



# Directions For Improving Service Efficiency In Banks Through Digital Technologies

**To'rayev Azamat  
Shuxratovich**

Independent Researcher, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi

## ABSTRACT

The purpose of the article is to increase the efficiency of service provision in banks through digital technologies. Accordingly, this article considers the need to introduce an innovation mechanism in commercial banking. In addition, proposals are made to introduce an innovation mechanism in commercial banking through digital technologies.

### Keywords:

Innovation, efficiency, commercial banks, banking services, technologies, digital banking, digitization, digital technologies.

## Introduction

Digital technologies are at the center of global economic transformations today. Digital technologies and innovations are ensuring the rapid development of the banking service sector, increasing the economic importance of this sector. Digital technologies contribute to increasing the competitiveness of the banking service sector and the success of the national economy in the global market. Traditional banking services are giving way to innovative solutions such as digital platforms, mobile applications, internet banking, and services based on artificial intelligence.

This encourages commercial banks to adapt to the new technological environment and reconsider their activities. Increasing the efficiency of banks in the digital economy is an important factor not only for maintaining competitiveness, but also for solving urgent tasks such as adapting to customer needs, increasing the speed and quality of service provision, optimizing operating costs, managing risks, and ensuring system security.

This article analyzes the main directions of improving the efficiency of service provision in banks through digital technologies and the

integration of digital technologies into the activities of commercial banks, its impact on efficiency, and the successful implementation of digital transformation in the banking system. It also presents existing problems and practical proposals for their elimination.

In Uzbekistan, reforms are being carried out consistently to introduce digital technologies in the banking sector. Analytical reports and strategic documents published by the Central Bank of the Republic of Uzbekistan, the Ministry of Economy and Finance, and the Center for Economic Research and Reforms set out directions for the digital transformation of the national banking system, the development of electronic payment systems, credit ratings, and the fintech environment. At the same time, local scientists - Sh. Abdurazzokov, N. Sultanov, R. Mamatkulov, and others - have studied the digitalization of internal systems of commercial banks in their research, their impact on financial stability and the level of service.

Various methodologies are used in the scientific literature to measure the efficiency of banks. In particular, DEA (Data Envelopment Analysis), CAMELS system, analysis is carried out based on indicators such as ROI, ROA, net

interest margin. These methods allow for comparative analysis between banks, the level of resource utilization, risk management and profitability. In recent years, these methods have been combined with artificial intelligence and machine learning algorithms, which allows for a more in-depth analysis of efficiency.

The digital economy has become a powerful process that is fundamentally changing the activities of every industry and every organization. Especially for the financial sector, and in particular commercial banks, these changes have become not only inevitable, but also a vital necessity. Banks are now operating not as simple financial intermediaries, but as platforms that provide digital solutions, fast services, and adapt to customer needs.

Analysis shows that commercial banks that have implemented digital technologies are achieving significant gains in efficiency. First of all, the speed and quality of service have increased. For example, the number of transactions carried out through mobile applications has been surpassing traditional types of services in recent years. Now customers have the opportunity to carry out their financial transactions in a matter of minutes, without having to visit bank branches.

In addition, the reduction of operating costs is also one of the important results.

Digital systems, especially automated services (chatbots, AI-powered advisors, automatic credit rating systems), save banks a lot of money and time. At the same time, these technologies allow for targeted targeting of employee potential and reduction of repetitive work. Another important aspect is the development of customer experience. Real-time communication with customers through digital platforms, analysis of their behavior and provision of appropriate services are among the factors that increase the competitiveness of banks. Convenient interfaces, customized services and quick response capabilities are especially important for a young audience.

At the same time, some shortcomings and problems are also observed. Factors such as the underdevelopment of digital infrastructure, information security problems, and insufficient

digital literacy of employees are slowing down the transformation process of banks. In particular, for small and medium-sized banks, investing heavily in digital technologies can be a financial burden. This creates a digital divide among them.

The results show that digital technologies are a door to new opportunities for banks to grow. Their successful implementation depends on the internal management culture, strategic decisions and initiative of each bank. Banks that adapt to the digital economy will not only gain the trust of customers, but also be able to act as a stable financial support for the economy.

Therefore, the main task facing banks is to perceive digital transformation not only as a technological upgrade, but as a full-fledged strategic development path. Only then will they be able to strengthen their position and operate effectively in the digital economy of today and tomorrow. The digital economy is fundamentally changing the activities of commercial banks in Uzbekistan today. Statistical data shows that banks that have implemented digital technologies are significantly increasing their efficiency. As of July 1, 2024, total assets in the banking system amounted to 690.4 trillion soums, while the total volume of loans reached 493.9 trillion soums. State-owned banks still occupy the main part of the sector - they account for almost 70 percent of the volume of assets and loans.

The digital banking market is expanding rapidly. Their net interest income is expected to be \$117.5 million in 2025, growing to \$168.6 million by 2029. Traditional banks are still leading in terms of total volume, but their growth rate is lower than that of digital banks 9.45% versus 5.89%.

Leading the way in mobile banking services are Uzum Bank 53.9 points, Ipak Yuli Bank 51.5 points, and Agrobank 50.5 points. These banks were highly rated for their user interface, service quality, and technological capabilities.

Also, TBC Bank Uzbekistan increased its loan portfolio by 99% to \$460 million in 2024. This shows that digital banks are gaining customer trust.

Modernization of banking infrastructure is also ongoing - 33% of ATMs are already equipped with multi-function processing devices. This figure is expected to increase further by the end of 2024.

The process of digital transformation in the banking sector of Uzbekistan has been steadily progressing in recent years. Statistical analyses show that the introduction of digital technologies is leading to significant positive changes in all areas of banking activity. In particular, a reduction in operating costs, an

increase in the speed and quality of service provision, an increase in the number of services tailored to the needs of customers - all this indicates an increase in the efficiency of the bank.

The discussion highlights the dual impact of digital technologies. On the one hand, these innovations are providing a competitive advantage for banks. On the other hand, their successful implementation requires significant infrastructure, human capital, and regulatory frameworks.

**Table 1**  
**The impact of digital technologies on the activities of commercial banks**

No	Field of activity	Technologies used	Expected result
3.	Speed of service	Mobile applications, internet banking	24/7 service, time savings
4.	Cost reduction	RPA (robotic processes), AI	Reduction in labor and operating costs
5.	Customer communication	Chatbot, CRM systems, push notifications	Increased customer loyalty and trust
6.	Risk management	Big Data, AI, automatic scoring	Rapid identification and reduction of risks
7.	Credit process	Online lending platforms, e-survey	Simplified credit granting process
8.	Marketing and analytics	Big Data analytics, targeted advertising	Effective advertising, accurate segmentation
9.	Cybersecurity	Security firewalls, biometric authentication	Data security and reliability
10.	Human resource skills	E-learning systems, distance training	Formation of modern technical skills
11.	Banking infrastructure	Cloud technologies, IoT devices	Flexible and cost-effective infrastructure

Mobile banking, online lending, electronic payment systems, and artificial intelligence-based services - all of this is not only expanding the functional capabilities of banks, but also taking the culture of communication with customers to a new level.

However, for small and medium-sized banks, this process requires more resources and technical knowledge. Also, their digital infrastructure is not yet sufficiently developed compared to large banks. Another aspect that needs to be discussed is the issue of information security and digital trust. Along with the expansion of digital services, cyber risks are also

increasing. This requires banks to implement modern security systems and increase digital literacy among employees and customers.

Currently, reforms in the banking system of Uzbekistan are aimed at gradually reducing the state's share, creating a healthy competitive environment among banks, and expanding cooperation with fintech companies. These reforms are important steps towards creating a banking system that is adaptable to the digital economy.

In conclusion, the review of the literature shows that the introduction of digital technologies is not only a technological

innovation for the banking system, but also a source of strategic advantage. Scientific research and international experience in this area play an important role in shaping the future development strategies of commercial banks. Therefore, a thorough analysis of literary sources in this area makes it possible to develop scientifically sound and practically effective proposals.

## References

1. Central Bank of the Republic of Uzbekistan, 2024. Main indicators of the banking system (as of July 1, 2024). [online] Available at: <https://www.cbu.uz> [Accessed 26 Mar. 2025].
2. Center for Economic Research and Reforms, 2023. Digital Transformation of Commercial Banks: Analytical Review. Tashkent: ITIM.
3. Sultanov, N., 2022. Ways to improve the efficiency of digital services in commercial banks. Economics and Innovation, [online] (4), pp.112–118.
4. Mamatkulov, R., 2023. Priority areas of the banking system in the digital economy. Journal of Financial Research, [online] (2), pp.55–62.
5. Abdurazzoqov, Sh., 2021. The role of fintech technologies in the digitalization of banking activities. Bank and Market, (3), pp.45–50.
6. Islamov, B., 2020. The role of digital services in ensuring financial stability. Proceedings of the Scientific and Practical Conference. Tashkent: TSIU.
7. McKinsey & Company, 2023. Digital Banking in Emerging Markets: Strategic Insights. [online] Available at: <https://www.mckinsey.com> [Accessed 26 Mar. 2025].
8. World Bank, 2022. Digital Financial Services: Challenges and Opportunities. [online] Available at: <https://www.worldbank.org> [Accessed 26 Mar. 2025].