей в пользу других платформ, в зависимости от локализации. Безопасность данных: вопросы кибербезопасности могут представлять угрозу для доверия пользователей к хранению своих финансовых данных в облаке
**Примечание.* Составлена авторами на основе данных.	

Проведенный SWOT-анализ в таблице 9 выявил, что 1С и Xero обладают своими уникальными преимуществами и ограничениями. 1С, с обширными функциональными возможностями и широким распространением, является мощным инструментом для компаний, стремящихся к полному управлению бизнес-процессами. Однако, несмотря на регулярные обновления, ее высокая сложность может потребовать значительного времени и ресурсов для освоения.

С другой стороны, Xero предлагает простоту использования, гибкость облачных решений и широкие возможности интеграции. Это делает его идеальным выбором для небольших и средних предприятий, особенно для тех, кто ценит мобильность и доступность данных в реальном времени.

Обсуждение

В последние десятилетия предприятия вынуждены развивать свой бизнес более универсальными способами, чтобы реагировать на различные потребности рынка, становиться более эффективными и продуктивными и, в конечном счете, быть более конкурентоспособными. Внедрение и применение новых цифровых технологий имеет решающее значение в этом контексте. Они могут положительно повлиять на способность компаний реагировать на потребности рынка. Aghimien и другие (2022) отмечают, что технологическое развитие является приоритетным направлением политики во многих странах и считается двигателем экономического и конкурентного развития. Компании, включающие эти технологические разработки, такие как цифровая трансформация, делают это для саморазвития, чтобы оставаться в тренде современных тенденций. Несомненно, эти процессы также могут вызывать внутреннее сопротивление со стороны сотрудников из-за сложности и неопределенности, которые это может принести.

Кроме того, Karim и другие (2022) утверждают, что эффективность бизнеса в отношении информационно-коммуникационных технологий (ИКТ) зависит от национального контекста, в котором они развиваются. Например, фирмам в развивающихся странах может не хватать доступа к ИКТ, которые могут быть легко доступны их коллегам в развитых странах. Чтобы стать конкурентоспособными, первые должны осваивать и внедрять современные технологии в свою деятельность (Karim, Nahar, Demirbag, 2022).

Компании должны иметь возможность продвигать и руководить различными изменениями в производственных моделях, применяя гибкие методы. Это может помочь им выжить и оставаться конкурентоспособными. Кроме того, компании должны быть инновационными, чтобы стать более конкурентоспособными, и не должны бояться рисков при добавлении сетей, которые повышают производительность их бизнес-процессов **(**Bacca-Acosta J. et al., 2023).

Мы согласны с Zalazar, Ballejos, & Rodriguez в том, что использование информационно-коммуникационных технологий может повысить конкурентоспособность бизнеса и предоставить конкурентные преимущества всем организациям (Zalazar, Ballejos, Rodriguez, 2017).

Мы поддерживаем мнение Moll, J., & Yigitbasioglu о том, что большую роль играют интернет-технологий в формировании работы бухгалтеров, в частности, появляются новые направления бухгалтерских исследований (Moll, Yigitbasioglu, 2019)

В 2022 году одним из экспертов, Артемом Табуниным — основателем и председателем правления ПЦ «Аксиома», высказана точка зрения, противоположная широко распространенному мнению относительно будущего бухгалтеров. В своем высказывании он подчеркнул, что в малых предприятиях бухгалтеры уже не столь необходимы, их функции могут быть частично замещены автоматизированными системами. Согласно Табунину, в настоящее время множество предпринимателей предпочитают автоматизированные решения для ведения бухгалтерии. Банковские системы, офис-менеджеры и внешние бухгалтерские аутсорсинговые услуги, по его мнению, могут успешно заменить бухгалтера в штате, особенно в свете того, что большинство бизнес-задач не требуют сложных финансовых расчетов за счет автоматизации. Однако наша позиция отличается от высказанной Табуниным. Мы утверждаем, что автоматизация, напротив, станет невероятно полезным инструментом для бухгалтеров. Вместо того чтобы устранять профессию, технологические инновации помогут повысить качество бухгалтерской работы, сократив время на выполнение рутинных задач. Это предоставит бухгалтерам возможность сосредоточиться на более стратегических и аналитических аспектах финансового управления, таких как принятие важных бизнес-решений, финансовый анализ и стратегическое планирование. В свете текущих тенденций в бизнес-технологиях, где цифровая трансформация становится ключевым фактором в развитии организаций, бухгалтеры, использующие современные технологии, станут неотъемлемой частью успешного управления финансами в будущем.

Выводы

Xero привлекает своей простотой использования, интуитивно понятным интерфейсом и акцентом на мобильность. Это решение оптимально для малых и средних предприятий, где ценят гибкость, легкость в освоении и доступность в облаке. Приоритетом для Xero являются регулярные обновления, инновации и активное внедрение новых технологий. С другой стороны, 1С:Бухгалтерия 8 для Казахстана предоставляет обширные функциональные возможности, модульность и адаптацию к местным требованиям. Это решение более подходит для крупных предприятий, где необходим комплексный учет и готовность к адаптации к специфике отрасли и законодательства. Окончательный выбор зависит от конкретных потребностей предприятия. Если акцент делается на простоте использования, мобильности и гибкости, Xero может быть предпочтительным вариантом. В случае, когда важны обширные функциональные возможности и адаптация к местным требованиям, 1С:Бухгалтерия 8 представляет собой более подходящий инструмент.

В контексте сравнения с платформой 1С для бухгалтерии в Казахстане, обе системы предоставляют обширный функционал и соответствуют местным требованиям. Однако выбор между ними может зависеть от конкретных потребностей бизнеса, размера компании и предпочтений пользователей. Обе платформы имеют свои преимущества и ограничения:

Xero:

- ориентирован на глобальный рынок, что делает его предпочтительным для малых и средних предприятий;
- интуитивный интерфейс и активное внедрение новых технологий обеспечивают простоту использования;
- облачная модель с относительно низкими ежемесячными платежами.

1С:

- широкие функциональные возможности, модульность и способность адаптироваться к различным видам бизнеса;
- предпочтительно для компаний в постсоветском пространстве с хорошей локализацией;
- большое сообщество пользователей и разработчиков.

Организации, стремящиеся к глобальной доступности и облаковым решениям, могут отдать предпочтение Xero, в то время как компании, работающие в странах СНГ и ценящие обширные функциональные возможности, могут предпочесть 1С.

Выбор между Xero и 1С зависит от конкретных потребностей компании, бизнес-модели, стратегии и особенностей работы. Вот несколько сценариев, когда стоит рассмотреть каждую из платформ:

При каких критериях стоит выбрать облачную платформу Xero:

- глобальная деятельность: если бизнес имеет международный характер и требует глобального доступа, Xero, ориентированный на мировой рынок, может быть предпочтительным вариантом;
- малое или среднее предприятие: Xero часто выбирают предприятия малого и среднего размера, благодаря своей простоте использования и относительной доступности;
- облачные технологии: если бизнес активно использует облачные технологии, Xero, как облачное решение, может интегрироваться более гладко в вашу бизнес-инфраструктуру;
- интуитивный интерфейс: интуитивный и легкий в использовании интерфейс Xero делает анализ финансов более доступным для широкого круга пользователей, включая тех, кто не обладает специализированными навыками в области бухгалтерии;
- гибкость и мобильность: Xero, как облачное решение, предоставляет гибкий доступ из любого места с подключением к интернету. Это особенно важно для компаний, где мобильность играет решающую роль;
- интеграция с приложениями: Xero предлагает обширные возможности интеграции с другими приложениями, что позволяет собирать и анализировать данные из различных источников для более глубокого понимания финансового состояния;
- низкие затраты на начальном этапе: Xero предлагает относительно низкие ежемесячные платежи за использование облачного сервиса, что может быть более привлекательным для малых предприятий с ограниченным бюджетом;
- глобальная команда или удаленная работа: если в компании команда распределена глобально или частично работает удаленно, Xero обеспечивает легкий доступ и совместную работу в режиме реального времени;

- регулярные обновления и инновации: Xero активно обновляется, внедряя новые технологии и функции, что обеспечивает актуальность инструментов для анализа и прогнозирования.

При выборе 1С стоит учесть следующие факторы:

- крупное предприятие или специфические требования: если компания крупная, имеет сложные бухгалтерские процессы или специфические требования, 1С с его обширным функционалом и модульной структурой может быть более подходящим выбором;
- наличие квалифицированных специалистов: использование 1С может быть более эффективным, если у компании уже есть квалифицированные специалисты, знакомые с этой системой;
- регулярные изменения в законодательстве: если бизнес подвержен частым изменениям в законодательстве, 1С, с регулярными обновлениями и адаптацией к законодательным изменениям, может обеспечить актуальной информацией;
- требования по обработке данных на месте: Если компании или законы страны требуют хранение и обработку данных на месте (не в облаке), 1С, работающая на локальных серверах, может быть более подходящей;
- предпочтение стандартным решениям: Если бизнес предпочитает использовать стандартные решения, широко принятые в регионе, 1С может быть лучшим выбором в странах СНГ;
- сложные бизнес-процессы: Если компания занимается сложными бизнес-процессами, требующими высокой степени настройки и индивидуализации, 1С с его модульностью и гибкостью может более эффективно поддерживать эти процессы;
- модульность: Система 1С модульна, что означает, что можно выбирать и настраивать только те компоненты, которые необходимы для данного бизнеса, что полезно для более точного анализа;
- локализация: Если бизнес действует в странах СНГ, где 1С широко используется, локализирован и соответствует местным требованиям, что улучшает точность анализа в соответствии с местным законодательством.

После внимательного анализа облачной бухгалтерской платформы Xero и программного обеспечения 1С:Бухгалтерия 8 для Казахстана можно выделить ключевые моменты:

Xero отличается простотой использования, интуитивно понятным интерфейсом и мобильностью. Это подходит для малых и сред4них предприятий, где важны гибкость, легкость в освоении и доступность в облаке. Приоритет у Xero — обновления, инновации и активное внедрение новых технологий.

1С:Бухгалтерия 8 для Казахстана предоставляет обширные функциональные возможности, модульность и адаптацию к местным требованиям. Она подходит для крупных предприятий, требующих комплексного учета и готовых адаптироваться к специфике отрасли и законодательства.

Рекомендации зависят от конкретных потребностей. Если акцент на простоте использования, мобильности и гибкости — Xero может быть предпочтительным. Для компаний, где важны обширные возможности и адаптация к местным требованиям, 1С:Бухгалтерия 8 — более подходящий вариант.

Итоговый выбор следует делать, оценивая размер компании, доступные ресурсы и стратегические цели. Проведение тестового использования и консультация с профессионалами помогут сделать информированный выбор, соответствующий уникальным потребностям бизнеса.

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Бухгалтерлік есепте бұлттық платформаларды пайдалану: 1С және Xero салыстыру

Аңдатпа:

Мақсаты: Бухгалтерлік есеп саласында 1С: Accounting және Xero сияқты бұлтты платформаларды қолданудың тиімділігін зерттеу және ұсынылған құралдардың саны мен сапасын салыстыру.

Әдісі: Мақаламен жұмыс істеу кезінде ғылыми танымның жалпы әдістері қолданылды: эмпирикалық зерттеу әдістері (бақылау, салыстыру, талдау, синтез (жалпылау); теориялық зерттеу әдістері (абстрактіліден нақтыға, жалпыдан жекеге және құбылыстан болмысқа, объектінің жеке бөліктерін анықтау, себеп-салдарлық байланыстарды айқындау); формальды логика ережелері; жүйелі тәсіл.

Қорытынды: Xero платформасын пайдаланушылардың танымалдылығы мен қанағаттану дәрежесін түсіну үшін келесі көрсеткіштер зерттелді: бір пайдаланушының орташа табысы (ARPU); тұтынушының сатып алу шығындары (CAC); бір абонентке өмірлік құндылық (LTV); шығын (%). Төмен шығын деңгейі тұтынушылардың қалуы мүмкін екенін көрсететін оң көрсеткіш болып табылады. Егер шығын деңгейі тұрақты болып қалса немесе төмендесе, бұл тұтынушылардың жоғары қанағаттанушылығын көрсетуі мүмкін. Бір абонентке өмірлік құндылықтың артуы тұтынушылардың компаниямен ынтымақтастық кезінде көбірек кіріс әкелетінін көрсетеді. Бұл тұтынушылардың ұзақ мерзімді адалдығы мен қанағаттанушылығын көрсетуі мүмкін. ARPU-ның ұлғаюы пайдаланушылардың қалып қана қоймай, қызметтер үшін көбірек төлеуге дайын екендігін көрсетуі мүмкін, бұл қанағаттану деңгейінің жоғарылауына немесе қосымша құндылық қызметтерін ұсынуға байланысты болуы мүмкін. Сонымен қатар 1С өндіріс пен сауданы қоса алғанда, әртүрлі бизнес түрлеріне арналған кең мүмкіндіктерге, модульділікке ие. Ол көпфункционалды, локализацияланған интерфейсі бар, әртүрлі жүйелермен интеграцияны қамтамасыз етеді. Модульдік құрылым қажетті компоненттерді таңдауда икемділікті қамтамасыз етеді. Xero мен 1С арасындағы ұсынылған салыстырмалы талдауға сүйене отырып, екі бухгалтерлік жүйенің де әртүрлі нарықтар мен аудиторияларға арналған өзіндік ерекшеліктері мен сипаттамалары бар деп айтуға болады.

Тұжырымдама: SWOT-талдауы 1С және Xero-ның өзіндік ерекше артықшылықтары мен шектеулері бар екенін көрсетті. 1С өзінің кең функционалдылығымен және кеңінен қолданылуымен бизнес-процестерді толық басқаруға ұмтылатын компаниялар үшін қуатты құрал болып табылады. Дегенмен, тұрақты жаңартуларға қарамастан, оның жоғары күрделілігі меңгеру үшін айтарлықтай уақыт пен ресурстарды қажет етуі мүмкін. Екінші жағынан, Xero пайдаланудың қарапайымдылығын, бұлттық шешімдердің икемділігін және кең интеграциялық мүмкіндіктерді ұсынады. Бұл оны шағын және орта бизнес үшін, әсіресе нақты уақыттағы деректердің ұтқырлығы мен қолжетімділігін бағалайтындар үшін тамаша таңдау жасайды.

Кілт сөздер: 1С:Бухгалтерлік есеп, Xero, бухгалтерлік есеп, есеп процестерін автоматтандыру, бағдарламалық интеграция, бұлттық технологиялар, есеп беру және аналитика, есептің тиімділігі.

A.K. Atabayeva, D.M. Akynov, I.A. Ovcharenko, G.N. Agabekova, Sh.N. Agabekova

Using cloud platforms in accounting: comparison of 1C and Xero

Abstract

Object: Research the effectiveness of using cloud platforms such as 1C: Accounting and Xero in the field of accounting and compare the quantity and quality of the tools presented.

Methods: In working on the article, general methods of scientific knowledge were used: methods of empirical research (observation, comparison, analysis, synthesis (generalization); methods of theoretical research (ascending from the abstract to the concrete, from the general to the particular and from the phenomenon to the essence, identifying individual parts of the object, identification of cause-and-effect relationships); rules of formal logic; systematic approach.

Findings: In order to understand the popularity and satisfaction of users of the Xero platform, the following indicators were studied: Average revenue per user (ARPU); Customer acquisition costs (CAC); Lifetime value (LTV) per subscriber; Churn (%). A low churn rate is a positive indicator indicating that customers are likely to stay. If your churn rate remains stable or decreases, it may indicate high customer satisfaction. An increase in lifetime value per subscriber indicates that customers are generating more revenue over the course of their relationship with the company. This can indicate long-term customer loyalty and satisfaction. An increase in ARPU may indicate that users not only remain, but are also willing to pay more for services, which may be due to increased satisfaction levels or the provision of additional value services. 1 C also has extensive capabilities, modularity, and is designed for different types of business, including production and trade. It has a multifunctional, localized interface and provides integration with various systems. The modular structure provides flexibility in selecting the required components. Based on the presented comparative analysis between Xero and 1C, it can be stated that both accounting systems have their own features and characteristics intended for different markets and audiences.

Conclusions: The SWOT analysis revealed that 1C and Xero have their own unique advantages and limitations. 1C, with its extensive functionality and widespread adoption, is a powerful tool for companies seeking complete business process management. However, despite regular updates, its high complexity can require significant time and resources to master. On the other hand, Xero offers ease of use, cloud-based flexibility, and extensive integration capabilities. This makes it an ideal choice for small and medium-sized businesses, especially those who value mobility and real-time data availability.

Keywords: 1C:Accounting, Xero, accounting, automation of accounting processes, program integration, cloud technologies, reporting and analytics, accounting efficiency.

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