

MUHANDISLIK

& IQTISODIYOT

*ijtimoiy-iqtisodiy, innovatsion texnik,
fan va ta'limga oid ilmiy-amaliy jurnal*

2026-YIL
IYUN/6-SON, III-QISM



Milliy nashrlar

OAK: <https://oak.uz/pages/4802>

05.00.00 – Texnika fanlari

08.00.00 – Iqtisodiyot fanlar



Google
Scholar

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INTERNATIONAL CENTRE

OpenAIRE



ISSN: 3060-463X

РЭУ.РФ
РОССИЙСКИЙ ЭКОНОМИЧЕСКИЙ УНИВЕРСИТЕТ
ИМЕНИ Г.В. ПЛЕХАНОВА
ТАШКЕНТСКИЙ ФИЛИАЛ



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Elektron nashr, 2026-yil, iyun.

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- 05.01.00 – Axborot texnologiyalari, boshqaruv va kompyuter grafikasi
05.01.01 – Muhandislik geometriyasi va kompyuter grafikasi. Audio va video texnologiyalari
05.01.02 – Tizimli tahlil, boshqaruv va axborotni qayta ishlash
05.01.03 – Informatikaning nazariy asoslari
05.01.04 – Hisoblash mashinalari, majmualari va kompyuter tarmoqlarining matematik va dasturiy ta'minoti
05.01.05 – Axborotlarni himoyalash usullari va tizimlari. Axborot xavfsizligi
05.01.06 – Hisoblash texnikasi va boshqaruv tizimlarining elementlari va qurilmalari
05.01.07 – Matematik modellashtirish
05.01.11 – Raqamli texnologiyalar va sun'iy intellekt
05.02.00 – Mashinasozlik va mashinashunoslik
05.02.08 – Yer usti majmualari va uchish apparatlari
05.03.02 – Metrologiya va metrologiya ta'minoti
05.04.01 – Telekommunikatsiya va kompyuter tizimlari, telekommunikatsiya tarmoqlari va qurilmalari. Axborotlarni taqsimlash
05.05.03 – Yorug'lik texnikasi. Maxsus yoritish texnologiyasi
05.05.05 – Issiqlik texnikasining nazariy asoslari
05.05.06 – Qayta tiklanadigan energiya turlari asosidagi energiya qurilmalari
05.06.01 – To'qimachilik va yengil sanoat ishlab chiqarishlari materialshunosligi
05.08.03 – Temir yo'l transportini ishlatish
05.08.06 – "G'ildirakli va gusenisali mashinalar va ularni ishlatish" (texnika fanlari)
05.09.01 – Qurilish konstruksiyalari, bino va inshootlar
05.09.04 – Suv ta'minoti. Kanalizatsiya. Suv havzalarini muhofazalovchi qurilish tizimlari
10.00.06 – Qiyosiy adabiyotshunoslik, chog'ishtirma tilshunoslik va tarjimashunoslik
10.00.04 – Yevropa, Amerika va Avstraliya xalqlari tili va adabiyoti
08.00.01 – Iqtisodiyot nazariyasi
08.00.02 – Makroiqtisodiyot
08.00.03 – Sanoat iqtisodiyoti
08.00.04 – Qishloq xo'jaligi iqtisodiyoti
08.00.05 – Xizmat ko'rsatish tarmoqlari iqtisodiyoti
08.00.06 – Ekonometrika va statistika
08.00.07 – Moliya, pul muomalasi va kredit
08.00.08 – Buxgalteriya hisobi, iqtisodiy tahlil va audit
08.00.09 – Jahon iqtisodiyoti
08.00.10 – Demografiya. Mehnat iqtisodiyoti
08.00.11 – Marketing
08.00.12 – Mintaqaviy iqtisodiyot
08.00.13 – Menejment
08.00.14 – Iqtisodiyotda axborot tizimlari va texnologiyalari
08.00.15 – Tadbirkorlik va kichik biznes iqtisodiyoti
08.00.16 – Raqamli iqtisodiyot va xalqaro raqamli integratsiya
08.00.17 – Turizm va mehmonxona faoliyati

Ma'lumot uchun, OAK
Rayosatining 2024-yil 28-avgustdagi 360/5-son qarori bilan "Dissertatsiyalar asosiy ilmiy natijalarini chop etishga tavsiya etilgan milliy ilmiy nashrlar ro'yxati"ga texnika va iqtisodiyot fanlari bo'yicha "Muhandislik va iqtisodiyot" jurnali ro'yxatga kiritilgan.

Muassis: "Tadbirkor va ishbilarmon" MChJ

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DIGITAL ECONOMY IN THE CONDITIONS OF CURRENT LEVEL AND DYNAMICS OF WOMEN'S ENTREPRENEURSHIP DEVELOPMENT

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Abstract. This article examines the current state and development trends of women's entrepreneurship in the Republic of Uzbekistan. Particular attention is given to statistical data on vocational and entrepreneurship training courses organized for women in the Samarkand region. The study identifies key factors influencing women's participation in entrepreneurial activities and highlights opportunities for further strengthening female entrepreneurship. The findings contribute to a better understanding of regional entrepreneurship development and provide practical insights for enhancing women's economic participation and business activity.

Keywords: women's entrepreneurship, female entrepreneurs, Samarkand region, vocational training, entrepreneurship courses, women's economic participation, business development, Uzbekistan.

Annotatsiya. Ushbu maqolada O'zbekiston Respublikasida xotin-qizlar tadbirkorligining hozirgi holati va rivojlanish tendensiyalari tahlil qilingan. Xususan, Samarqand viloyatida xotin-qizlar uchun tashkil etilgan kasb-hunar va tadbirkorlikka o'qitish kurslari bo'yicha statistik ma'lumotlar keltirilgan. Tadqiqot natijalarida xotin-qizlarning tadbirkorlik faoliyatidagi ishtirokiga ta'sir etuvchi omillar yoritilib, ayollar tadbirkorligini yanada rivojlantirish imkoniyatlari ko'rsatib berilgan. Olingan natijalar hududlarda tadbirkorlikni rivojlantirish hamda xotin-qizlarning iqtisodiy faolligini oshirish bo'yicha amaliy tavsiyalar ishlab chiqishga xizmat qiladi.

Kalit so'zlar: xotin-qizlar tadbirkorligi, ayol tadbirkorlar, Samarqand viloyati, kasb-hunar ta'limi, tadbirkorlik kurslari, iqtisodiy faollik, biznesni rivojlantirish, O'zbekiston.

Аннотация. В данной статье рассматриваются современное состояние и тенденции развития женского предпринимательства в Республике Узбекистан. Особое внимание уделено статистическим данным о курсах профессионального обучения и предпринимательства, организованных для женщин в Самаркандской области. В ходе исследования выявлены основные факторы, влияющие на участие женщин в предпринимательской деятельности, а также определены возможности дальнейшего развития женского предпринимательства. Полученные результаты способствуют более глубокому пониманию региональных особенностей предпринимательской деятельности и могут быть использованы при разработке практических рекомендаций по повышению экономической активности женщин.

Ключевые слова: женское предпринимательство, женщины-предприниматели, Самаркандская область, профессиональное обучение, курсы предпринимательства, экономическая активность женщин, развитие бизнеса, Узбекистан.

INTRODUCTION

Supporting women's entrepreneurship has a direct positive impact on employment, family income, and the development of small and medium-sized enterprises in the regions. Expanding access to affordable credit resources, guarantee mechanisms, and infrastructure support for women entrepreneurs contributes to the creation of new jobs, the growth of small businesses, and the strengthening of regional economic activity.

In particular, in 2024, approximately 5.2 million people in Uzbekistan were engaged in entrepreneurial activity, of whom 2.1 million were women. Small and medium-sized enterprises (SMEs) account for approximately 89% of all registered businesses in the country. As of 01.01.2025, small businesses and micro-firms operating in Uzbekistan generated more than 55% of the country's gross domestic product (GDP) [1].

According to official statistics, 92% of women in Uzbekistan use the Internet [2], indicating a high

level of digital accessibility and creating favorable conditions for expanding women's participation in digital entrepreneurship. At the same time, reports prepared within the framework of the UNDP project "Trade Development Assistance in Central Asia - Phase V".

During January-March 2025, the share of information and communication technology (ICT) services in the national economy reached 3.2%. Of the gross value added generated in the sector, 45.7% was attributed to computer programming, consulting, and related services; 35.4% to communication services; 10.0% to data storage, data processing services, and web portals; 5.8% to software publishing; and 3.1% to the repair of computers and communication equipment.

The gross value added of ICT services amounted to 10 billion soums in January-March 2025, accounting for 3.2% of GDP, compared with 7 billion soums and 2.6% of GDP during the same period in 2024. In addition, income generated by small entrepreneurship has consistently accounted for approximately 54% of the total income structure since 2021, demonstrating the significant contribution of entrepreneurial activity to the country's economic development.

LITERATURE REVIEW

The relationship between digital technologies and women's entrepreneurship has attracted growing attention in academic research. Numerous studies demonstrate that digital platforms act as equalizing mechanisms, enabling women entrepreneurs to overcome socio-cultural and institutional barriers. Research conducted in developing countries confirms that access to online markets, e-commerce platforms, and digital financial services significantly expands economic opportunities for women and strengthens their participation in entrepreneurial activities.

At the national level, scholars have emphasized that the digitalization of women's entrepreneurship generates substantial socio-economic benefits, including poverty reduction, job creation, increased household income, and sustainable economic growth. These positive effects are particularly evident in developing regions, such as Central Asia and the Middle East and North Africa (MENA). Furthermore, the institutional framework supporting women entrepreneurs, including microfinance mechanisms, preferential lending programs, and targeted government initiatives, has been identified as a key factor in promoting female business development and economic inclusion.

Furthermore, Rakhmonova (2023) emphasizes that the development of women's entrepreneurship is closely linked to access to education, professional skills, and financial resources. Her research indicates that improving business knowledge and managerial competencies significantly enhances the sustainability and competitiveness of women-owned enterprises. In addition, recent studies highlight that digital technologies improve market accessibility, reduce transaction costs, and facilitate more effective communication with customers and business partners. The integration of digital tools into entrepreneurial activities enables women to overcome geographical and social constraints, thereby improving business performance, increasing competitiveness, and strengthening long-term economic empowerment in both urban and rural areas.

RESEARCH METHODOLOGY

This study employs a descriptive-analytical research methodology to examine the current state and development trends of women's entrepreneurship. Statistical data were collected from official and reliable sources, including the State Statistics Committee of the Republic of Uzbekistan (stat.uz), the Gender Statistics Portal (gender.stat.uz), the Samarkand Regional Administration database (gsbe.uz), and reports published by international organizations, particularly the United Nations Development Programme (UNDP).

A comparative analysis was conducted to assess changes in key indicators of women's entrepreneurship in the Samarkand region during 2023-2024. Furthermore, data related to the regional distribution of women-led enterprises, employment generation, and lending programs were systematically collected, classified, and analyzed. The application of these analytical approaches made it possible to identify major development trends, evaluate existing support mechanisms, and determine the factors influencing the growth and sustainability of women's entrepreneurial activity.

ANALYSIS AND RESULTS

Supporting women's entrepreneurship has a direct and positive impact on employment generation, household income growth, and the development of small and medium-sized enterprises in the regions. Expanding access to affordable credit resources, guarantee mechanisms, and infrastructure support for women



entrepreneurs contributes to the creation of new jobs, the growth of small businesses, and the strengthening of regional economic activity.

In particular, in 2024, approximately 5.2 million people in Uzbekistan were engaged in entrepreneurial activities, of whom 2.1 million were women. Small and medium-sized enterprises (SMEs) account for approximately 89% of all registered businesses in the country. As of 01.01.2025, small businesses and micro-firms generated more than 55% of Uzbekistan's gross domestic product (GDP), highlighting their significant contribution to national economic development¹.

According to official statistics, 92% of women in Uzbekistan use the Internet, indicating a high level of digital accessibility and creating favorable conditions for the expansion of women's participation in digital entrepreneurship². At the same time, reports prepared within the framework of the UNDP project "Trade Development Assistance in Central Asia - Phase V", financed by the Government of Finland, identify a number of challenges faced by women entrepreneurs across different regions of the country.

During January-March 2025, the share of information and communication technology (ICT) services in the national economy reached 3.2%. Of the gross value added generated in the sector, 45.7% was attributed to computer programming, consulting, and related services; 35.4% to communication services; 10.0% to data storage, data processing services, and web portals; 5.8% to software publishing; and 3.1% to the repair of computers and communication equipment.

The gross value added of ICT services amounted to 10 billion soums during January-March 2025, accounting for 3.2% of GDP. During the corresponding period of 2024, this figure stood at 7 billion soums, representing 2.6% of GDP. Furthermore, income generated by small entrepreneurship has consistently accounted for approximately 54% of the total income structure since 2021, demonstrating the substantial role of entrepreneurial activity in the country's sustainable economic growth (Figure 1).

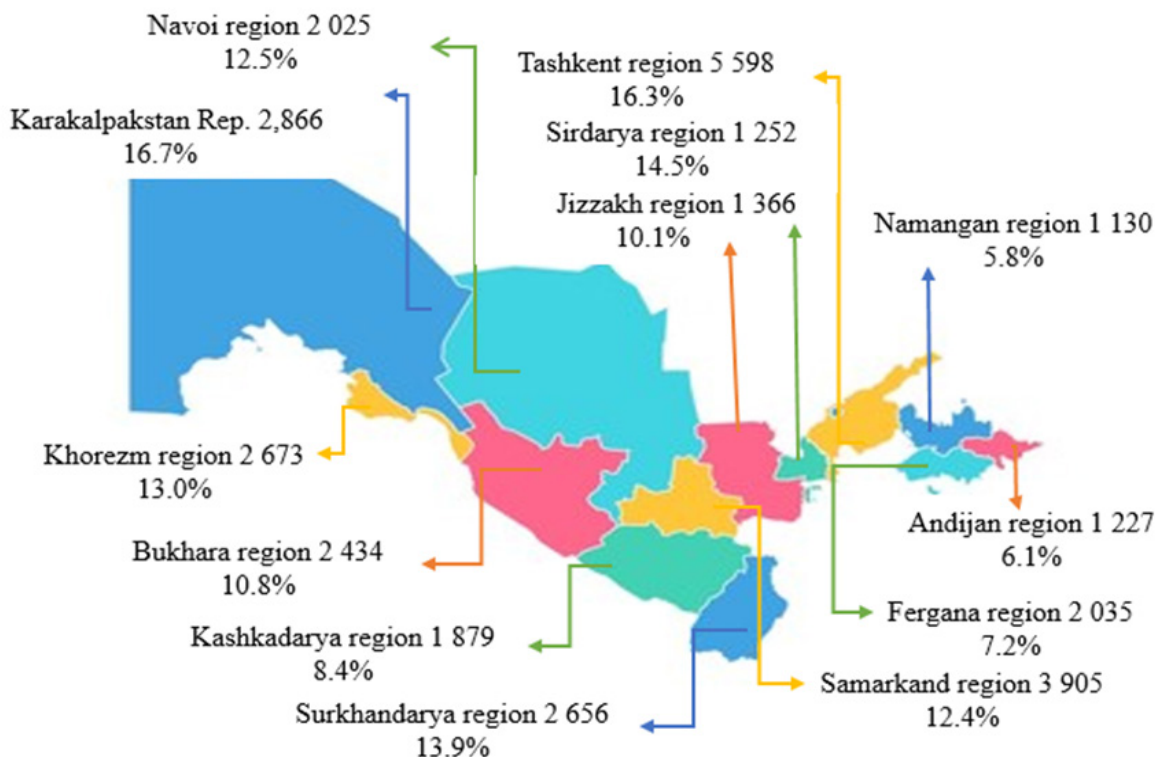


Figure 1. Number of small enterprises and micro-firms led by women entrepreneurs and their share in the total number of small enterprises and micro-firms (2025)³.

The net revenue generated from product sales by small enterprises and micro-firms managed by women amounted to 47.7 trillion soums, representing an increase of nearly 10.1 trillion soums compared to the corresponding period of the previous year. This growth reflects the increasing contribution of women-led businesses to economic activity and highlights the strengthening role of female entrepreneurship in the

1 Central Bank of the Republic of Uzbekistan. "Charter of the Women Entrepreneurs Finance Code: National Charter of the Republic of Uzbekistan"-2025 p-3.

2 Gender Statistics Portal of Uzbekistan. (2025). Unemployment rate among women. Retrieved from <https://gender.stat.uz>.

3 Compiled by the author based on data from <https://gender.stat.uz>.

development of the national economy⁴.

As of 01.01.2025, the share of officially unemployed women in Uzbekistan stood at 7.3%. Although this figure indicates the existence of employment challenges, ongoing government support programs, entrepreneurial initiatives, and expanding access to financial resources continue to create favorable opportunities for increasing women's economic participation and reducing unemployment levels (Figure 2) .

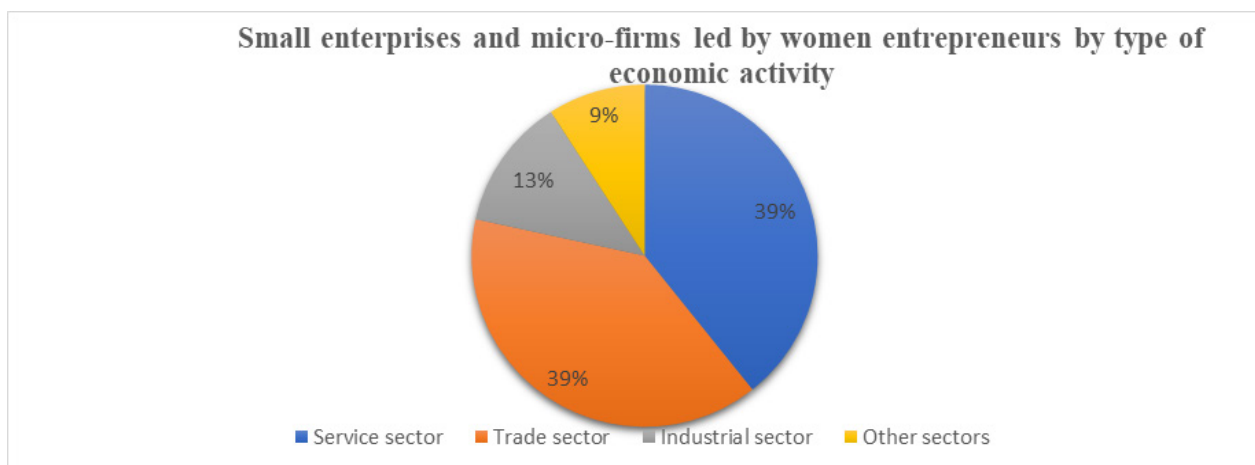


Figure 2. Distribution of Small Enterprises and Micro-Firms Led by Women Entrepreneurs by Economic Activity in Uzbekistan (2025)

According to the National Statistics Committee, as of 01.01.2025, the number of small enterprises and micro-firms led by women entrepreneurs in Uzbekistan reached 43,860. By type of economic activity, these enterprises were distributed as follows: 17,239 in the service sector, 17,161 in trade, 5,464 in industry, and 3,996 in other sectors. These figures demonstrate the growing contribution of women entrepreneurs to various sectors of the national economy, particularly in services and trade.

Maintaining a balance between work and family responsibilities, as well as improving access to financial resources, remains an important factor in supporting women's entrepreneurial activity. In recent years, a number of measures have been implemented to expand financial inclusion and strengthen institutional support for women entrepreneurs⁵.

In particular, the Hamroh organization provides comprehensive assistance to women entrepreneurs through professional training, business establishment and formalization, employment support, and access to new markets. The organization also offers financial assistance to women seeking to expand their businesses and develop long-term growth strategies.

Furthermore, within the framework of the Hamroh initiative, several commercial banks have introduced specialized lending programs for women entrepreneurs. These include Uzmilliybank in the service sector, Turonbank in lemon cultivation, Mikrokreditbank in poultry farming, and Sanoat Qurilish Bank in vegetable and seedling production. In addition, Xalq Banki and other commercial banks provide targeted "Hamroh" loans aimed at supporting the establishment, expansion, and sustainable development of women-owned businesses (Figure 3).

4 State Statistics Committee of the Republic of Uzbekistan. (2025). Women-led enterprises: Share of economic activity. Retrieved from <https://stat.uz/uz/matbuot-markazi/qo-mita-yangiliklar/63388>.

5 Hamroh Organization. (2025). About us. Retrieved from <https://www.hamrohingiz.uz/biz-haqimizda>.

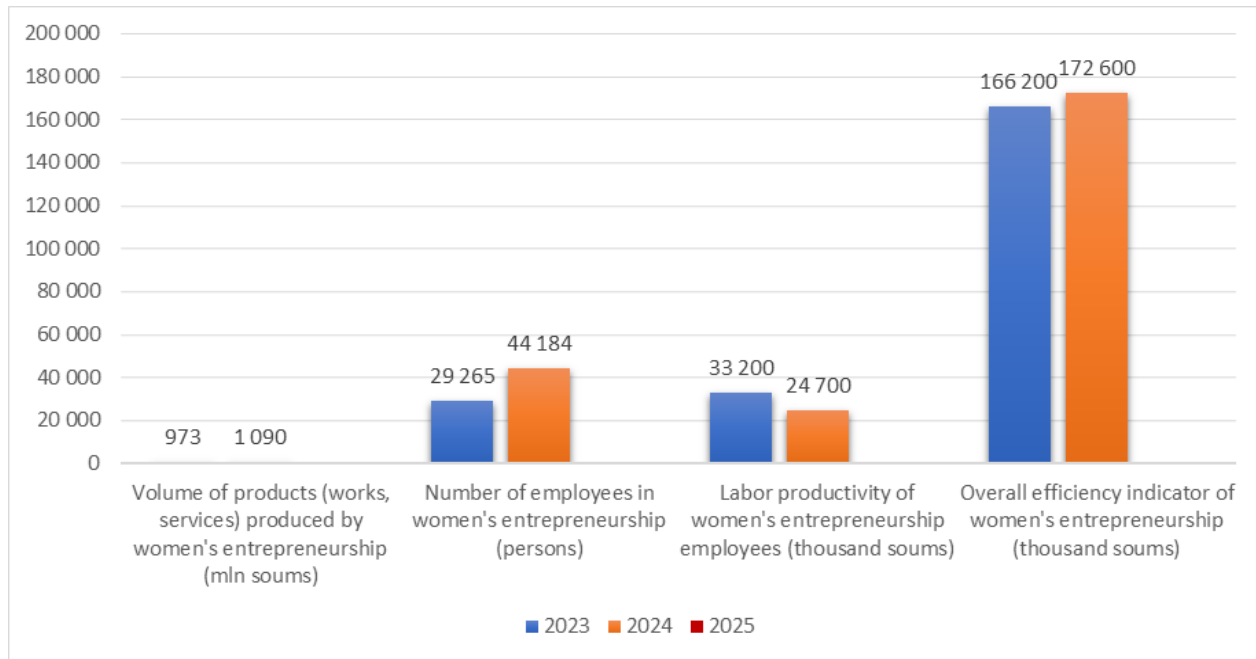


Figure 3. Indicators related to women entrepreneurs in Samarkand region in 2023-2024⁶.

As can be seen from the data presented in the table, the volume of products and services generated by women's entrepreneurship increased from 972.8 million soums in 2023 to 1,089.6 million soums in 2024, representing a growth rate of approximately 12%. Positive changes were also observed in the number of women entrepreneurs, which increased from 5,853 to 6,312 during the same period. In the Samarkand region, women-led enterprises demonstrated significant business expansion, as the average number of employees per enterprise increased from 5 in 2023 to 7 in 2024⁷. Furthermore, preferential loans totaling 468.9 billion soums were allocated to 28,143 women entrepreneurs in 2024, while by the end of 2025 nearly 34,000 women had received concessional loans amounting to 934 billion soums⁸.

According to official data from the Samarkand Regional Administration, by the end of 2024 employment opportunities had been created for 50,297 previously unemployed women, including 20,531 women who obtained permanent employment and 7,155 women who participated in public works programs. In addition, 28,143 women seeking to establish or expand entrepreneurial activities received credit resources totaling 468.9 billion soums⁹. To further support women's economic initiatives, an additional USD 200 million was allocated for women-oriented projects through regional financial institutions, including Xalq Banki, the Business Development Bank, and Mikrokreditbank¹⁰.

A notable example of targeted financial support can be observed in the Past Dargom district of the Samarkand region, where the "First Step into Business" microloan program has been introduced for individuals wishing to establish new businesses. This simplified microloan is provided at an annual interest rate of 28% for a period of up to 36 months and ranges from 2.5 million soums to an amount equivalent to 35 times the base calculation value. The loan is secured through a third-party guarantee and a credit repayment insurance policy and is primarily utilized by small business entities. According to the May 2026 report, Mikrokreditbank allocated 450 million soums in credit resources to 23 women-owned small businesses operating across 22 mahallas of the district.

In addition, the "My Mahalla" microloan program, including the "Istiqbolli Ayol" loan designed to support women's entrepreneurship and self-employment, was provided to 159 women residing in the same 22 mahallas, with total financing amounting to 4.5045 billion soums. The "Istiqbolli Ayol" loan is intended for self-employed

6 Graduate School of Business and Entrepreneurship under the Cabinet of Ministers of the Republic of Uzbekistan. (2025). Samarkand Region. Retrieved from <https://gsbe.uz/uz/general-info/samarkand-region>.

7 Rakhmonova, Aziza Tolibovna. PhD dissertation abstract on the topic: "Ways of Developing Women's Entrepreneurship in the Service Sector". Specialization:08.00.05-Economics of Service Industries. <https://api.ziyonet.uz/uploads/books/10010133/aoMzgXE81wQWU9G.pdf>.

8 Official Portal of the Government of the Republic of Uzbekistan. (2025). Samarkand region news. Retrieved from <https://gov.uz/oz/samarqand/news/view/141582>.

9 Samarkand Regional Administration. (2025). Statistical data on women's entrepreneurship and employment. Retrieved from https://samarkand.uz/uploads/news_foto/2022/05/Samarqand-Malumot_compressed.pdf.

10 Official Portal of the Government of the Republic of Uzbekistan. (2025). Women's projects funding in Samarkand region. Retrieved from <https://gov.uz/oz/samarqand/news/view/141582>.



women and citizens aged 18-65 and may be used for establishing or expanding a business. The loan amount can reach up to 50 million soums with a repayment period of up to 60 months and a grace period of up to six months. The grace period is applicable to loans issued for a term of three years or longer. These support mechanisms play an important role in strengthening women's entrepreneurial capacity, expanding employment opportunities, and promoting inclusive regional economic development.

CONCLUSIONS AND RECOMMENDATIONS

The findings of this study indicate that women's entrepreneurship has become an increasingly important component of Uzbekistan's socio-economic development. The growing number of women-led enterprises, expanding access to financial resources, and the increasing use of digital technologies demonstrate the positive impact of government support measures and institutional initiatives. The results also show that digitalization creates new opportunities for women entrepreneurs by improving access to markets, financial services, and business information.

To further strengthen women's entrepreneurship, it is recommended to expand digital literacy and business training programs, increase access to affordable financing, and promote the adoption of e-commerce and digital financial technologies. In addition, strengthening cooperation between government institutions, commercial banks, and support organizations can enhance the sustainability and competitiveness of women-owned businesses. These measures will contribute to employment growth, poverty reduction, and inclusive economic development.

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