

Digitalization Processes in the Banking System and their Advantages

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Abstract: In this article, the essence of technological modernization processes in the banking system today, their role in the economy, and their impact on the efficiency of financial services are analyzed. In recent years, as a result of the rapid development of digital technologies, banks have been carrying out large-scale reforms aimed at automating their operations, providing customers with convenient and fast services, and improving security. Moreover, digital transformation not only strengthens the competitiveness of banks but also contributes to the development of remote services (mobile applications, internet banking, electronic payment systems), thereby creating more convenient opportunities for the population.

Keywords: Banking system, digital transformation, financial technology, e-banking services, fintech innovations, cybersecurity, operational efficiency



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INTRODUCTION.

In recent years, digitalization process in the banking sector has emerged not merely as the process of converting operations into electronic form, but as a broader and more strategic transformation. Technological modernization refers to the reorganization of banks' internal processes, customer interactions, product and service delivery methods, as well as control and security systems through the use of information and communication technologies. This process is not simply a shift "from paper to digital," but rather a fundamental change in the business model, the way value is delivered to customers, and the mechanisms of decision-making within banks. Digital transformation consists of several stages: converting existing processes into electronic form (digitization), automating and optimizing these processes (automation), and expanding the market and increasing competitiveness through new digital products and services (transformation).

Today, mobile banking applications, online services, cloud-based solutions, API ecosystems, big data analytics, and artificial intelligence–based decision-making tools represent the core elements of digitalization. The transition of the banking system to digital technologies today creates convenient opportunities not only for bank employees and service providers but also for customers who use these services. Currently, there are many driving factors behind digitalization, including the growing demand from customers for faster and more convenient services, the establishment of new standards in the market by fintech companies, the need to improve efficiency and reduce costs, as well as the tightening requirements for information security and transparency imposed by regulatory authorities. For these reasons, banks are adopting digital transformation as a strategic priority, renewing both their internal processes and the customer experience.

REVIEW OF RELATED LITERATURE.

We can also observe the opinions of several foreign scholars regarding the banking system’s transition to digital transformation. According to the article *Digital Transformation in Banking and Its Impact on Customer Experience: A Literature Review on Satisfaction and Loyalty*, the authors found that the implementation of digital technologies by banks has a positive impact on customer satisfaction and loyalty, emphasizing that these processes create convenient opportunities for customers.[1]

- Through mobile banking applications, artificial intelligence, and online services, customers’ engagement and the process of using digital services are becoming increasingly easier.
- Furthermore, from the perspective of customer experience, aspects such as “speed,” “convenience,” and “personalized service” remain important.
- However, customer expectations regarding the quality of digital services are also rising, which means that banks need to ensure high-quality digital interfaces and reliability.

The importance of digital transformation in the business world is uncontested. Companies are aware the digitalization contributes to increasing short-term profits, but the main goal of digital strategy is instead to build a competitive business for the long term, through improving the ability to meet customer demands. There are intensive efforts even in the level of international organizations [2] to propel the digital transformation of businesses by 2030 with more than 90% of SMEs reaching at least a basic level of digital intensity, and 75% of EU companies using cloud computing services, perform big data analysis, or use artificial intelligence. According to a recent survey by the Economist Intelligence Unit, nine out of ten companies believe digital transformation is now a requirement for success, while almost four out of five say that without further digital transformation, they will be at a competitive disadvantage within three years.[3] Digital transformation is present in all sectors, including industrial companies, various administrations, educational institutions, the financial sector, etc., and has a noticeable impact on them.[4] Research highlights that within the financial sector, commercial banks have been at the forefront of the technological revolution, characterized by rapid deployment and innovation of digital services leading to new banking practices.[5] Keeping the pace of technological change requires people and businesses to acquire new digital skills and competencies[2], which intends increase of digital skills for individuals for their everyday life needs and as employees. There is an obvious increase in digital skills for people in European countries according to the Eurostat publication (2024), with effect on their communication, education and information needs, medical and banking services as well. It is reported that 70% of internet users used online banking services in 2023 compared with 55% in 2013. The increasing trend reinforces the need for banking and financial services to facilitate the process by better infrastructure and highly skilled workforce.

RESEARCH METHODOLOGY.

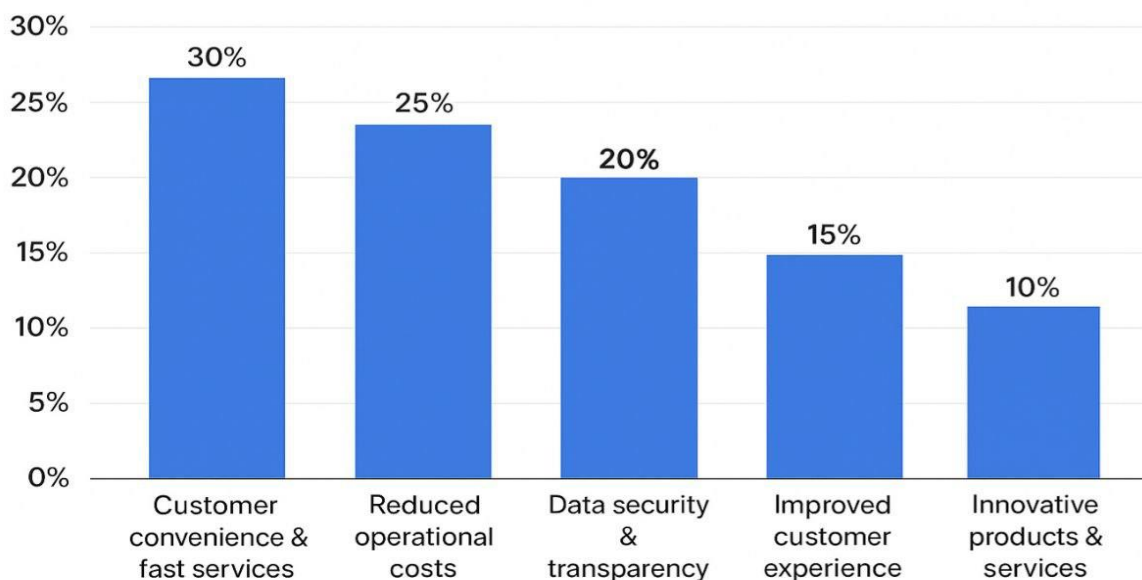
The methodology of this article uses the methods of analysis and synthesis, scientific abstraction, generalization and comparative theoretical interpretation. The scientific basis of the study is the articles of local and foreign scientists published in scientific publications and their international research. In addition, the study also takes into account real economic indicators based on the analysis of statistical data, which increases the reliability of the research results and provides the possibility of their practical application.

ANALYSIS AND RESULTS.

In today’s era of globalization and technological advancement, digitalization is becoming an integral part of every sector. In particular, in the banking system, this process plays a crucial role in improving the quality of financial services, creating convenience for customers, and ensuring security. By 2025, the number of digital banking users worldwide is expected to approach 7 billion, which is almost equal to the world’s total population. In 2024, around 73% of banks had already implemented or were in the process of implementing a digital transformation strategy. Online and mobile payments grew by 20% between 2023 and 2024, reflecting the growing customer demand for speed and convenience. Artificial intelligence and automated services now handle 60–70% of banking operations through digital channels. Currently, thanks to digital banking services, service speed has increased by 50–70%, while operating costs have decreased by 30–40%.

Similarly, Uzbekistan’s banking system is also undergoing a digitalization phase. In 2025, the number of internet users in Uzbekistan is expected to reach approximately 32.7 million people, representing about 89% of the country’s population. Today, Uzbekistan has a fully digital banking ecosystem TBC Digital Bank, whose user base has reached nearly 19.7 million people.

The adoption of digital banking services provides numerous advantages, such as improving service quality, accelerating processes, and reducing costs. Furthermore, digital payment services support economic activity in various regions and expand access to credit resources for small and medium-sized enterprises (SMEs), contributing to overall economic development.



1-rasm. Advantages of Digitalization in the Banking System, 2025 [6]

If we take the main advantages of digitalization in the banking system as 100% in total, we can examine their share in each area in percentage terms. The analysis of digitalization processes in the banking sector shows that technological transformation has brought significant efficiency and innovation. As the bar chart demonstrates, customer convenience and faster services (30%) remain the primary advantage, reflecting the growing reliance on mobile banking and online transactions. Reduced operational costs (25%) indicate that automation and digital workflows help banks optimize expenses and improve internal efficiency. Meanwhile, data security and transparency (20%) have become key priorities as blockchain and cybersecurity systems strengthen trust in digital banking.

Furthermore, enhanced customer experience (15%) highlights personalized services and the use of AI-powered tools such as chatbots. Finally, innovative products and services (10%) illustrate how fintech integration and open banking ecosystems foster new business models.

Overall, digitalization is not only improving the operational efficiency of banks but also transforming their relationship with customers - creating a faster, safer, and more customer-centered financial environment.

If we look at the banking systems of developed countries, Germany's banking system is considered one of the most advanced in Europe in terms of digitalization. In this country, commercial banks - particularly major financial institutions such as Deutsche Bank and Commerzbank - have made digital transformation a central part of their strategy. Through the use of artificial intelligence, blockchain technologies, online payment systems, and mobile applications, they have achieved greater simplification and automation in customer service processes. As a result, the use of digital banking services in Germany has significantly increased in recent years, while the circulation of cash has noticeably declined. Another key aspect of the digitalization process is the improvement of security and data protection systems. German banks operate based on Open Banking principles, which allow customers to manage their accounts through various banking applications. Moreover, within the framework of the PSD2 Directive, strict regulations on cybersecurity and customer data protection have been introduced.

This transformation has enabled banks to reduce operational costs, conduct real-time data analysis, and implement a more personalized approach to customers. Furthermore, digitalization plays an important role in ensuring environmental sustainability, as electronic document circulation and remote services promote more efficient use of resources.

CONCLUSION.

The process of digitalization in the banking system today is transforming not only the way financial services are delivered but also their very essence. Digital transformation has emerged as a key direction in the strategic development of banks, playing a crucial role in improving service quality, efficiency, transparency, and customer trust. Digital technologies - including mobile applications, online payment systems, artificial intelligence, blockchain, and big data analytics - have become an integral part of banking operations. The experience of developed countries, particularly Germany, clearly demonstrates the importance of digitalization in enhancing the efficiency and security of the banking system. The principles of Open Banking, the PSD2 Directive, and strict cybersecurity regulations ensure the protection of customer rights while enabling the expansion of innovative financial services. The implementation of such systems allows banks to conduct real-time data analysis, strengthen personalized customer approaches, and reduce operational costs, thereby improving overall performance and competitiveness.

Uzbekistan's banking system has also achieved significant progress in digitalization in recent years. Fully digital ecosystems such as TBC Bank, along with online payments, electronic transactions, and mobile applications, are making banking services more convenient and accessible to a wider segment of the population. As a result of this process, the level of financial

inclusion is increasing, economic activity in various regions is becoming more dynamic, and new opportunities are being created for small and medium-sized enterprises (SMEs).

Overall, digitalization is not merely a technological innovation but a powerful strategic direction that ensures economic stability, customer orientation, and competitiveness. In the future, by further deepening digital innovations in the banking system and expanding the implementation of solutions in artificial intelligence, blockchain, and cybersecurity, Uzbekistan's financial sector will have greater opportunities to enhance its global competitiveness.

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