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CORPORATE INNOVATION SYSTEM OF KAZAKHSTAN: ANALYSIS AND MANAGEMENT MODELS

Abstract

In the context of economic transformation and the urgent need for technological modernization, Kazakhstan faces the challenge of building an effective corporate innovation system (CIS). The purpose of this study is to analyze the current state of the corporate innovation system, identify barriers and institutional constrains, and develop practical solutions to overcome them. The study is based on an empirical analysis of innovation activity dynamics, sectoral and regional disparities, investment structure, and institutional limitations affecting corporate innovation development in Kazakhstan. As a result, two complementary management models are proposed: the state-corporate model, focused on institutional support and coordination of innovation infrastructure, and the digital venture model, based on private initiative and flexible market mechanisms. It has been established that the most effective option is a phased combined approach, which implies a gradual transition from state-dominated incentives to a sustainable and self-developing innovation architecture. The value of the research lies in substantiating the institutional nature of existing constraints and in proposing a management framework that links innovation policy instruments with the level of corporate and regional innovation maturity. The scientific novelty of the research lies in the development of systemic models for managing the corporate innovation system, while the practical significance is determined by the possibility of applying these models in the design of national strategies, sectoral roadmaps, and corporate innovation development programs.

Keywords: corporate innovations, innovation system, innovation management, state-corporate model, digital venture model, corporate innovation system, institutional development, innovation policy.

Introduction

Innovation has become the key factor of competitiveness and sustainable development in the context of globalization and accelerated technological progress. For Kazakhstan, classified as a developing economy, the formation of a corporate innovation system (CIS) is not only a national priority but also a prerequisite for integration into the global technological landscape [1]. In the era of the Fourth Industrial Revolution, the CIS is perceived not as an auxiliary tool but as a fundamental mechanism for creating new products, services, and business models [2].

However, Kazakhstan still demonstrates a relatively low level of innovation activity. According to national statistics, the share of enterprises actively introducing new technologies and developments in the GDP structure remains insignificant. While more than 50% of companies in OECD countries

are engaged in innovation [3], in Kazakhstan this figure fluctuates between 9,6% (2017) and 11,9% (2024), and expenditures on R&D account for only 0,13% of GDP compared to the global average of about 2,6% [4]. Despite the existence of the state program «Industrial and Innovative Development 2021–2025», support measures (tax incentives, grants, subsidies) have not ensured mass business involvement in innovation. A persistent gap between scientific developments and their implementation in the corporate sector limits the effectiveness of innovation policy. Institutional barriers, insufficient venture financing, and weak integration of science and business continue to constrain the formation of a full-fledged corporate innovation system. At the same time, national policy, aimed at economic diversification, digitalization, and the development of innovation infrastructure (technoparks, clusters, accelerators), creates opportunities for the transition to a knowledge-based economy.

One of the important tools for this transition is the creation of technoparks, business incubators, and cluster associations designed to foster interaction between business, science, and government [5]. Within the framework of public-private partnerships, pilot projects are being implemented that provide companies with access to university laboratories and academic researchers with access to real production sites. However, the scale of such initiatives is still insufficient to cover a significant part of the corporate sector. The formation of a sustainable corporate innovation system requires a systemic approach and new managerial solutions [6].

The object of the research is the corporate innovation system of Kazakhstan. The subject of the research is the mechanisms of its formation and management. The purpose of the research is to conduct a comprehensive analysis of the CIS, identify barriers and institutional characteristics, and propose management models adapted to the national context.

To achieve this goal, the following tasks were set:

- To analyze the dynamics of innovation activity of Kazakhstan enterprises and compare it with international indicators.
- To assess existing mechanisms of corporate innovation support, including state policy measures, financial instruments, and the role of technoparks and clusters.
- To identify institutional and organizational constrains to the development of the CIS.
- To conduct a SWOT analysis of the corporate innovation system of Kazakhstan.
- To develop innovation management models considering the maturity level of the national innovation environment.

The scientific novelty of the study lies in the development of two complementary CIS management models – the state-corporate model and the digital venture model – reflecting national realities and international experience.

The practical significance is expressed in the possibility of applying the proposed models in the development of national innovation policy, sectoral roadmaps, and corporate strategies, as well as in integrating science and business to improve the efficiency of technology transfer.

The study advances the concept of an «open innovation ecosystem», based on interaction among the state, business, universities, and the venture sector, which may serve as the foundation for building Kazakhstan's innovation-driven economy.

Materials and methods

The research methodology is based on a comprehensive interdisciplinary approach that combines theoretical-analytical and empirical-applied methods. As a conceptual framework, the systemic approach was employed, which made it possible to consider Kazakhstan's corporate innovation system as a complex hierarchical structure comprising organizational, institutional, and economic subsystems.

To achieve the research objectives, the following methods were applied:

General scientific methods, including comparison, analysis and synthesis, induction and deduction, as well as historical and logical approaches.

Special methods of economic analysis, such as horizontal and vertical analysis, coefficient analysis, and comparative methods.

Strategic analysis tools, including SWOT analysis, which allowed the identification of strengths and weaknesses, as well as opportunities and threats in the development of the corporate innovation system.

Conceptual modeling, used in the development of the proposed models for corporate innovation system.

The empirical base of the research was formed using data from the Bureau of National Statistics of the Republic of Kazakhstan, the Ministry of Digital Development, Innovation and Aerospace Industry, analytical reports of international organizations (OECD, World Bank, WIPO), as well as annual reports of Astana Hub and QazInnovations. For international comparisons, indicators from the Global Innovation Index, OECD, and World Bank statistics were utilized.

The combination of theoretical and applied methods ensured a high degree of validity of the analysis and enabled the transition from a general assessment of innovation activity to the development of practical models for managing Kazakhstan's corporate innovation system.

Results and discussion

The analysis of innovation activity in Kazakhstan demonstrates positive dynamics; however, the development of the corporate innovation system remains fragmented and constrained by institutional barriers. Over the past two decades, state policy has been aimed at shifting from a resource-export model to a knowledge and innovation-based economy. Nevertheless, quantitative indicators show that the set goals are being achieved at a slow pace.

According to the Bureau of National Statistics, the share of innovation-active enterprises increased from 9,6% in 2017 to 11,9% in 2024. Despite the growth, the figure remains several times lower than in OECD countries, where more than half of companies engage in innovation. Moreover, a significant share of Kazakhstan's innovation-related investments is directed not toward the creation of new products and technologies, but toward the acquisition of ready-made solutions, which reduces the potential for domestic scientific and technological development. The share of innovative products in GDP also remains extremely low – 1,37%, compared to 7–10% in leading countries such as Germany, Finland, and South Korea [7, 8].

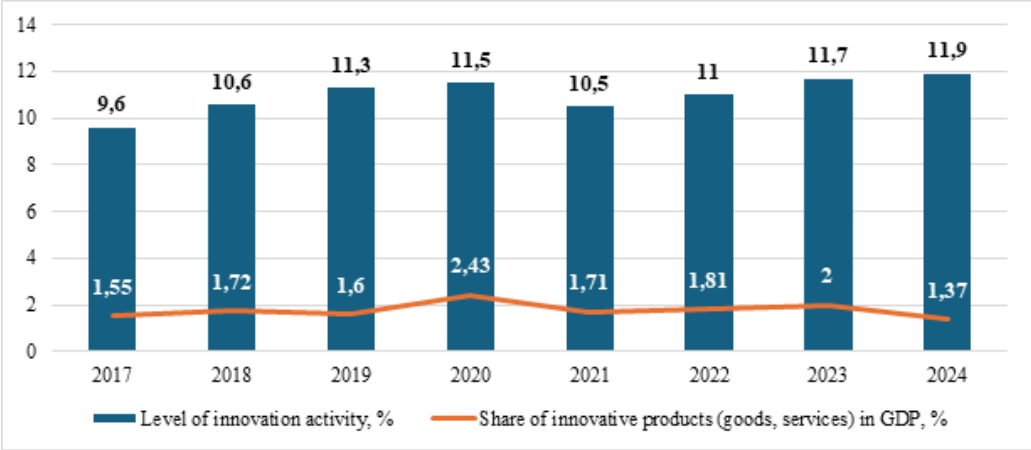

Figure 1 – Dynamics of innovation activity of enterprises in Kazakhstan, 2017–2024

Note: Complied based on the source [9].

Despite the positive dynamics of innovation activity indicators, their absolute values indicate the structural immaturity of Kazakhstan's corporate innovation system. The growth in the share of innovation-active enterprises is not accompanied by a sustainable and comparable increase in the share of innovation products in GDP, which indicates the predominance of adaptive and borrowed innovations over proprietary developments. This indicates the limited ability of existing innovation policy mechanisms to transform quantitative indicators into sustainable results of corporate innovation development. Thus, the quantitative growth of innovation activity is not transformed into a sustainable qualitative effect, which reflects the existence of institutional constraints in the corporate sector.

A sectoral analysis reveals that innovation activity is highly uneven across industries. In 2024, out of more than 30,000 enterprises, only about 3,662 engaged in innovation. The highest concentration

is observed in higher education (57,3%), scientific research and development (26,8%), health care activities (15,8%), and manufacturing industry (11,4%). However, in traditionally significant sectors, indicators remain low: construction – 3,5%, transport and warehousing – 4,3%, advertising activities and market research – 3,6%. This suggests that innovation dynamics are largely shaped by sectors dependent on public funding and digitalization, while many real-economy industries continue to show weak receptiveness to innovation [10].

Table 1 – Indicators of innovation activity enterprises by type of economic activity, 2024

	Number of enterprises, units	Of them	Activity level in the field of innovations, in %
		having innovation	
Total	30 756	3 662	11,9
Agriculture, forestry and fisheries	1 888	202	10,7
Mining and quarrying	883	131	14,8
Manufacturing industry	4 598	522	11,4
Supply of electricity, gas, steam, hot water and air conditioning	445	45	10,1
Collection, treatment and distribution of water	228	15	6,6
Wastewater collection and treatment	23	1	4,3
Collection, treatment and disposal of waste; recycling (recovery) of materials	240	9	3,8
Pollution clean-up activities and other waste disposal services	11	1	9,1
Construction	5 180	180	3,5
Wholesale and retail trade; car and motorcycle repair	8 693	1 629	18,7
Transport and warehousing	2 336	101	4,3
Information and communication	1 582	202	12,8
Financial and insurance activities	14	1	7,1
Activities in the field of architecture, engineering surveys, technical testing and analysis	1 123	64	5,7
Scientific research and development	205	55	26,8
Advertising activities and market research	275	10	3,6
Other professional, scientific and technical activities	307	16	5,2
Higher education	117	67	57,3
Health care activities	2 608	411	15,8
Note: Complied based on the source [11].			

The sectoral structure of innovation activity shows the dominance of areas closely linked to public funding and digitalization, while traditional real sector industries remain poorly involved in innovation processes. This points to limited incentives for corporate innovation in capital-intensive and infrastructure industries, as well as insufficient development of mechanisms for technology transfer from the scientific sector to industry. As a result, innovation activity is concentrated in certain segments of the economy and does not generate a sustainable multiplier effect, which limits the potential of innovation as a tool for structural transformation and diversification of the economy.

A regional analysis demonstrates significant disparities across the country. The highest levels of innovation activity are recorded in major cities – Almaty (15%), and Astana (15,4%). At the same time, in several regions the figure does not exceed 4–7%, such as in Mangystau (4,6%), Atyrau (3,7%), and Ulytau (3,5%). These disparities highlight the need for targeted development of regional innovation ecosystems and support for small and medium-sized enterprises [12].

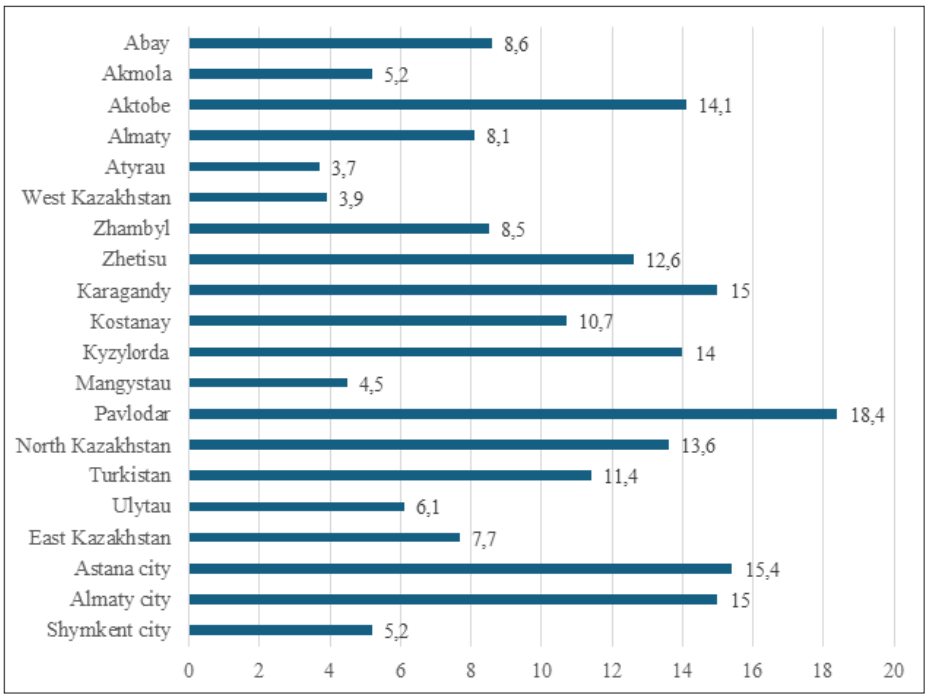

Figure 2 – Innovation activity of enterprises by regions of Kazakhstan, 2024

Note: Complied based on the source [11].

The identified regional disparities indicate a high concentration of innovation potential in certain agglomerations and industrially developed regions. The lack of developed regional innovation ecosystems in a number of territories limits the opportunities for small and medium-sizes enterprises, exacerbates spatial inequality, and reduces the overall effectiveness of the national corporate innovation system. This points to the need for a differentiated approach to managing innovation development, taking into account regional specifics.

Investments in innovation are also highly unevenly distributed. In 2023, the largest volume of investments was recorded in Atyrau region – 1 025,9 billion KZT, primarily due to the oil and gas sector. Almaty (102 billion), North Kazakhstan (150 billion), and Karagandy (118 billion) regions follow. Meanwhile, regions such as Shymkent (8,3 billion), Zhetisu (8,7 billion), and Ukytau (8,8 billion) remain on the periphery of innovation flows.

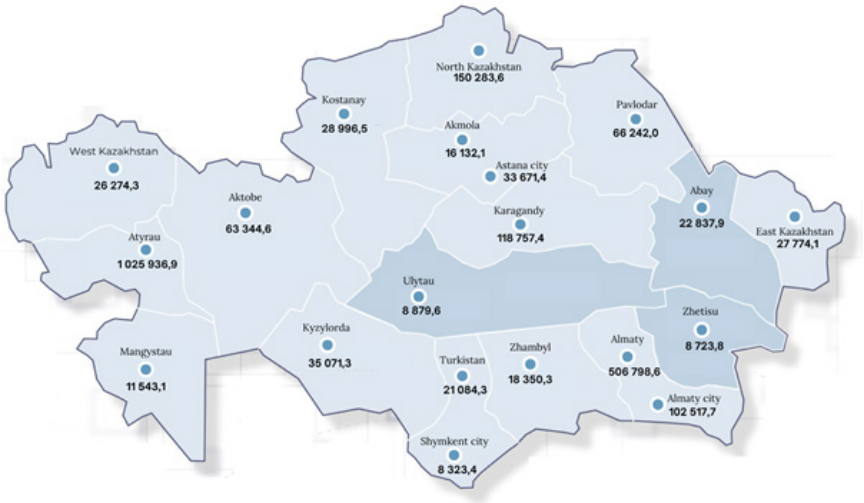

Figure 3 – Distribution of innovation investments by regions of Kazakhstan, 2024

Note: Complied based on the source [11].

The structure of innovation investment in Kazakhstan reflects the predominantly exogenous nature of innovation development, which is focused on supporting export-oriented and raw material industries. The concentration of investment in certain regions is not accompanied by the formation of sustainable corporate innovation chains in the non-raw materials sector, which reduces the potential for technological diversification of the economy. Under these conditions, investment activity is not transformed into the systematic development of corporate innovation, which confirms the need to shift the priorities of innovation policy towards stimulating internal corporate R&D and non-resource innovation projects.

Taken together, the results of the sectoral, regional, and investment analyses indicate that Kazakhstan's corporate innovation system functions in a fragmented and institutionally unbalanced manner. Innovation activity, financial resources, and human capital are unevenly distributed across sectors and regions, while existing support mechanisms are not sufficiently coordinated to generate cumulative and self-reinforcing innovation effects. As a result, innovation processes remain isolated, project-based, and weakly integrated into corporate development strategies. This fragmentation limits the capacity of the corporate sector to move from technology adoption toward endogenous innovation generation, thereby constraining the formation of sustainable corporate innovation trajectories.

Despite government efforts, Kazakhstan continues to occupy low positions in international rankings. In the Global Innovation Index (2023), the country demonstrates weak performance in terms of university-industry collaboration and technology transfer mechanisms. This indicates a persistent gap between the academic and corporate sectors. An additional limitation remains the insufficient level of venture financing: most companies face a lack of flexible credit mechanisms, while existing government support measures are accompanied by bureaucratic procedures and high administrative barriers.

Human capital remains one of the key challenges for the formation of the corporate innovation system. According to the Kazakhstan Institute for Strategic Studies under the President of the Republic of Kazakhstan, in 2025 the country had about 25,400 researchers working in 425 organizations, with 46% of them being young scientists. Despite positive dynamics, a significant portion of research staff is concentrated in universities and public research institutes, while the corporate sector shows little inclination to establish its own R&D divisions. This reinforces the structural gap between science and business, hindering the effective development of an innovation-driven economy.

An important element of the modern innovation ecosystem is Astana Hub, the largest technopark in Central Asia. By the end of 2024, it included more than 1,600 IT companies, of which 425 were foreign-owned. The total volume of attracted investments exceeded USD 177 million, IT service exports amounted to USD 481.5 million, and the total revenue of residents reached USD 1,3 billion [13]. More than 28,000 jobs were created, 18 regional hubs were launched, and support programs were implemented in cooperation with Google for Startups and Draper University. In 2024, 49 startups entered international markets, while 22 projects attracted investment through the Silicon Valley Residency program. In addition, the venture fund Astana Hub Ventures was launched with a capitalization of UDS 10 million.

Despite these achievements in the IT sector, corporate innovation activity in most traditional industries remains low. Unlike international practices, where corporate venture funds, internal accelerators, and intrapreneurship programs are actively developing, such mechanisms in Kazakhstan are still rare [14]. Only a few market leaders, such as a Kaspi.kz, Beeline, and BI Group, demonstrate strategic approaches to innovation, introducing R&D elements, digital platforms, and ESG initiatives.

To systematize the identified trends, a SWOT analysis of the corporate innovation system of Kazakhstan was conducted.

The results of the analysis and SWOT diagnosis confirm that the key constraints on the development of the corporate innovation system are systemic in nature and cannot be eliminated by individual support tools. This necessitates a transition from fragmented measures to stimulate innovation to the formation of comprehensive management models focused on coordinating the actions of the state, the corporate sector, and scientific organizations, taking into account the varying levels of maturity of the innovation environment and the specifics of the corporate sector.

Table 2 – SWOT analysis of Kazakhstan's corporate innovation system

Strengths	Weaknesses
- Growth of innovation activity: share of innovation-active enterprises increased from 9,6% (2017) to 11,9% (2024). - Government support: presence of strategic programs, tax incentives, grants, and subsidies. - Development of digital solutions: strong progress in fintech, telecom, and digital public services (Kaspi.kz, Beeline, eGov). - Successful corporate cases: examples from Astana Hub and IT sector demonstrating scaling and export potential.	- Insufficient interaction with universities and research organizations: limited commercialization of academic research. - Low level of investment in R&D: only 0,13% of GDP compared to 2-3% in OECD countries. - Limited internal venture financing: few companies develop corporate venture funds or in-house R&D. - Low maturity of innovation culture: risk aversion, reliance on imported technologies, lack of incentives for innovative initiatives inside companies.
Opportunities	Threats
- Participation in international programs: OECD initiatives, and global innovation networks. - Development of regional technoparks and clusters: potential to reduce regional imbalances and stimulate SMEs. - Growing interest in ESG and digitalization: new niches for technological solutions in renewable energy, efficiency, and digital platforms.	- Economic instability: dependence on commodity exports makes financing innovations vulnerable to global market fluctuations. - Migration of qualified personnel: brain drain, especially among young researchers, weakens national R&D capacity. - Low demand for innovation from consumers: limited internal market discourages business from investing in high-risk projects.
Note: Complied based on the source [15].	

Under these conditions, the development of corporate innovation requires not isolated policy instruments, but integrated management models capable of aligning institutional support, corporate incentives, and innovation infrastructure across different levels of the economy.

Based on the conducted analysis, two complementary models of corporate innovation management were proposed. The first is the state-corporate model, which emphasizes institutional support and active involvement of the state as the main coordinator and investor in the innovation process. This approach is particularly relevant for Kazakhstan at the current stage, of its innovation ecosystem's development, when the business sector remains insufficiently mature to independently finance large-scale R&D initiatives.

The state-corporate model implies the establishment of sectoral research and technology transfer centers operating under the framework of public-private partnerships. These centers are designed to ensure the commercialization of research results, strengthen collaboration between universities, research institutes, and businesses, and reduce the current gap between science and industry. At the same time, the model envisages the expansion of financing tools for applied R&D, including innovation vouchers, targeted grants for projects at TRL 5–8 stages, concessional loans through development institutions (such as QazInnovations, Development Bank of Kazakhstan), and the introduction of specialized venture funds with state participation.

A central element of this model is the system of fiscal incentives – tax deductions for corporate R&D expenditures, VAT exemptions for scientific equipment, and preferential taxation for companies involved in digital transformation or ESG-oriented projects. Such incentives aim to reduce the financial burden on businesses and encourage them to launch innovation-focused projects.

Equally important is the development of regional clusters, which serve as localized ecosystems bringing together enterprises, universities, and government agencies. These clusters are intended not only to stimulate innovation activity in the regions but also to ensure a more balanced distribution of innovation investments across the country, reducing the existing concentration in resource-rich areas such as Atyrau and Almaty. In this sense, the state-corporate model addresses regional disparities, fosters technology transfer, and enhances innovation-driven industrial diversification.

Overall, this model provides the necessary institutional foundation for the innovation ecosystem: it builds infrastructure, creates incentives for private companies to participate in R&D, and reduces risks associated with early-stage projects. While it may generate a certain dependency on state support,

it is essential for the initial phase of innovation-driven transformation, laying the groundwork for a gradual shift towards private initiative and market-based mechanisms.

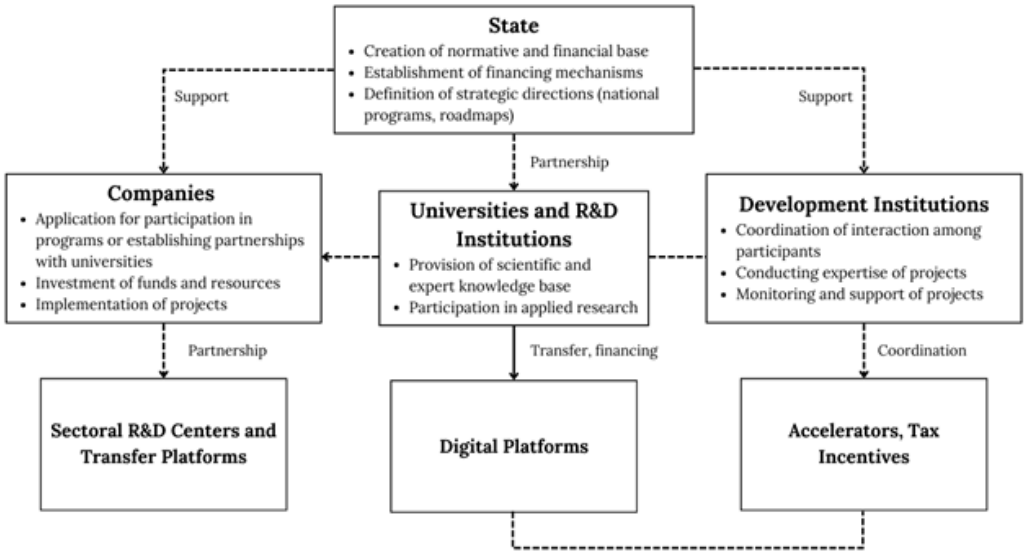

Figure 4 – State-Corporate Model of Innovation Stimulation

Note: Complied by the authors.

The second proposed model is the digital venture growth model, which is fundamentally based on market mechanisms, private initiative and the mobilization of entrepreneurial resources. Its core lies in stimulating corporations to act not only as consumers of ready-made technologies but also as generators and investors in innovative solutions. This model envisages the creation of corporate venture funds and R&D centers within companies, the launch of internal accelerators and incubators in partnership with universities, and the establishment of collaborative platforms with non-governmental organizations. An important element is the implementation of digital innovation management tools – including business intelligence systems, KPI dashboards, and lifecycle trackers – that allow companies to monitor, evaluate, and scale innovations in real time [16]. Furthermore, the model emphasizes integration into global venture ecosystems such as Plug and Play, Techstars, and MassChallenge, which opens access to international markets, advanced technologies, and investment flows. Its major advantage is flexibility and the ability to quickly adapt to technological and market shifts, making it particularly effective in sectors exposed to rapid digitalization, such as fintech, telecommunications, and e-commerce.

In practice, the digital venture model reduces dependence on government subsidies and fosters sustainable private leadership in innovation. It also creates incentives for the development of an entrepreneurial culture within corporations, supporting intrapreneurship and encouraging risk-taking behavior among employees.

The optimal trajectory for Kazakhstan, however, lies not in choosing one model exclusively but in adopting a combined scenario. At the initial stage, the state-corporate model plays a dominant role, ensuring the institutional framework, infrastructure development, and basic R&D funding. As the innovation ecosystem matures, the focus gradually shifts towards the digital venture model, strengthening the role of private initiative, venture capital, and international integration. This phased transition allows the corporate innovation system to evolve progressively – from institutional dependency and reliance on state coordination to a self-sustaining innovation architecture led by the private sector. In the long run, such a balanced approach provides Kazakhstan with the potential to achieve technological independence, expand export-oriented innovations, and secure competitiveness in the global knowledge economy.

From a practical point of view, the proposed models for managing corporate innovation systems can be used at various levels of management.

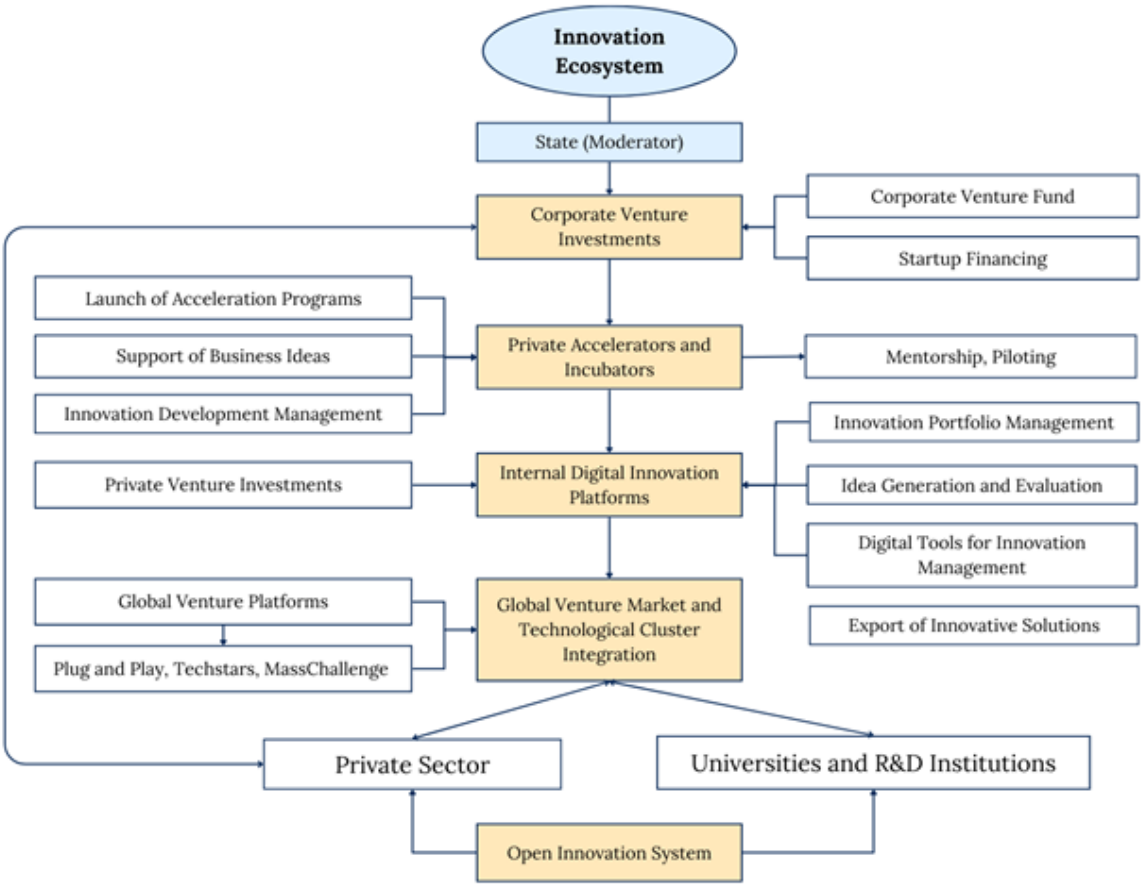

Figure 5 – Digital Venture Growth Model through the Private Sector

Note: Complied by the authors.

At the level of state policy, the state-corporate model makes it possible to develop targeted instruments for supporting applied research, create industry-specific technology transfer centers, and reduce the risks of innovation for businesses. This approach ensures institutional coordination between the state, the scientific sector, and corporate structures, which is particularly important at the stage of forming and institutionally strengthening the national innovation system.

At the corporate sector level, the digital venture model is focused on developing internal R&D departments, corporate venture funds, and intrapreneurship programs that generate and scale innovative solutions in conditions of high market uncertainty. Using this model allows companies to increase the flexibility of innovation management, accelerate the introduction of new technologies, and integrate into global innovation and venture ecosystems.

At the regional level, the combination of these models contributes to the formation of local innovation ecosystems that integrate business, universities, and government agencies. This makes it possible to take into account the industry and economic specifics of regions, reduce spatial disparities in innovation development, and expand the participation of small and medium-sized enterprises in innovation processes.

In general, the proposed models allow for the development of a differentiated corporate innovation management system depending on the level of institutional maturity, industry structure, and strategic priorities for economic development. The state-corporate model is most appropriate for capital-intensive and infrastructure industries with long investment cycles, while the digital venture model is most effective in sectors with high technological change dynamics. Their combined application creates the basis for a transition from isolated innovation initiatives to systematic management of corporate innovation activities.

Table 3 – Comparative analysis of models

Criteria	State-Corporate Model	Digital Venture Model
Source of incentives	State	Private sector and corporations
Mechanisms	Grants, subsidies, development institutions	Venture funds, accelerators, digital platforms
State involvement	High	Low (moderation and regulation)
Implementation speed	Medium-term (requires coordination with state authorities)	Short-term and flexible
Scalability level	High, if state resources are available	High, due to digitalization and entrepreneurship
Risks	Bureaucratization, dependence on the state budget	Insufficient institutional support
Main beneficiaries	National corporations, state institutions	Startups, private companies, technology entrepreneurs
Sustainability	High, if policy is stable	High, when venture ecosystem is mature
Application sectors	Industry, infrastructure	Finance, ICT, service
Note: Complied by the authors.		

Thus, Kazakhstan's corporate innovation system is at the stage of institutional formation. While state support and infrastructure are in place, its progress is constrained by weak integration among key actors, human resource shortages, and insufficient innovation maturity of companies. The proposed management models can help overcome these barriers and set a trajectory for the formation of a sustainable innovation economy.

Conclusion

The study has demonstrated that the corporate innovation system of Kazakhstan is at the stage of institutional formation, characterized by both positive trends and significant constrains. The share of innovation-active enterprises has shown growth in recent years, yet its level remains considerably below international standards. The gap between the scientific and corporate sectors, weak integration of universities and business, a shortage of venture financing, and a deficit of qualified personnel continue to hinder innovation development.

At the same time, the expansion of support infrastructure, the formation of digital ecosystem, and the success of individual companies in R&D create conditions for the transformation of the country's innovation landscape. Kazakhstan is gradually shifting from a model of imported technologies toward the creation of domestic solutions, although this process remains fragmented and requires a systemic approach.

Within the framework of the research, two models of corporate innovation system management have been proposed: the state-corporate model, aimed at institutional transformation and the strengthening of science-industry cooperation, and the digital venture growth model, focused on fostering private initiative, flexible instruments, and integration into global innovation chains. Considering the current maturity level of Kazakhstan's innovation ecosystem, a phased combined approach appears most appropriate, assuming state coordination at the initial stage with a gradual strengthening of the private sector's role as institutional maturity increases.

The practical significance of this study lies in the fact that the proposed models can be used as tools for the development of national strategies, sectoral roadmaps, and corporate innovation programs. The recommendations of the research suggest expanding state support for R&D, developing human capital through the stimulation of corporate R&D divisions, and creating mechanisms for the integration of science and business. Particular attention should be paid to economic diversification, strengthening regional innovation ecosystems, and fostering a sustainable culture of entrepreneurial innovation within companies.

This research contributes to the development of the theoretical foundations of corporate innovation management and provides practical guidelines for improving Kazakhstan's national innovation policy.

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ҚАЗАҚСТАННЫҢ КОРПОРАТИВТІК ИННОВАЦИЯЛЫҚ ЖҮЙЕСІ: ТАЛДАУ ЖӘНЕ БАСҚАРУ МОДЕЛЬДЕРІ

Аңдапта

Экономиканың трансформациясы және технологиялық жаңғыртудың қажеттілігі жағдайында Қазақстан тиімді корпоративтік инновациялық жүйені (КИЖ) қалыптастыру міндетімен бетпе-бет келуде. Осы зерттеудің мақсаты – корпоративтік инновациялық жүйенің қазіргі жағдайын талдау, негізгі кедергілері мен институционалдық шектеулерді айқындау, сондай-ақ оларды еңсерудің практикалық шешімдерін әзірлеу. Зерттеу Қазақстандағы корпоративтік инновациялардың дамуына әсер ететін инновациялық белсенділіктің динамикасын, салалық және өңірлік теңсіздіктерді, инвестиция құрылымын және институционалдық шектеулерді эмпирикалық талдауға негізделген. Зерттеу нәтижесінде бірін-бірі толықтыратын екі басқару моделі

ұсынылады: институционалдық қолдауға және инновациялық инфрақұрылымды үйлестіруге бағытталған мемлекеттік-корпоративтік модель және жеке бастамалар мен икемді нарықтық тетіктерге сүйенетін цифрлық венчурлық модель. Мемлекеттік ынталандырудың басымдығынан тұрақты әрі өзін-өзі дамытатын инновациялық архитектураға біртіндеп көшуге негізделген кезеңдік біріктірілген тәсілдің ең тиімді нұсқа екені анықталды. Зерттеудің құндылығы қолданыстағы шектеулердің институционалдық сипатын негіздеуде және инновациялық саясат құралдарын корпоративтік және өңірлік инновациялық жетілу деңгейімен байланыстыратын басқару шеңберін ұсынуда көрініс табады. Зерттеудің ғылыми жаңалығы корпоративтік инновациялық жүйені басқарудың жүйелік модельдерін әзірлеумен айқындалады, ал практикалық маңыздылығы аталған модельдерді ұлттық стратегияларды, салалық жол карталарын және корпоративтік инновацияларды дамыту бағдарламаларын әзірлеуде қолдану мүмкіндігімен анықталады.

Тірек сөздер: корпоративтік инновациялар, инновациялық жүйе, инновацияларды басқару, мемлекеттік-корпоративтік модель, цифрлық венчурлық модель, корпоративтік инновациялық жүйе, институционалдық даму, инновациялық саясат.

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КОРПОРАТИВНАЯ ИННОВАЦИОННАЯ СИСТЕМА КАЗАХСТАНА: АНАЛИЗ И МОДЕЛИ УПРАВЛЕНИЯ

Аннотация

В условиях трансформации экономики и необходимости технологической модернизации Казахстан сталкивается с задачей формирования эффективной корпортивной инновационной системы (КИС). Целью данного исследования является анализ текущего состояния корпоративной инновационной системы, выявление барьеров и институциональных ограничений, а также разработка практических решений по их преодолению. Исследование основано на эмпирическом анализе динамики инновационной активности, отраслевых и региональных диспропорций, структуры инвестиций и институциональных ограничений, влияющих на развитие корпоративных инноваций в Казахстане. В результате предложены две взаимодополняющие модели управления: государственно-корпоративная модель, ориентированная на институциональную поддержку и координацию инновационной инфраструктуры, и цифровая венчурная модель, основанная на частной инициативе и гибких рыночных механизмах. Установлено, что наиболее эффективным вариантом является поэтапный комбинированных подход, предполагающий постепенный переход от доминирования государственных стимулов к устойчивой и саморегулируемой инновационной архитектуре. Ценность исследования заключается в обосновании институциональной природы существующих ограничений и в предложении управленческой рамки, связывающей инструменты инновационной политики с уровнем корпоративной и региональной инновационной зрелости. Научная новизна исследования заключается в разработке системных моделей управления КИС, а практическая значимость определяется возможностью применения данных моделей при формировании национальных стратегий, отраслевых дорожных карт и программ развития корпоративных инноваций.

Ключевые слова: корпоративные инновации, инновационная система, управление инновациями, государственно-корпоративная модель, цифровая венчурная модель, корпоративная инновационная система, институциональное развитие, инновационная политика.

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