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STARTUP INITIATIVES IN THE CURRENT ECONOMY: THE EXPERIENCE OF KAZAKHSTAN AND CHINA

Abstract. In the context of globalization and the digital revolution, the growth of the number of startups is becoming a key factor in economic growth and progress. This paper examines the specifics of the creation and development of startup ecosystems in Kazakhstan and China, as well as their impact on the economy and entrepreneurial activity. The purpose of the study is to compare the strategies used by these countries to develop innovative entrepreneurship, as well as to identify successful public and private initiatives aimed at supporting startups. The paper examines the institutional framework, government initiatives, infrastructure, and support mechanisms for startup ecosystems in both countries. Special attention is paid to the role of universities, business incubators, accelerators and venture capital funds in the development of the startup movement. The article examines China's strategy to stimulate technological innovation within the framework of the "Made in China 2025" initiative and the efforts of the Government of Kazakhstan to modernize the digital economy within the framework of the "Digital Kazakhstan" program and the creation of the Astana Hub International Technopark of IT Startups. The article also analyzes the successful examples of startups in both countries and identifies the challenges they face, such as access to finance, lack of qualified personnel, and legal uncertainty. National characteristics, mentality, and historical models of economic development influence risk perception, motivation for innovation, and the willingness of young entrepreneurs to participate in the startup movement. Taking these factors into account allows us to develop more targeted and sustainable approaches to the development of startup ecosystems, focused on long-term development and sustainable growth. The results show that, despite the differences in scale and level of development, both countries are successfully working to create favorable conditions for the development of startups.

Keywords: startup, current economy, Kazakhstan, China, innovation, entrepreneurship, startup ecosystem.

Introduction

In the context of a rapidly developing digital economy and the process of globalization, startup projects are becoming the most important catalyst for innovative growth and an important factor in the transformation of national economies. This issue is especially relevant for emerging market countries such as Kazakhstan and China, where startups serve a dual purpose. On the one hand, they contribute to the growth of entrepreneurial spirit and innovation, and on the other, they serve as a means of sustainable socio-economic development. In these countries, startup ecosystems are thriving thanks to the support of government policies, educational institutions, and the private sector.

The importance of this article lies in the need to carefully study the experience of two key countries – Kazakhstan and China – in promoting startup initiatives. Despite the growing attention to this topic, there is still a lack of comprehensive analytical and comparative studies in the scientific and practical literature that could help identify the strengths and weaknesses of each approach, as well as the potential for their adaptation.

Modern challenges such as digital transformation, sustainable development, demographic shifts and cross-border cooperation require a new approach to the development of innovative

entrepreneurship, especially among the younger generation.

Therefore, the purpose of this article is to study the unique aspects of the development of startup projects in Kazakhstan and China, to study the factors contributing to their success, and to provide practical advice on how to improve the mechanisms for supporting innovative entrepreneurship. This research is of interest to scientists, government officials, investors, and

The launch of new projects in Kazakhstan and China is becoming an important strategy for economic diversification, especially in conditions of unstable global markets and dependence on raw materials.

In both countries, increasing attention is being paid to the creation of innovation centers, technology parks, accelerators and incubators aimed at identifying and developing promising ideas with the potential to succeed on the international market. This transition to a knowledge-based economy and digital technologies serves as a strategic approach to future economic growth.

When creating an ecosystem of startups, special attention is paid to youth initiatives, the development of STEM education and the improvement of digital literacy.

Kazakhstan implements government initiatives such as “Digital Kazakhstan” and “Business 2025”, which are aimed at creating an environment conducive to technological entrepreneurship (Nauryzbaeva A., Nepshina V., Muratova D., 2024:194).

Similarly, China is actively promoting innovation platforms as part of its policy of “Mass Entrepreneurship and Mass Innovation” (Zhang L., Yuan E. J., 2023:290).

In both cases, the government plays an important role in creating conditions for the emergence and growth of new business models.

Thus, studying the experience of these two countries is an important scientific work that allows not only to evaluate the effectiveness of existing approaches, but also to identify methods for implementing the most successful practices. In light of the growing importance of startups in the global economic landscape, this study contributes to a deeper understanding of the processes underlying the development of innovative entrepreneurship in the context of digital transformation and interstate cooperation.

Methods and materials

The fundamental research is based on modern approaches to the analysis of the development of the innovative economy and the business environment. In the course of the work, both general scientific methods and special ones were used to study in detail the specifics of the development of startup projects in Kazakhstan and China.

The main research methods included comparative analysis and content analysis. The comparative analysis made it possible to compare the key characteristics of the startup ecosystems of Kazakhstan and China, including the level of government support, the development of innovative technologies, the amount of venture financing and the participation of universities in the development of entrepreneurship.

Content analysis was used to study program strategies, government initiatives, and scientific publications on the development of startup projects and innovation policies in the two countries.

Various sources of information were used in the course of the research. First of all, the scientific works of foreign and domestic scientists devoted to the issues of innovative economics, entrepreneurship and the development of the startup ecosystem were studied.

Policy initiatives and programs aimed at supporting innovation and entrepreneurship were analyzed. Among them are the Chinese initiatives “Mass Entrepreneurship and Innovation”, “Made in China 2025” and “Digital Silk Road”.

An important part of the study was also the analysis of national legislation and government programs regulating the development of innovation and startup ecosystems. In particular, Kazakhstan's regulatory and program documents were reviewed, including the Digital Kazakhstan initiative, the activities of the Astana Hub International Technology Park, Development Programs

for Technological Development Agencies and the Science Foundation.

The work uses statistical data provided by international and national organizations. Among them is information from the Astana International Financial Center (AIFC), the Ministry of Science and Higher Education of the Republic of Kazakhstan. Analytical reports on the development of venture capital and the startup ecosystem in China were also analyzed.

The study used materials from international research centers, statistical surveys of the venture market, and data from university entrepreneurship support programs.

This comprehensive approach allows us to objectively assess the development of startup initiatives in Kazakhstan and China, identify key aspects of institutional support for innovative entrepreneurship and identify promising areas for the development of national startup ecosystems.

Discussions

The advancement of startup entrepreneurship in China and Kazakhstan is extensively documented in scholarly and practical literature. Chinese researchers meticulously examine the influence of government assistance and innovative ecosystems on the expansion of startups. In their work, Gao J. and Mu R. underscore the significance of the government's policy of “mass innovation and entrepreneurship” (Gao J., Mu R., 2021:255). The authors highlight that the establishment of a supportive regulatory framework, tax incentives, and venture capital support have fostered the rapid expansion of technology startups, particularly in regions such as Beijing, Shenzhen, and Hangzhou.

Chinese scholar, Zhang L., Chen J. Y. highlights the significance of digital infrastructure and the platform economy in driving the rapid growth of startups. Their study shows that the presence of advanced digital platforms, such as Alibaba Cloud, Tencent, provides a unique environment for the swift expansion of new ventures (Zhang L., Chen J. Y., 2022:1460). The integration of big data and AI is becoming a fundamental aspect of China's startup landscape.

In the Kazakh context, M. Kamysbayev delves into the emergence and evolution of startups in the context of digital transformation and institutional reforms. The author highlights the significance of initiatives such as technoparks (for instance, Astana Hub), national acceleration programs, and government strategies aimed at fostering youth entrepreneurship (Kamysbayev M. et al., 2025:102). It is acknowledged that, despite the positive trends, the startup sector in Kazakhstan faces a number of challenges, including a shortage of investment resources and a lack of experienced mentors.

Among foreign studies, one cannot overlook the work of K. Olek, a pioneer in the field of “lean startup” methodology (Olek K., 2023:3745). In his book and articles, he outlines a framework for creating sustainable startups through hypotheses, rapid iterations, and client-centric approaches. His approach has become a global benchmark in startup management and is actively being adapted to the startup environments in Kazakhstan and China.

The study of scientific works allows us to conclude that startup entrepreneurship in China and Kazakhstan is considered by researchers in the context of public policy, freedom of innovation and digital transformation of the economy.

The analyzed works demonstrate that systemic government support plays a key role in changing the dynamic startup ecosystem in China. It includes stimulating mass entrepreneurship, the development of digital platforms and the active participation of venture capital. This contributes to the creation of a stable innovation environment in which technology startups stimulate economic growth.

At the same time, research on Kazakhstan shows that the national ecosystem of startups is in the process of formation. Although the government supports initiatives in this area and creates development platforms such as the Astana Hub, there are still obstacles related to access to investment, insufficient entrepreneurial skills and weak integration of universities into innovation activities.

Thus, the analysis of scientific papers shows that the successful development of startups depends on the complex interaction of government support, innovative employment, digital technologies and entrepreneurial culture. The literature review also confirms the need for a comparative analysis of the experience of China and Kazakhstan, which makes it possible to assess the effectiveness of innovative entrepreneurship development practices and identify possible directions for the development of national startup ecosystems in Kazakhstan.

Results

The study, conducted using comparative analysis and content analysis, identified key aspects that highlight the characteristic features of startup development in Kazakhstan and China.

The Chinese startup support system is based on strategic government initiatives such as Mass Entrepreneurship and Innovation, Made in China 2025, and the Digital Silk Road (Amighini A. et al., 2019:15). These initiatives are aimed at creating more than a thousand technology incubators providing access to subsidies, tax benefits and direct public investment through municipal venture funds.

For example, in Shenzhen, startups can receive up to 500,000 yuan in seed funding without collateral.

Kazakhstan has a startup support system, represented by the Astana Hub platform, the Science Foundation, NATR programs, and national accelerators. According to a survey of 100 Kazakhstani startups, only 33% of respondents consider support mechanisms to be accessible and transparent.

Bureaucratic difficulties, limited access to grants, and poor post-grant support are often mentioned.

In China, the innovation infrastructure is much more developed. Large IT corporations such as Alibaba, Baidu, and Huawei are actively involved in accelerating startups (Melnik J., 2019:29). An ecosystem of “digital cities” has been created, where startups receive not only infrastructure, but also access to big data, cloud computing and platform support. Beijing and Hangzhou are the global centers of the startup movement.

The ecosystem of Kazakhstan is in the process of formation. Despite the existence of initiatives such as Digital Kazakhstan and Astana Hub, startups in Kazakhstan face a number of challenges, such as a shortage of office space, insufficient integration of universities into the startup ecosystem, and a lack of technology platforms.

There are only three accelerators operating in Almaty, while there are more than two hundred in Shanghai. China's annual venture capital investment exceeds \$100 billion, making it the second largest market in the world after the United States.

Venture capital funds such as Sequoia China, Hillhouse Capital, and IDG Capital actively support innovative startups, especially in the fields of artificial intelligence, biotechnology, robotics, and financial technology.

The venture capital market in the Republic of Kazakhstan is still in its infancy. According to the AIFC, the total volume of investments in startups in 2023 did not exceed \$ 50 million, with most of the investments directed to later stages of development (preliminary series A and subsequent). Investments in the early stages (pre- and seed) are often absent, and entrepreneurs are forced to resort to using personal savings or crowdfunding.

China is actively introducing entrepreneurship into educational programs. Universities such as Tsinghua and Beijing have established innovation centers, accelerators, and business partnerships. In 2022, more than 40% of Chinese university graduates were involved in startup projects.

In Kazakhstan, entrepreneurial activity among students is at the initial stage of development. According to the Ministry of Science and Higher Education, only 40% of students are involved in startup projects (table 1). The main obstacles to entrepreneurship development among students are the fear of failure, lack of knowledge in management and finance, and lack of mentoring and support from mentors.

Cooperation between China and Kazakhstan has received a new impetus within the framework of the “One Belt, One Road” initiative. Kazakhstani startups specializing in agricultural technologies, logistics, and digital education can use Chinese infrastructure and resources to expand their operations.

As part of the China-Tech Bridge initiative, which is being implemented in the Astana hub, there is already a program aimed at exporting startups to cities such as Shanghai, Nanjing and Guangzhou.

Table 1 shows the comparative characteristics of startup ecosystems in China and Kazakhstan.

Indicator	China	Kazakhstan
Government support	Systematic, multi-level	Partial, fragmented
Number of accelerators and incubators	>1,000	~15 (active)
Volume of venture capital	>\$100 billion/year	<\$50 million/year
Student participation in startups	40%	40%
Integration into global value chains	High (via BRI, tech hubs)	Moderate (mainly intra-regional)

The data was compiled based on sources (Smagulova G., Gonçalves M., 2024),(Su D. J., Ali M., Sohn D. W., 2011),(Khadzhieva G. U., Nuralim A. E.,2020),(Mayemerova B., Zhetpisbaeva M., 2019),(Larionov A. A., Avdokushin E. F., Ratz G. I., 2020),(Lee M., Lee M., Kim J.,2017),(Xie Z. et al.,2021)

A comparison of startup ecosystems in China and Kazakhstan reveals significant differences in the level of development and institutional support.

In China, the government plays an important role in the development of startups. The country has influential venture capital funds and a well-developed infrastructure that promotes innovation. Initiatives such as "Made in China by 2025" and the "Mass Entrepreneurship and Innovation" strategy create a dynamic environment in which startups become a key driver of technological progress and global competitiveness.

In Kazakhstan, the startup ecosystem is just being formed. Despite successful initiatives such as Astana Hub and Tech Garden, the country is facing challenges in venture financing, limited university participation, and a growing number of young entrepreneurs.

It should be emphasized that the successful implementation of the innovation strategy in Kazakhstan requires an integrated approach, which should include reforming the educational system, stimulating private investment and developing international cooperation.

The study shows that one of the promising areas for development in Kazakhstan may be the adaptation of elements of the Chinese experience. In particular, this applies to scalable startup support programs and more active government financing of innovative projects. However, when implementing these approaches, it is important to take into account the specifics of the country, cultural characteristics and economic conditions.

Conclusion

Thus, the analysis of startup ecosystems in China and Kazakhstan demonstrates the need for an integrated approach to the development of the entrepreneurial environment in emerging economies.

China is an example of a successful government strategy that allows for the transformation of innovative ideas into commercially successful enterprises. Kazakhstan, in turn, needs to focus on institutional improvements, increasing financial resources and developing human capital in order to turn startups into a powerful tool for economic growth.

The implementation of effective strategies to support young entrepreneurs, the creation of technology centers and the attraction of investments are key to the successful integration of Kazakhstan into the global innovation economy. Only through strategic planning, interdisciplinary collaboration and the use of international experience will we be able to ensure the sustainable growth of startups and their contribution to the modernization of the national economy.

The study found that education and the academic environment have a significant impact on the formation of entrepreneurial thinking.

In China, there is close cooperation between universities, research institutes and enterprises, which contributes to the creation of innovative ideas and their successful implementation.

In Kazakhstan, this process is at an early stage, but the potential for the development of an innovation ecosystem is significant. The introduction of entrepreneurial programs into educational programs, the creation of accelerators for students and the support of research startups can be important steps in the development of the country's innovation ecosystem.

Thus, the systematic development of educational infrastructure with an emphasis on entrepreneurial skills represents an additional opportunity for the growth of the startup ecosystem in Kazakhstan.

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Ли Сяоо

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ҚАЗІРГІ ЗАМАНҒЫ ЭКОНОМИКАДАҒЫ СТАРТАП-БАСТАМАЛАР: ҚАЗАҚСТАН МЕН ҚЫТАЙДЫҢ ТӘЖІРИБЕСІ

Аңдатпа. Жаһандану және цифрлық революция жағдайында стартаптар санының өсуі экономикалық өсу мен прогрестің негізгі факторына айналууда. Бұл жұмыста Қазақстан мен Қытайда стартап-экожүйелерді құру және дамыту ерекшеліктері, сондай-ақ олардың экономика мен кәсіпкерлік қызметке әсері зерттеледі. Зерттеудің мақсаты-бұл елдердің инновациялық кәсіпкерлікті дамыту үшін қолданатын стратегияларын салыстыру, сондай-ақ стартаптарды қолдауға бағытталған табысты мемлекеттік және жеке бастамаларды анықтау. Жұмыста институционалдық негіздер, үкіметтердің бастамалары, инфрақұрылым және екі елдегі стартап-экожүйелерді қолдау тетіктері қарастырылады. Стартап-қозғалысты дамытудағы университеттердің, бизнес-инкубаторлардың, акселераторлардың және венчурлық капитал қорларының рөліне ерекше назар аударылады. Мақалада Қытайдың "Қытайда жасалған 2025" бастамасы аясындағы технологиялық инновацияларды ынталандыру стратегиясы және Қазақстан Үкіметінің "Цифрлық Қазақстан" бағдарламасы шеңберінде цифрлық экономиканы жаңғырту және Astana Hub IT-стартаптарының халықаралық технопаркін құру жөніндегі күш-жігері қарастырылады. Мақала сонымен қатар екі елдегі стартаптардың сәтті мысалдарын талдайды және қаржыландыруға қол жеткізу, білікті кадрлардың жетіспеушілігі және құқықтық белгісіздік сияқты қиындықтарды анықтайды. Ұлттық ерекшеліктер, менталитет және экономикалық дамудың тарихи үлгілері тәуекелдерді қабылдауға, инновацияларға ынталандыруға және жас кәсіпкерлердің стартап-қозғалысқа қатысуға дайындығына әсер етеді. Осы факторларды есепке алу ұзақ мерзімді даму мен тұрақты өсуге бағытталған стартап-экожүйелерді дамытудың неғұрлым мақсатты және тұрақты тәсілдерін әзірлеуге мүмкіндік береді. Нәтижелер даму ауқымы мен деңгейіндегі айырмашылықтарға қарамастан, екі ел де стартаптарды дамыту үшін қолайлы жағдайлар жасау үшін табысты жұмыс істеп жатқанын көрсетеді.

Кілт сөздер: стартап, қазіргі заманғы экономика, Қазақстан, Қытай, инновация, кәсіпкерлік, стартаптардың экожүйесі

Ли Сяоо

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СТАРТАП-ИНИЦИАТИВЫ В СОВРЕМЕННОЙ ЭКОНОМИКЕ: ОПЫТ КАЗАХСТАНА И КИТАЯ

Аннотация. В условиях глобализации и цифровой революции рост числа стартапов становится ключевым фактором экономического роста и прогресса. В данной работе проводится исследование особенностей создания и развития стартап-экосистем в Казахстане

и Китае, а также их влияния на экономику и предпринимательскую деятельность. Целью исследования является сравнение стратегий, используемых этими странами для развития инновационного предпринимательства, а также выявление успешных государственных и частных инициатив, направленных на поддержку стартапов. В работе рассматриваются институциональные рамки, инициативы правительств, инфраструктура и механизмы поддержки стартап-экосистем в обеих странах. Особое внимание уделяется роли университетов, бизнес-инкубаторов, акселераторов и фондов венчурного капитала в развитии стартап-движения. В статье рассматривается стратегия Китая по стимулированию технологических инноваций в рамках инициативы «Сделано в Китае 2025» и усилия правительства Казахстана по модернизации цифровой экономики в рамках программы «Цифровой Казахстан» и создания Международного технопарка IT-стартапов Astana Hub. Также анализируются успешные примеры стартапов в обеих странах и выявляются проблемы, с которыми они сталкиваются, такие как доступ к финансированию, нехватка квалифицированных кадров и правовая неопределённость. Национальные особенности, менталитет и исторические модели экономического развития оказывают влияние на восприятие рисков, мотивацию к инновациям и готовность молодых предпринимателей участвовать в стартап-движении. Учет этих факторов позволяет разработать более целенаправленные и устойчивые подходы к развитию стартап-экосистем, ориентированные на долгосрочное развитие и устойчивый рост. Полученные результаты показывают, что, несмотря на различия в масштабах и уровне развития, обе страны успешно работают над созданием благоприятных условий для развития стартапов.

Ключевые слова: стартап, современная экономика, Казахстан, Китай, инновации, предпринимательство, экосистема стартапов.

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