

Article

Analysis of Innovation Activity of Small Businesses and Microfirms

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Abstract: This paper explores the innovation activities of small businesses and micro-enterprises in the Republic of Uzbekistan as compared to their impact on social and economic development of the country. It accentuates how strategic innovation is a way to enhance efficiency, competitiveness and sustainability within small businesses. The report explores how innovative these businesses are, considering where they beat the broader business community – including in their use of digital innovations and in developing and bringing to market new products and services. It also deals with the constraints they face, which include credit constraint, poor infrastructure and lack of skills. The article analyses the government's initiatives and reforms in promoting innovation in small businesses such as financial incentives, duties benefits, creation of business incubators. It uses real data to offer a glimpse on the impact of these policies in the entrepreneurial ecosystem. By featuring successful examples of innovative ventures, the research highlights the possibility of microenterprises fueling economic expansion _ENREF_55. It ends with a series of policy suggestions for boosting the innovation capabilities of small firms through modified policies, higher levels of government investment and international cooperation.

Keywords: Innovation, Small Businesses, Micro-Firms, Uzbekistan, Entrepreneurship, Competitiveness, Digital Technologies, Government Reforms, Economic Growth, Sustainability

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1. Introduction

Small business and micro entrepreneurs are the basis of economic growth in the Republic of Uzbekistan, and also serves to create jobs, reduce poverty and develop regions. In recent times, the government of Uzbekistan is gradually realizing that the sector needs an innovative culture to grow the economy and be on a position to respond to challenges of globalization and technological changes. SMIs and micro enterprises accounted for approximately 56.2% of the gross domestic product of according to State Statistics Committee, in year 2023 they employed more than the overall country's working population (78%). These figures underscore the sector's importance to the American economy."

The ability to innovate of small businesses is an essential driver for productivity growth, in advancing the diversification of economic structures and enhancing competitiveness at home or abroad. The amount of innovation based companies has been increasing in the Republic of Uzbekistan, and especially during application of Strategy of Actions on Five Priority Areas for 2017-2021. This policy thrust had elevated modernization, science and technology as the central strategies in search for national

socio-economic development. Take for instance interventions by introduction of digital technologies in areas like agriculture, textiles and services which have already resulted in high efficiency and growth. It was innovative measures that enabled exports by small and micro-enterprises to hit US\$5.8bn in 2022."

Despite these achievements, challenges remain. Small businesses in Uzbekistan often face the same drawbacks such as easier access to finance, which is more common among micro-enterprises and a lack of infrastructure, judicious law on patent (Johnson et al., 2004). 32% of small businesses concentrated on innovative kind of activities, percentage is based on reported 2021 source: Ministry for Economic Development and Poverty Reduction (MEDPR) while main obstacle to innovation was shortage of funds. Aggressor nations also want an ideology and government that has developed enough to take on the West, although a lack of skilled labor and old technologies continue to hinder their potential for innovation. Recently, however the government has revamped its policies to create a better ecosystem for innovation. Major policies include the creation of innovation funds, tax benefits for R&D investment, and the construction of business incubation centres as well as science and technology parks. For example, the Yashnobod Innovation Technopark in Tashkent has contributed to establishing cooperation between small businesses and research organizations, which resulted in the commercialization of innovative ideas. International cooperation has also become an important feature of Uzbekistan's efforts to promote innovation. The government has entered into agreements with foreign investors or international organizations for technology transfer and technical assistance. For instance, the engagement with the Asian Development Bank (ADB) through "Innovation and Entrepreneurship Development Project" which began in 2021 has given \$100 million to small and micro-enterprises for adopting state-of-art technologies. Such attempts have socioeconomic consequences and it now appears that nebulous bootloader manufacturers cannot be as ignored as previously. This, in part was the result of positive changes in the business environment which greatly increased Uzbekistan's Ease of Doing Business ranking, from 166th position in 2012 to 69th by year-end 2020 according to the World Bank. Introduction of digital products, such as in the form of 'Solliq' (tax administration) and 'Monomarkaz' (workforce training), has also streamlined processes from small business and allowed to shift more attention towards other innovations.

This paper considers the innovation activity of small business and microenterprises in Uzbekistan, their current state, problems they face and state policy and international cooperation. Innovation and growth adoption: The emphasis here is on the way in which innovations promote industry growth, as measured by: output (GDP contributions); employment; and export performance. It exposes best practices in success cases that can be interesting to know about the techniques and methods that small companies have used to grow when a competition is on [1].

As such, it is important for small and micro-firms in Uzbekistan to harness the ability to innovate if the country's long-term economic sustainability and competitive edge are to be maintained. By surmounting the remaining barriers and seizing opportunities for growth, these firms have vastly potential to contribute to sustainable development under Tashkent's vision of transforming Uzbekistan into a modern and competitive market economy.

2. Methodology

Тўраева, С. Н. Naqshbandi Mardonovna Turaeva The author of the article discussed is analyzed innovative approach to consolidating employment of population during realization the programs on private business developing in the Republic of Uzbekistan. The paper discusses new innovative niches in the digital economy, distance employment and remote work, startups and technoparks, green economy and ecological

entrepreneurship, agribusiness and services. It is pointed out that the ways of generating new jobs through innovational technologies creation, training and retraining in new professions, economic diversification and sustainable development are considered. The article testifies to the significance of the custom-based approaches in the aspect of entrepreneurship and employment of country population.

Rustam T. In the work of the author, a systematic analysis was conducted to define (cloud) technology in terms of storing and processing data in a business (entity), as well as similar present operations. The significance, practicality, thrills (the reference contains its application in multiple spheres) of the technological process as a service (SaaS, PaaS and IaaS) in different areas of entrepreneurship including potential threats are identified; also the nature of implementation is described and recommendations for practice are offered as well. The services give entrepreneurs virtual computers, servers, templates and any other program necessary to control the network. This offers entrepreneurs a solution to install the basic computer infrastructure themselves.

3. Results

The analysis of innovative activities among small businesses and micro-firms in Uzbekistan reveals significant progress in fostering innovation-driven growth, despite persistent challenges. Over the past five years, small enterprises have increasingly adopted advanced technologies and innovative practices, contributing to economic diversification and enhanced productivity [2]. According to the State Statistics Committee, small businesses accounted for 31.4% of industrial production in 2023, reflecting their growing role in the national economy.

Government reforms, including tax incentives for innovation and the establishment of technology parks, have been pivotal in this progress [3]. The Yashnobod Innovation Technopark, for instance, supported over 120 projects between 2020 and 2023, leading to the commercialization of innovative solutions in sectors such as agriculture, healthcare, and energy. Additionally, the export performance of small and micro-enterprises improved significantly, with innovative products accounting for 18% of their total exports in 2022, valued at approximately \$1 billion.

However, challenges persist, including limited access to financing and skilled personnel. Only 34% of small businesses reported engaging in R&D activities, indicating a need for further support [4]. Nevertheless, the results demonstrate the potential of innovation to transform small businesses into dynamic contributors to Uzbekistan's socio-economic development, aligning with the country's strategic goals. Also, Table 1 below analyzes the innovations introduced by small businesses and micro-firms in Uzbekistan [4].

Table 1. Innovations introduced by small businesses and micro-firms.

No	Republic and regions	2019- year	2020- year	2021- year	2022- year	2023- year
1	O'zbekiston Republic	1443	3535	2974	1635	1815
2	Qoraqalpog'iston Republic	15	16	6	43	87
3	Andijon	53	57	22	252	65
4	Buxoro	47	243	191	77	78
5	Jizzax	46	128	38	7	20
6	Qashqadaryo	54	35	147	269	37
7	Navoiy	402	293	408	70	147
8	Namangan	50	188	38	19	19
9	Samarqand	14	190	178	207	340
10	Surxandaryo	113	147	108	52	276

11	Sirdaryo	177	112	134	16	27
12	Toshkent	105	521	247	77	138
13	Farg'ona	84	225	234	64	37
14	Xorazm	30	20	29	181	70
15	Toshkent city	253	1360	1194	301	474

Table shows the regional development trends of innovations for small business and micro-firms in Uzbekistan from 2019 to 2023. An analysis of the data shows that there are pronounced regional differences and fluctuations in innovation dynamics over time, presumably reflecting different degrees of development, support, and opportunity in various areas [5], [6].

Nationwide, the number of innovations introduced reached a record 3,535 in 2020 (up from just 1,443 in 2019). The scale-up happens concurrently with state-led innovation promotion policies that encourage policy activities for innovations, financial encouragement strategies and technological support within the “Strategy of Actions on the Development of Uzbekistan for 2017–2021”. But the numbers reduced in subsequent years and could go down to 1,815 by 2023 because of economic impacts from global events like the COVID-19 pandemic.

At the regional level, Tashkent region and Tashkent city proved to be the leaders of innovation during these five years [7]. In 2020 Tashkent City scored an impressive figure of 1,360 innovations and kept the pace, scoring a total of 474 innovations at year's end in 2023. This dominance is the result of “gaining better resources like raw materials, skilled labour and technological base as well as innovation hubs (for instance Yashnobod Technopark)” [8].

Other areas where there was significant activity were Navoiy, Samarqand and Surxandaryo. Navoiy introduced 408 innovations in 2021, thanks to its mining and industrial base, but this figure dropped to 147 in 2023. In the same vein, Samarqand's innovations also showed constant growth, ascending to 340 in 2023 from a mere 14 in 2019. In 2023 innovation activity in Surxandaryo made a come-back with 276 innovations including diversification and modernization of region's economic base. On the other hand, some regions faced challenges in sustaining innovation. For instance, Sirdaryo experienced a decline from 177 innovations in 2019 to just 27 in 2023. Similarly, Andijon's innovation numbers peaked at 252 in 2022 but fell to 65 in 2023, indicating volatility in innovation efforts. To better understand the changes in the cross-section of regions, the following diagram 1 was used [9].

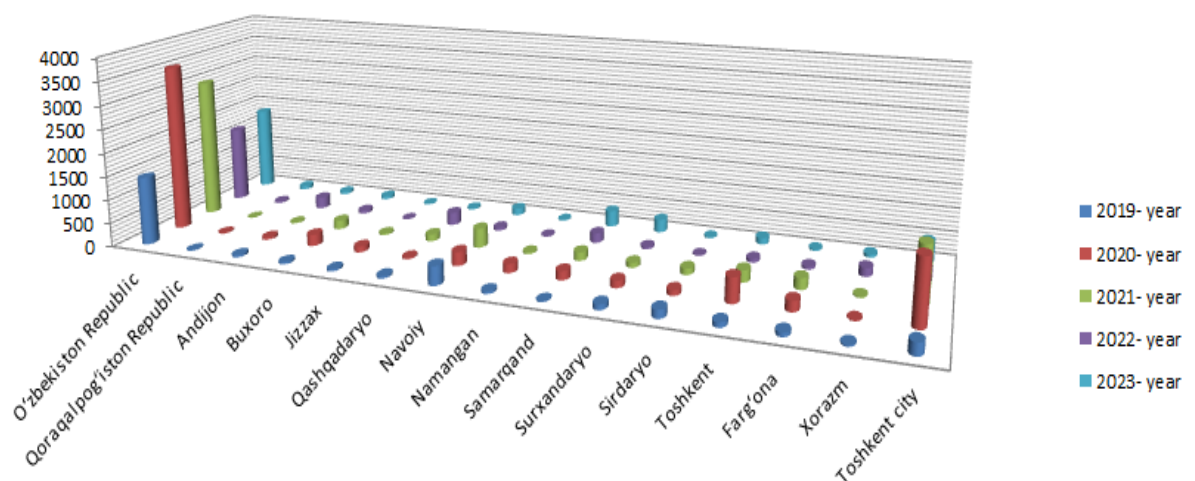


Figure 1. Results of diagram 1

The data emphasizes the importance of local economic and institutional context in shaping innovation. Although the national setting is conducive to innovation, inequitable distribution of resources and infrastructure among regions indicates that some areas should be targeted for special interventions [10]. Greater innovation capacity among the underperforming regions might create a balance between the disparity of development across regions and accelerate Uzbekistan's socio-economic growth by investing in technology, learning, and finance. This study reveals that promoting regional innovation matters for developing small companies and micro-businesses in this country [11].

4. Discussion

The innovative activities of small businesses and micro-firms in Uzbekistan demonstrate a dynamic but uneven pattern across regions and industries, reflecting both progress and persistent challenges. The significant increase in innovations between 2019 and 2020, fueled by government initiatives such as tax benefits, grants, and innovation hubs, highlights the effectiveness of policy-driven support [12], [13]. However, the subsequent decline in innovation activity, as seen in the national total of 1,815 innovations by 2023, suggests a need for sustained efforts to maintain momentum.

Regional disparities remain a critical concern. Tashkent City and regions like Navoiy and Samarqand have emerged as innovation leaders due to better access to resources, infrastructure, and skilled labor [14]. In contrast, regions such as Sirdaryo and Jizzax lag behind, underlining the need for targeted investments and support mechanisms to foster innovation in underperforming areas.

Moreover, while sectors like textiles, agriculture, and IT services have benefited significantly from innovation, others face barriers such as limited financing and inadequate workforce training [15]. Only 34% of small businesses engaged in research and development activities in 2023, indicating room for improvement in fostering a culture of innovation.

To bridge these gaps, the government must focus on enhancing access to financing, improving infrastructure, and promoting regional innovation ecosystems. Collaboration with international partners can further accelerate progress.

5. Conclusion

The invention activity of small business and micro-enterprises in the Republic of Uzbekistan is an important factor in the economic development, increasing labor productivity and other indicators, attracting competition within industries. The improvement in 2019–2023 illustrates how government policies including tax relief, innovation hubs and grant funding can help to drive innovation. These numbers put the significance of small business to Uzbekistan's developing industrial sector and growing economy at 31.4% of industrial production by 2023, generating \$5.8 billion in exports in 2022.

Despite these achievements, challenges remain. Regional divides in innovation, restricted financing opportunities, and poor R&D involvement prevent potential from being realized. It is evident from the data that a mere 34% of SMMEs are engaged in research and development, which implies targeted interventions to fill these gaps.

To support and boost innovation, Uzbekistan needs to invest in technology infrastructure; broaden financial access; and promote cooperation among companies, educational institutions, and government. The development of regional innovation ecosystems will also be the key to balanced growth.

The innovation capability of small business and micro-firms is solid, but targeted interventions will be critical in overcoming challenges so the two lagging sectors can realize their potential and grow following national strategic plans.

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