

**PROSPECTS FOR IMPROVING INFRASTRUCTURE FOR SMALL BUSINESS AND
ENTREPRENEURSHIP IN THE REPUBLIC OF UZBEKISTAN****Xulkar Olimjonovna Botirova**Tashkent State University of Economics
Department of “Economic Theory” Assoc. Prof.xulkarbotirova@gmail.com

Abstract : This article analyzes the prospects for improving infrastructure for small business and entrepreneurship in the Republic of Uzbekistan. It examines the achievements of developed countries in establishing business incubators, technology parks, venture funds, innovation centers, and public-private partnerships. Based on these international experiences, the paper identifies directions for modernizing Uzbekistan’s entrepreneurial infrastructure, mechanisms for supporting startups and small enterprises, and opportunities for creating regional innovation centers.

Keywords: small business, entrepreneurial infrastructure, innovation, public-private partnership, business incubator, technopark, venture fund.

Annotatsiya : Ushbu maqolada O‘zbekiston Respublikasida kichik biznes va tadbirkorlik infratuzilmasini takomillashtirish istiqbollari tahlil qilinadi. Maqolada rivojlangan mamlakatlarning biznes-inkubatorlar, texnoparklar, venchur fondlar, innovatsion markazlar va davlat-xususiy sheriklik asosida erishgan yutuqlari o‘rganilgan. Xorijiy tajribani o‘zlashtirish orqali O‘zbekistonda tadbirkorlik infratuzilmasini modernizatsiya qilish yo‘nalishlari, startup va kichik biznesni qo‘llab-quvvatlash mexanizmlari, hududiy innovatsion markazlarni tashkil etish imkoniyatlari ko‘rsatib o‘tilgan.

Kalit so‘zlar: kichik biznes, tadbirkorlik infratuzilmasi, innovatsiya, davlat-xususiy sheriklik, biznes-inkubator, texnopark, venchur fond.

Аннотация : В данной статье анализируются перспективы совершенствования инфраструктуры для малого бизнеса и предпринимательства в Республике Узбекистан. Рассмотрены достижения развитых стран в создании бизнес-инкубаторов, технопарков, венчурных фондов, инновационных центров и систем государственно-частного партнёрства. На основе международного опыта определены направления модернизации предпринимательской инфраструктуры Узбекистана, механизмы поддержки стартапов и малых предприятий, а также возможности создания региональных инновационных центров.

Ключевые слова: малый бизнес, предпринимательская инфраструктура, инновации, государственно-частное партнёрство, бизнес-инкубатор, технопарк, венчурный фонд.

Introduction

Small and medium-sized enterprises (SMEs) are widely recognized as critical drivers of economic growth, employment generation, and innovation across global economies. In many developed countries, SMEs contribute significantly to GDP, create a majority of new jobs, and serve as a key engine for technological advancement and market diversification. The success of these enterprises, however, depends not only on the entrepreneurial capabilities of business

owners but also on the quality and availability of the supporting infrastructure that facilitates business operations, innovation, and market integration.

Entrepreneurial infrastructure encompasses a wide range of physical, institutional, financial, and informational resources, including business incubators, technology parks, innovation hubs, venture funds, public-private partnerships (PPPs), mentoring programs, and regulatory frameworks. Empirical studies from countries such as the United States, Germany, Japan, South Korea, and Scandinavian nations have demonstrated that well-structured entrepreneurial ecosystems significantly increase the survival rate of startups, accelerate the commercialization of innovations, and enhance overall competitiveness in both local and global markets.

In the context of Uzbekistan, the development of a modern and efficient entrepreneurial infrastructure has become a strategic priority. The government's "New Uzbekistan" development strategy emphasizes promoting small and medium-sized enterprises, facilitating startups, and creating regional innovation centers. Despite recent progress in establishing IT Parks, technology hubs, and innovation programs, challenges remain in areas such as access to venture capital, regional distribution of infrastructure, technological capacity, and the integration of scientific research with business development.

The adaptation of international best practices to the Uzbek context is therefore essential. Learning from the experiences of developed economies can provide guidance on creating a cohesive entrepreneurial ecosystem that supports SMEs at every stage from ideation and startup to scaling and market expansion. Effective infrastructure not only provides physical resources and financial support but also fosters an innovation-friendly environment, encourages knowledge transfer, and facilitates collaboration between universities, research centers, and the private sector.

Literature Review

The development of entrepreneurial infrastructure has been widely recognized as a critical determinant of small business success in global economic literature. Entrepreneurial infrastructure refers to the physical, financial, institutional, and knowledge-based support systems that facilitate the establishment, growth, and sustainability of small and medium-sized enterprises (SMEs). The literature emphasizes that effective infrastructure is not limited to physical facilities but extends to financial mechanisms, mentorship, regulatory support, innovation hubs, and networks that enable market access and technology transfer.

In the United States, business incubators and accelerators have a long-standing history of supporting startups and SMEs. Research indicates that incubators provide critical resources, including office space, administrative support, mentorship, and networking opportunities, which significantly increase the survival and growth rates of startups (Hackett & Dilts, 2004; Cohen, 2013). The success of incubators is closely linked to their integration with universities, investors, and industry partners, which facilitates technology commercialization and access to financial and human capital. European countries such as Germany and the United Kingdom also demonstrate that university-linked incubators play a pivotal role in translating research into marketable innovations. For instance, Germany's UnternehmerTUM and UK's Cambridge Enterprise provide structured programs that combine mentoring, investor networking, and access to advanced research facilities, enabling startups to scale efficiently (Bercovitz & Feldman, 2008).

Technology parks and innovation hubs are essential components of national innovation systems. Japan's Tsukuba Science City and South Korea's Pangyo Techno Valley illustrate the importance of clustering R&D, startups, and established firms within a localized ecosystem to enhance collaboration, reduce transaction costs, and accelerate innovation diffusion (Fukugawa, 2006; Kim, 2010). These hubs offer access to laboratories, high-speed networks, financial incentives, and partnerships with universities, which collectively promote knowledge spillovers and entrepreneurial growth.

In Scandinavia, countries like Sweden and Denmark have leveraged innovation agencies and technology parks to support sustainable and socially responsible startups. Vinnova in Sweden, for example, provides grants, mentoring, and networking opportunities specifically targeted at innovation-based SMEs, emphasizing systemic support and regional equity (Arnold, 2014).

Access to venture capital is consistently identified in the literature as a determinant of startup growth and innovation commercialization. South Korea's TIPS (Tech Incubator Program for Startups) combines government-backed grants with venture capital co-investment to accelerate high-tech startups' entry into global markets (Lee et al., 2015). The model integrates mentorship, networking, and rigorous evaluation, ensuring that selected startups have both financial support and managerial guidance.

Public-private partnerships (PPPs) in entrepreneurial infrastructure, observed in the United States and the European Union, have been effective in mobilizing resources, sharing risk, and fostering innovation ecosystems. PPPs bridge gaps between government policy, private investment, and research institutions, creating an enabling environment for SMEs (Katz & Wagner, 2014).

A consistent theme across the literature is the importance of spatial distribution of infrastructure. Centralized models risk neglecting regional potential, whereas distributed innovation systems facilitate equitable economic development and local capacity building (Feldman & Audretsch, 1999). In Uzbekistan, pilot IT Parks and technology hubs have largely been concentrated in urban centers, which highlights the need to expand regional infrastructure and integrate smaller cities into the innovation ecosystem.

Furthermore, the literature stresses that national policies must complement infrastructure development by offering regulatory support, tax incentives, and educational programs aimed at entrepreneurial skill-building (OECD, 2020).

Methodology

This study employs a qualitative and comparative research approach to analyze the prospects for improving infrastructure for small business and entrepreneurship in Uzbekistan. The methodology is structured to combine theoretical analysis, empirical evidence, and international benchmarking to provide a comprehensive understanding of both the current state of entrepreneurial infrastructure in Uzbekistan and the lessons that can be drawn from global best practices.

The research design integrates descriptive, analytical, and comparative methods. Descriptive analysis is used to examine the current state of entrepreneurial infrastructure in Uzbekistan, including IT Parks, technology hubs, business incubators, and regional innovation centers. Official reports, government publications, and statistical data from the Ministry of Economy and State Committee on Statistics were analyzed. Analytical methods assess the effectiveness of existing infrastructure in supporting SMEs, focusing on resource availability, accessibility, regional coverage, and the integration of financial, technological, and human capital. Comparative analysis benchmarks Uzbekistan's infrastructure against selected developed

countries (e.g., USA, Germany, Japan, South Korea, and Scandinavian nations) to identify transferable practices, gaps, and potential areas for adaptation.

The study draws on multiple data sources to ensure reliability and triangulation. Primary sources: Semi-structured interviews with Uzbek entrepreneurs, innovation center managers, and policymakers provided first-hand insights into challenges and opportunities. Secondary sources: Academic publications, international reports from OECD, World Bank, UNCTAD, and country-specific case studies offered a comparative framework and evidence on best practices. Statistical data: Quantitative indicators on SME development, startup survival rates, investment levels, and innovation outputs were collected from official government databases.

The study employs a systems-based analytical framework to assess entrepreneurial infrastructure across four dimensions:

- Physical infrastructure: Availability of technology parks, incubators, laboratories, and co-working spaces.
- Financial infrastructure: Accessibility of venture capital, grants, and public-private partnership funding.
- Institutional support: Legal frameworks, government programs, mentorship initiatives, and policy incentives.
- Innovation ecosystem: Linkages between universities, research institutions, private sector, and startups; knowledge transfer mechanisms and technology commercialization pathways.

This framework allows for a holistic evaluation of the factors influencing SME growth and entrepreneurship development in Uzbekistan.

Qualitative data from interviews and case studies were analyzed using content analysis to identify recurring themes, challenges, and opportunities. Quantitative data were examined using descriptive statistics and comparative metrics, enabling benchmarking against international standards. Cross-case comparisons highlighted the effectiveness of different models and informed the recommendations for policy and infrastructure improvements in Uzbekistan.

The study acknowledges certain limitations. Data availability is limited in some regional areas, which may affect the comprehensiveness of the analysis. While international comparisons provide valuable insights, cultural, economic, and institutional differences may influence the transferability of specific practices. The study primarily focuses on formal SMEs and registered startups, whereas informal entrepreneurial activities are less represented in official data.

All primary data were collected with informed consent from participants. Confidentiality and anonymity of interviewees were strictly maintained. Secondary data sources were properly cited and verified to ensure credibility. This methodology combines qualitative insights, comparative analysis, and systems-based evaluation to comprehensively assess the current state of entrepreneurial infrastructure in Uzbekistan and identify evidence-based strategies for improvement. The framework provides a solid foundation for deriving practical recommendations to enhance SME support, innovation capacity, and regional development.

Results and Analysis

The aim was to identify the key factors influencing the growth of small and medium-sized enterprises (SMEs) in various regions of Uzbekistan. The analysis revealed that several infrastructure-related variables significantly affect SME development, including access to financing, gas, electricity, water, internet connectivity, and labor productivity.

The model calculations highlighted several important aspects that should be considered in further research. First, the model indicates that both soft and hard infrastructure present in all sectors influence the activities of small business and entrepreneurial entities. Improving infrastructure positively impacts SME productivity at the regional level.

The findings of this study align with the results obtained by foreign researchers. Specifically, Eskribano (2009), in his research on African countries, demonstrated that low-quality electricity supply infrastructure has a significant negative impact on the productivity of all production factors, making it one of the most critical infrastructure components affecting firm efficiency. Therefore, in developing countries, especially in rural areas, improving the quality and reliability of electricity infrastructure is crucial to enhance firm productivity and household incomes.

In Uzbekistan, investing in the energy sector should be a priority to ensure sustainable economic growth and reduce unemployment and poverty in different regions.

Moreover, the relationship between crime rates and economic business cycles has been studied by numerous sociologists. Enterprises need to be aware of local conditions, as ignoring them can lead to capital losses or damage for both small and large businesses. Economic downturns often lead to increased criminal activity. Economic cycles show that during economically difficult periods (for example, fraud), illegal activities tend to increase (Bressler). Therefore, government and private sector representatives should implement preventive measures and strengthen security during crises. This helps protect assets and prevent potential losses caused by criminal activity.

Considering normative-legal frameworks, entrepreneurial institutions, infrastructure, and SME support programs, it is essential to develop specialized programs aimed at promoting small business and entrepreneurship. Such programs provide the opportunity to enhance the infrastructure supporting SMEs in regions, districts, and cities.



Figure 1. SEZs (Special Economic Zones) and EPZs (Export Processing Zones) in China and their locations¹

The map illustrates the geographical distribution of Special Economic Zones (SEZs), marked in red, and Free Trade Zones (FTZs), highlighted in blue, across China. These zones represent critical components of China's strategy to promote economic liberalization, foreign investment, and export-oriented growth.

SEZs such as Shenzhen, Zhuhai, Shantou, Xiamen, and Hainan are concentrated in the southern coastal provinces, reflecting China's historical focus on opening coastal areas to international trade and foreign investment. These zones were among the first to implement market-oriented reforms and preferential policies, including tax incentives, simplified administrative procedures, and land-use flexibility, designed to attract foreign direct investment (FDI). Their coastal location provides access to major ports, facilitating export-oriented manufacturing and integration into global supply chains.

The FTZs, shown in blue, are more widely distributed across both eastern and central China, covering provinces such as Hebei, Liaoning, Shandong, Jiangsu, Zhejiang, Fujian,

¹

¹https://www.google.com/search?q=special+economic+zones+in+china&source=lnms&tbm=isch&sa=X&ved=2ahUKEwicqWt1676AhXm1YsKHZl6CvkQ_AUoAXoECAIQAw&biw=1366&bih=635&dpr=1#imgrc=zar-k1hHLVj0M

Guangdong, Hubei, Sichuan, Chongqing, and Yunnan. **These zones aim to liberalize trade, streamline customs procedures, and promote service-oriented industries and high-value exports. Some FTZs were announced in 2020, such as those in Beijing, Anhui, and Hunan, highlighting China's ongoing strategy to expand trade liberalization beyond coastal regions into inland provinces.**

Southern coastal concentration: The cluster of SEZs along Guangdong, Fujian, and Hainan underscores the strategic importance of southern coastal provinces in China's initial economic reform era. These zones are highly industrialized and serve as hubs for electronics, manufacturing, and export-oriented industries. Inland FTZ expansion: The spread of FTZs into inland provinces such as Hubei, Sichuan, and Chongqing reflects China's policy to reduce regional economic disparities and encourage balanced development. These zones provide incentives for domestic trade, logistics, and innovation-oriented industries.

Strategic integration: SEZs and FTZs collectively function to create a networked economic ecosystem, combining export-oriented manufacturing, service trade, and high-tech industries. The coexistence of both zones supports regional diversification and maximizes access to domestic and international markets. The map demonstrates a dual approach in China's economic strategy: SEZs focus on pioneering reform in high-potential coastal areas, while FTZs facilitate the broader dissemination of trade liberalization and market-oriented policies inland. For other developing countries, this spatial strategy provides insights into how targeted economic zones can catalyze investment, promote industrial clusters, and stimulate regional development. The combination of SEZs and FTZs also highlights the importance of infrastructure, port access, logistics, and policy support in the successful operation of economic zones.

Conclusion

The development and improvement of infrastructure for small businesses and entrepreneurship in the Republic of Uzbekistan play a pivotal role in ensuring sustainable economic growth, increasing employment opportunities, and fostering innovation. Over the past decade, Uzbekistan has undertaken significant reforms aimed at creating a favorable environment for small and medium-sized enterprises (SMEs), including the establishment of industrial and free economic zones, business incubators, and financial support mechanisms. These initiatives have facilitated access to capital, enhanced entrepreneurial skills, and promoted the growth of innovative business ideas.

However, despite these achievements, several challenges persist. Limited technological infrastructure, underdeveloped logistics networks, and bureaucratic barriers continue to hinder the full potential of small businesses. Moreover, there is a need to further integrate digital solutions into business operations, improve access to modern production facilities, and strengthen the regulatory framework to ensure transparency and ease of doing business. Addressing these issues is essential to enhancing the competitiveness of SMEs both domestically and in international markets.

Looking forward, the prospects for improving infrastructure in Uzbekistan are promising. Strengthening public-private partnerships, investing in modern technological platforms, and developing targeted support programs for entrepreneurs can significantly enhance productivity, innovation capacity, and market reach. By focusing on these priorities, Uzbekistan can cultivate a more dynamic and resilient entrepreneurial ecosystem, which will contribute to economic

diversification, sustainable development, and long-term prosperity. Ultimately, a well-developed infrastructure for small businesses not only empowers entrepreneurs but also drives inclusive economic growth and social progress across the country.

References :

1. Abdullayeva, N. (2023). Regional Disparities in Innovation Infrastructure in Uzbekistan. *Journal of Economic Development*, 15(2), 45–61.
2. Etzkowitz, H., & Leydesdorff, L. (2000). The Dynamics of Innovation: From National Systems and “Mode 2” to a Triple Helix of University–Industry–Government Relations. *Research Policy*, 29(2), 109–123.
3. Kim, S., & Park, J. (2021). Venture Capital and SME Growth: International Experience and Lessons for Emerging Economies. *International Journal of Entrepreneurship*, 25(3), 78–95.
4. OECD. (2023). *SME and Entrepreneurship Outlook 2023*. Paris: OECD Publishing.
5. Porter, M. (1998). Clusters and the New Economics of Competition. *Harvard Business Review*, 76(6), 77–90.
6. Rasulov, A., & Yo‘ldoshev, D. (2021). *Innovation-driven Infrastructure and SME Efficiency in Uzbekistan*. Tashkent: Economic Research Institute.
7. Shodmonov, T., & Ergashev, A. (2020). Barriers and Opportunities for SME Development in Uzbekistan. *Central Asian Journal of Economics*, 12(1), 33–50.
8. Schwab, K. (2022). *Global Competitiveness Report 2022*. Geneva: World Economic Forum.
9. State Committee of the Republic of Uzbekistan on Statistics. (2020–2024). *Annual Statistical Reports on Small Business and Entrepreneurship Development*. Tashkent.
10. UNIDO. (2023). *Promoting Innovation and SME Growth in Developing Countries: Policy Guidelines*. Vienna: United Nations Industrial Development Organization.