

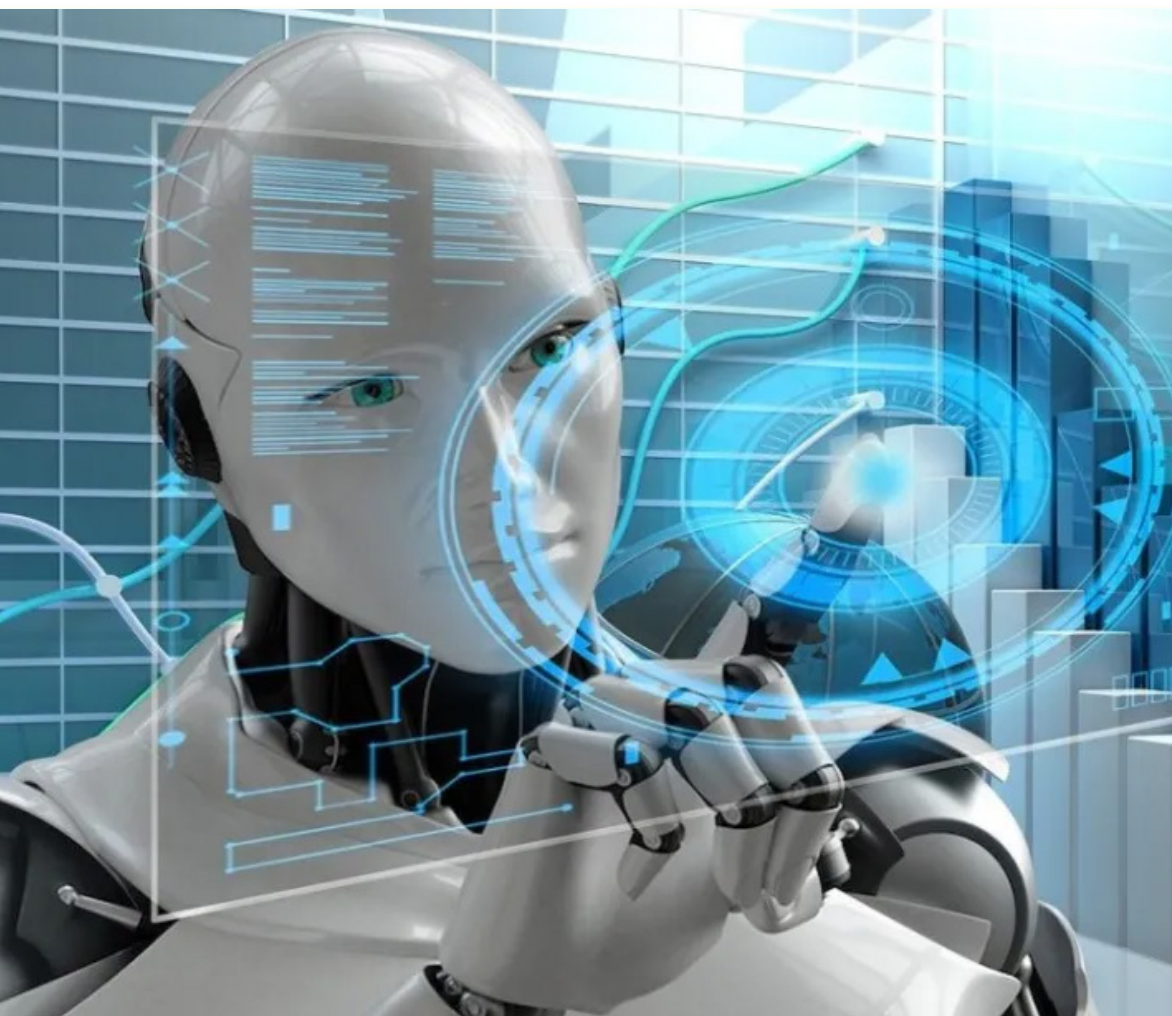
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EXPANSION OF FINANCIAL OPPORTUNITIES FOR THE INTRODUCTION OF INNOVATIVE TECHNOLOGIES IN ENTREPRENEURIAL ACTIVITY

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Annotatsiya. This article examines the current trends and mechanisms for expanding financial opportunities for entrepreneurs in Uzbekistan to implement innovative technologies. The study analyzes the main sources of innovation financing, government support programs, and the development of venture capital instruments and digital crowdfunding platforms. Comparative and system analysis methods, statistical data, and expert evaluations were applied to identify key patterns and factors influencing the innovation ecosystem. The research results demonstrate that the formation of an innovation-oriented financial infrastructure in Uzbekistan is actively progressing. However, several constraints remain, including a low level of financial literacy, an underdeveloped investment culture, and limited access of small and medium-sized enterprises (SMEs) to long-term financial resources. Strengthening institutional support, diversifying financing tools, and improving entrepreneurs' financial competencies are essential for accelerating the adoption of innovative technologies in the national economy.

Kalit so'zlar: innovation, entrepreneurship, investment, financial support, venture capital, crowdfunding, Uzbekistan.

Abstract. Ushbu maqolada O'zbekistonda tadbirkorlarning innovatsion texnologiyalarni joriy etishi uchun moliyaviy imkoniyatlarni kengaytirishga doir zamonaviy tamoyillar va mexanizmlar tahlil qilingan. Innovatsiyalarni moliyalashtirish manbalari, davlat tomonidan qo'llab-quvvatlash dasturlari, venchur kapital bozori va raqamli kraudfanding platformalarining rivojlanish dinamikasi o'rganilgan. Tadqiqotda taqqoslama va tizimli tahlil usullari, statistik ma'lumotlar hamda ekspert baholari qo'llanilgan. Natijalar shuni ko'rsatadiki, O'zbekistonda innovatsion va moliyaviy infratuzilma shakllanishi faol bosqichda davom etmoqda. Biroq ayrim to'siqlar — moliyaviy savodxonlikning pastligi, investitsiya madaniyatining yetarlicha rivojlanmaganligi hamda kichik va o'rta biznes sub'yektlarining uzoq muddatli moliyaviy resurslarga kirish imkoniyatining cheklanganligi — mavjud bo'lib qolmoqda. Innovatsion texnologiyalarni joriy etish jarayonini jadallashtirish uchun institutsional qo'llab-quvvatlashni kuchaytirish, moliyalashtirish vositalarini diversifikatsiya qilish va tadbirkorlarning moliyaviy kompetensiyalarini oshirish zarur.

Key words: innovatsiya, tadbirkorlik, investitsiya, moliyaviy qo'llab-quvvatlash, venchur kapital, kraudfanding, O'zbekiston.

Аннотация. В данной статье исследуются современные тенденции и механизмы расширения финансовых возможностей предпринимателей Узбекистана для внедрения инновационных технологий. Анализируются источники финансирования инноваций, государственные программы поддержки, развитие рынка венчурного капитала и цифровых краудфандинговых платформ. В исследовании применены методы сравнительного и системного анализа, статистические данные и экспертные оценки. Результаты демонстрируют, что формирование инновационной и финансовой инфраструктуры в Узбекистане находится на стадии активного развития. Вместе с тем сохраняются определённые барьеры — низкий уровень финансовой грамотности, недостаточно развитая инвестиционная культура и ограниченный доступ субъектов малого и среднего бизнеса к долгосрочным финансовым ресурсам. Для ускорения внедрения инновационных технологий необходимо усилить институциональную поддержку, диверсифицировать инструменты финансирования и повысить финансовые компетенции предпринимателей.

Ключевые слова: инновации, предпринимательство, инвестиции, финансовая поддержка, венчурный капитал, краудфандинг, Узбекистан.

INTRODUCTION

In the context of global digitalization and technological progress, innovation has become a key factor for sustainable economic growth and for strengthening the competitiveness of national economies. For entrepreneurs, the implementation of innovative technologies is not only a means of optimizing production processes but also an opportunity to enter new markets and reinforce their positions amid intensifying competition. In recent years, Uzbekistan has undertaken large-scale reforms aimed at developing the national innovation ecosystem and supporting entrepreneurship. Key policy documents include the Strategy for the Development of Innovative Activities until 2030, the “Digital Uzbekistan – 2030” Program, and the State Program for Entrepreneurship and Innovation Support for 2021–2025. However, the introduction of innovative technologies requires substantial financial resources, access to which remains limited for small and medium-sized enterprises (SMEs). Entrepreneurs often face challenges such as difficulties in obtaining long-term financing, high interest rates on loans, and the underdevelopment of venture capital and alternative investment instruments. Therefore, expanding financial opportunities for innovative activities is of particular importance.

RESEARCH METHODOLOGY

The study employs analytical, comparative, statistical, and expert methods: the analytical method — to analyze the legal framework of Uzbekistan in the fields of innovation and entrepreneurship; comparative analysis — to examine the experience of Kazakhstan, South Korea, Poland, and Turkey in forming financial and innovation mechanisms; statistical analysis — based on data from the Ministry of Economy and Finance, the Agency for Innovation Development, the World Bank, and the OECD; expert assessment — incorporating the opinions of entrepreneurs, representatives of the banking sector, and technoparks. The study covers the structure of innovation financing for 2020–2024, the effectiveness of public and private support programs, and the impact of financial accessibility on innovation dynamics.

ANALYSIS AND RESULTS

In recent years, Uzbekistan has demonstrated steady growth in investments in innovative projects. According to the Ministry of Economy and Finance, total investment in innovation increased from 4.2 trillion soums in 2020 to 6.8 trillion soums in 2024, reflecting a 62% rise. At present, Uzbekistan has formed a multi-level system for supporting innovation activities, including public, private, and international funding sources.

Table 1.

Source of Financing	Description	Advantages	Disadvantages
State grants and subsidies	Funding through the Agency for Innovation Development and the Entrepreneurship Support Fund	Non-repayable, accessible	Limited volume, bureaucratic complexity
Bank loans	Main source of external financing	Stable infrastructure	High interest rates, collateral requirements
Venture capital	Investments in innovative companies and startups	Long-term nature, investor support	Underdeveloped market
Crowdfunding and crowd-investing	Fundraising through digital platforms	Direct contact with investors	Low trust level, weak regulation
Foreign investments and grants	Funds from international organizations (World Bank, ADB)	Long-term resources, knowledge exchange	Currency risks, lengthy procedures

Table 2.

Year	Volume of Innovation Investments (trln soums)	Growth, %	Main Sources
2020	4.2	–	Government grants, loans
2021	4.8	+14.3	International funds, banks
2022	5.6	+16.7	Private investments, venture funds
2023	6.2	+10.7	Hybrid financing models
2024	6.8	+9.7	Crowdfunding, innovation platforms

The analysis shows that the share of private financing sources increased from 27% to 44% over a five-year period, indicating the gradual formation of a domestic market for innovation investments. Innovation financing in Uzbekistan is evolving amid ongoing reforms and digital transformation, with the state establishing key support mechanisms such as the Innovation Support Fund, the UzVC venture capital fund, technoparks, and business incubators aimed at fostering entrepreneurship and the commercialization of research. Key achievements include the establishment of technoparks in Tashkent, Navoi, Samarkand, and Fergana, the launch of startup acceleration programs, and the introduction of grant systems for scientific research. Partnerships with international organizations have also provided startups with mentorship, specialized expertise, and co-investment opportunities. Despite progress, several challenges remain, including low financial literacy among entrepreneurs, limited access to venture capital, high loan interest rates, insufficient links between research institutions and the private sector, and the inadequate digitalization of financial processes.

Addressing these barriers requires sustainable financing mechanisms, broader SME access to innovation resources, enhanced financial literacy programs, the expansion of venture capital networks, and improved digital platforms for funding and reporting. Strengthening collaboration between universities, research centers, and businesses will help transform scientific discoveries into commercial products, thereby enhancing the competitiveness of Uzbekistan's innovation ecosystem. Further development of innovative entrepreneurship in Uzbekistan requires the creation of a comprehensive financial-innovation ecosystem in which the state, businesses, academic institutions, and international partners operate in close coordination. A key priority is the development of the venture capital market and business angel networks, which necessitates legislative improvements, tax incentives for investors, and the establishment of venture fund infrastructure. These measures will expand access to long-term capital and stimulate innovation in the private sector. Special attention should be given to digital financing tools, particularly the development of national crowdfunding and crowd-investing platforms, which enable entrepreneurs to directly engage with investors and attract funding for startup implementation. To enhance the effectiveness of these tools, investor protection and public trust in digital financial services must be strengthened. Another promising approach is the introduction of state guarantee schemes and co-financing mechanisms for innovative projects, whereby public and private funds are jointly utilized. This reduces banking risks and encourages private investment. Human capital development is also critical, requiring expanded educational programs on innovation management, financial engineering, and digital technologies. Universities and technoparks should serve as centers for developing entrepreneurial skills and commercializing research outcomes. Moreover, international cooperation with organizations such as the World Bank, the Asian Development Bank, and the OECD should be intensified to attract additional funding and facilitate the adoption of global best practices in innovation management. Comprehensive implementation of these measures will establish a sustainable foundation for expanding entrepreneurs' financial capabilities and accelerate innovation across all economic sectors, enabling Uzbekistan to strengthen its position in the global market and develop a competitive innovation ecosystem.

CONCLUSION

The conducted research confirms that expanding financial opportunities for implementing innovative technologies is a crucial condition for the modern economic development of Uzbekistan. Over the past years the country has made significant progress in establishing the institutional and regulatory framework necessary for the development of an innovation ecosystem. Key achievements include the creation of technoparks, business incubators, venture capital funds, startup acceleration programs, and grant mechanisms for research and development projects. These initiatives have laid a strong foundation for the commercialization of scientific discoveries and the development of high-tech enterprises. However, the study highlights that further progress requires addressing several structural challenges, including diversifying financial instruments to better support startups and SMEs, increasing access to venture capital, reducing reliance on high-interest loans, and improving the digitalization of investment and reporting processes.

Additionally, strengthening collaboration between universities, research centers, and private enterprises is essential to translate scientific research into commercially viable products and services. Active mobilization of private capital alongside public funding will play a decisive role in sustaining innovation-driven growth, while programs aimed at improving financial literacy and managerial competence among entrepreneurs can enhance the efficiency of resource allocation and investment decision-making. The implementation of the proposed recommendations will not only stimulate innovative entrepreneurship but also strengthen Uzbekistan's global competitiveness, foster economic diversification and ensure long-term sustainable growth. A robust, well-financed and technologically advanced innovation ecosystem will create favorable conditions for high-value job creation, knowledge-based economic development and the effective integration of Uzbekistan into the global innovation landscape.

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