



**DIGITAL TRANSFORMATION IN UZBEKISTAN AND NEW
OPPORTUNITIES FOR SMALL BUSINESS**

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Abstract

This article analyzes the impact of digital transformation on small businesses in Uzbekistan and its role in expanding their opportunities. The development of digital technologies and e-commerce plays a significant role in making the small business sector in Uzbekistan more efficient and competitive. The paper discusses the economic and social consequences of digital transformation processes, as well as the new opportunities created for small businesses. It also provides a detailed analysis of Uzbekistan's transition to a digital economy, the state policy for creating additional opportunities, and the growth potential of digital infrastructure and e-commerce.

Keywords

Digital Transformation, Small Business, E-commerce, Digital Economy, Innovative Technologies, Digital Marketing, Online Sales, Digital Transformation in Uzbekistan, Business Models.

1. Introduction

The Presidential Decree of the Republic of Uzbekistan No. PF-5853 dated October 5, 2020, titled "Approval of the Digital Uzbekistan 2030 Strategy and Measures for Its Effective Implementation" places a high priority on the "rapid development of digital technologies and their impact on business practices, and the emergence of new digital services or products" with a focus on improving the legislative framework [1]. Moreover, the new development strategy of Uzbekistan for 2022-2026 outlines the goal of making the "digital economy the main driver of the sector, increasing its volume by at least 2.5 times." Research on the use of digital marketing strategies to ensure the effective operation of small business entities in virtual markets is required under the limited financial, innovative potential, and investment attraction opportunities of small businesses.

2. Literature Review



The topic of digital transformation and new opportunities for small businesses in Uzbekistan has gained significant attention in recent years. The introduction of digital technologies is transforming all sectors of the economy, particularly small business and entrepreneurship. Many studies show how digital transformation positively influences business processes, with a specific focus on increasing the competitiveness of small businesses.

For example, the "Digital Economy" strategy of the President of Uzbekistan, Shavkat Mirziyoyev, in 2017 was one of the key stages in the country's implementation of digital transformation. Additionally, the "Digital Uzbekistan 2030" strategy, adopted in 2020, is a major initiative aimed at widespread integration of digital technologies in the country. This strategy includes initiatives to improve digital infrastructure, internet access, and online service quality (D'Emidio, 2021) [2]. At the same time, the government's transition to a digital economy involves creating privileges and support mechanisms for small businesses.

Several researchers, such as G. Satarov (2019) [3] and I. Ismailov (2022) [4], have thoroughly studied the digital transformation processes in Uzbekistan and concluded that the development of digital infrastructure creates new opportunities for small and medium-sized businesses. They highlight that the adoption of digital technologies leads to the creation of new services and products in small businesses and increases their competitiveness. Another important aspect is the expansion of digital marketing and online sales, which allows small businesses to adapt to market demands and present their products on a global scale.

Digital technologies, particularly automation and data analytics, offer small businesses the opportunity to increase operational efficiency and profitability (Hughes, 2020) [5]. Technologies such as ERP (Enterprise Resource Planning) systems, CRM (Customer Relationship Management) systems, and analytics powered by artificial intelligence help small businesses manage their resources effectively and strengthen customer relationships.

However, the impact of digital transformation on small businesses in Uzbekistan also faces some challenges. Numerous studies, including research by T. Karimova (2021) [6], warn that transitioning to digital technologies requires high investments and complex infrastructure, which could hinder the development of small and medium-sized businesses. Additionally, the lack of qualified personnel to adapt to these technologies presents a significant obstacle.

In conclusion, digital transformation creates new opportunities for Uzbekistan's small business sector. However, the successful implementation of this process requires close cooperation and resource allocation among the government,



entrepreneurs, and academic institutions. Additionally, investing in digital technologies, improving infrastructure, and training skilled personnel will contribute to the further development of small businesses.

Research Methodology

In the research process, methods such as statistical and economic analysis, comparison, selective observation, observation, induction and deduction, logical approaches, and the results of sociological surveys were used.

Analysis and Results

Important conditions for implementing digital transformation include the global development of the information society, the widespread application of promising new digital technologies (virtual reality, artificial intelligence, big data, machine learning, neural networks, robotics, and the Internet of Things), the formation of a digital education environment, and the significant increase in internet connectivity [7].

The main requirement for digital transformation is increasing the level of access to modern technologies and the internet for businesses and organizations.

Digital transformation should not be considered simply as the introduction of information technologies into state organizations, enterprises, and business structures. Furthermore, the development and launch of corporate websites, Telegram bots, mobile applications, and access to social networks should not be mistaken for organizations considering themselves digital. In fact, digital transformation involves a comprehensive change in existing business models, including direct structure, development strategy, customer relations, product promotion and service methods, and even corporate culture [8].

Due to the favorable conditions created in Uzbekistan, the number of companies engaged in computer hardware management in 2020 was 149, in 2021 it reached 198, in 2022 it increased to 243, in 2023 it reached 290, and in 2024 it stood at 269. The number of companies operating in web portals increased from 70 in 2020 to 137 by 2024, doubling in size.

The number of companies that assist with information and communication technologies in 2023 included 296 in wired communication services, 1223 in wireless communication services, 16 in satellite communication services, 188 in information agencies, 1602 in computer programming, 604 in data processing and placement, and 1694 in other related activities.

1-table

Number of Enterprises and Organizations by Economic Activity Type in the Information and Communication Sector

Klassifikator	2020 y	2021 y	2022 y	2023 y	2024 y
Computer Equipment Management Activities	149	198	243	290	269



Web Portals	70	97	109	128	137
Consulting Services in Computer Technologies	309	387	461	536	583
Computer Game Development	109	136	130	156	171
Wired Communication Services	457	463	362	386	296
Wireless Communication Services	1127	1382	1457	1588	1223
Satellite Communication Services	20	24	22	25	16
Information Agency Activities	188	175	171	197	188
Software Development Activities	710	896	1121	1618	1602
Data Hosting and Processing Services	396	510	628	704	604
Other Activities in Information Technologies and Computer Systems	1217	1433	1596	1993	1694

The volume of communication and information services amounted to 13,852.3 million UZS in 2020, and by 2023, it reached 35,261.9 million UZS. The number of subscribers connected to the internet through mobile communication in 2020 was 17,946.5 thousand people, in 2021 it was 20,991.9 thousand people, and in 2022 it reached 24,017.6 thousand people. By 2023, the number of such subscribers had increased to 27,087.3 thousand people. The number of legal entities connected to the internet was 739.7 thousand in 2020, and by 2023, this number increased to 1,894.3 thousand. The number of individuals connected to the internet was 19,241.3 thousand in 2020, and by 2023, this number increased to 28,166.7 thousand.

2-table

Indicators of internet network connectivity

	Classifier	2020 y	2021 y	2022 y	2023 y
1	Number of subscribers connected to internet through mobile communication	17946,5	20991,8	24017,6	27087,3
2	Number of legal entities connected to internet	739,7	875	1555,7	1894,3
3	Number of individual subscribers connected to the internet	19241,3	22112,1	25167,9	28166,7

The key reforms in the digital transformation of business entities are carried out by the Chamber of Commerce and Industry of the Republic of Uzbekistan in cooperation with various ministries and agencies. In Uzbekistan, the procedures for registering entrepreneurial activities, obtaining various permits, and many other services have been simplified, and the transition to digital platforms has been made. A system has been implemented through which the State Services Agency and its local centers constantly provide support to business entities.

The introduction of digital technologies was a priority task for large and medium-sized enterprises. However, today, we can observe that small business entities are also adopting modern information and communication technologies,



which helps to improve efficiency, open new markets, and fully realize innovative potential.

As a result of the digital transformation of business, e-commerce has developed, and its various forms have emerged. E-commerce refers to trade processes conducted in a virtual market. Its opportunities are vast and diverse. Products such as electronics, medicines, clothing, and food can be sold or purchased online. This service allows businesses to sell quality products while saving time and money. Both businesses and customers are utilizing this method. Therefore, this technology is rapidly developing, and some companies conduct their sales exclusively through the Internet.

Today, various management business models for e-commerce are widespread in almost all countries and industries, in businesses of all sizes, as well as in government institutions and various levels of legislative and executive authorities. These business models are typically classified based on the interaction between the seller (supplier) and the buyer (customer). According to this classification, the parties involved in e-commerce can be referred to as: Government, Business, Consumer, Partner, Employee, and Individual.

Business model names are based on the designation of the supplier and buyer. For example: Business to Business (B2B), Business to Consumer (B2C), Business to Partner (B2P), Business to Employee (B2E), Consumer to Business (C2B), Consumer to Consumer (C2C), Business to Government (B2G), Government to Person (G2P), Government to Business (G2B), and Person to Government (P2G).

In essence, e-commerce is a significant part of electronic business, utilizing the global information systems' capabilities to generate profit.

Currently, the increasing volume of e-commerce, along with the need to improve regulatory frameworks and technical infrastructure, has highlighted the importance of protecting consumer rights in this field. The UNCTAD (United Nations Conference on Trade and Development) has outlined four areas in the "Global Cyberlaw Monitoring Program" that require regulation in e-commerce:

1. Laws on electronic transactions;
2. Laws protecting data and privacy;
3. Laws on cybercrimes;
4. Laws protecting consumer rights.

According to UNCTAD, consumer protection laws in the field of e-commerce have been implemented in 56% of countries, are being developed in 6%, and do not exist in 9%. Data for 29 countries is unavailable, and the interpretation of consumer rights protection may differ across various national legislations.



Currently, there are many variations of e-commerce systems, classifications, and business models. It is appropriate to introduce the concept of a “virtual marketplace.” In general, a virtual marketplace is a space where contracts are made between sellers and buyers, and financial transactions occur. Virtual marketplaces exist in three forms:

- Buyer-driven;
- Supplier-driven (or seller-driven);
- Third-party-driven.

The creation of such e-commerce marketplaces is typically influenced by the level of involvement of buyers and sellers in the business activities. In the B2B sector, virtually all marketplace types and organizational models mentioned above are used.

The first type of marketplace in the B2B sector is the supplier-driven marketplace, which is organized in a catalog model. In these marketplaces, a company can directly engage in transactions with buyers for equipment, machinery, or other products without intermediaries. An example of such a marketplace is Ciseo or Dell Computer. These marketplaces are characterized by one seller dealing with multiple buyers. [10]

In the B2C sector, various types of virtual marketplaces exist:

- Web storefronts;
- E-commerce websites;
- Electronic sales chains;
- Online auction systems.

E-commerce websites are retail sites for small and medium-sized businesses. They are larger and more complex than web storefronts, designed for more extensive sales.

An online store has three parts:

- Virtual sales hall: It contains a display, catalog, product list, order documentation system, information about the store, and more.

- Virtual block: The section where the store managers work. It controls the inventory and updates product data, sets prices, discounts for dealers or regular customers, and manages stock levels.

- Database: It stores all the information about products, orders, and customers.

E-commerce websites can use all types of sales schemes:

Direct sales from the warehouse, order acceptance, sales with organizations and individuals, service sales, and data trading.

The price of e-commerce websites may be higher than web storefronts due to their complexity, structure, and tracking systems.



E-commerce systems are specialized systems used by large companies, corporations, holdings, and manufacturers to improve productivity in their supply and sales departments. These systems are integrated with the company's automated sales processes and can manage resources effectively, thereby improving business operations.

Discussion of Results

The development of digital transformation in Uzbekistan is creating significant opportunities for small businesses. By implementing digital technologies, small businesses can effectively manage their operations, improve the quality of products and services, and reach new markets and customers. Uzbekistan's strategies for transitioning to a digital economy, including the "Digital Uzbekistan 2030" program, are making notable changes to support and equip small businesses with digital technologies.

However, the process of digital transformation has not yet been fully implemented, and there are still some barriers for small businesses. These challenges are related to the investments needed for technological transitions, the shortage of highly skilled personnel, and infrastructure issues. Therefore, for the successful implementation of digital transformation, it is necessary for the government to provide additional support, develop education and training programs, and address the most significant barriers faced by small businesses.

In conclusion, digital transformation is becoming a crucial factor in the development of small businesses in Uzbekistan, and for its full success, collaboration from all sides, investment in technology, and effective resource management are necessary. The successful implementation of this process could greatly contribute to the economic development of Uzbekistan.

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