web of semantic
Journal of Interdisciplinary Science | ISSN: 2960-9550
Research Article Peer-review, Open Access

Business Process Reengineering as the Foundation for Digital Transformation of Banks in Uzbekistan

Nodira Saidakhraovna Rakhimkhodjaeva [1]

Abstract

This study examines the challenges and opportunities of digital transformation in the banking industry and its link with business process reengineering (BPR). Digitalization significantly impacts the development of banks by introducing advanced technologies and reshaping key processes to increase efficiency and customer orientation. BPR ensures that digital solutions are integrated effectively; without it, transformation risks being fragmented and less impactful. Key challenges include staff adaptation to new digital systems and redesigned workflows, as well as the need for secure and regularly updated platforms to counter cyberattacks. Considering these factors when implementing digital transformation helps banks stay competitive and resilient.

Keywords: Digital transformation, business process reengineering, banking modernization, challenges, opportunities, payment systems, fintech integration.

[1] *Dean of Undergraduate Programs, Singapore Institute of Management Development in Tashkent*

INTRODUCTION

The banking industry is undergoing profound changes under the influence of digital technologies. These changes include the introduction of online banking, mobile applications, and digital payment systems. Modern customers increasingly choose banks that provide accessible, fast, and secure services. As a result, banks face new challenges but also gain opportunities for growth. Since banks play a key role in the economy, their transformation directly affects both national and global economic development. The banking sector, as the center of economic transactions, especially in retail banking, depends on attracting resources and expanding business through financing.

The growth of digitalization in the banking sector is linked to society's overall transition into the digital era. The millennial generation, which prefers online services, actively contributes to this transition. In Uzbekistan, as of the beginning of 2024, there were 29.52 million internet users (83.3% of the population) and 8.7 million social media users (24.6% of the population). There were also 33.81 million mobile connections, accounting for 95.5% of the total population. These figures demonstrate the active development of digitalization in Uzbekistan, encouraging banks to adapt their marketing strategies and shift from traditional methods to digital ones, thereby improving the digital literacy of their clients.

The need for transformation in the banking sector has also been reinforced by the emergence of new competitors, such as fintech companies. These non-bank financial institutions offer more convenient services without traditional restrictions, attracting customers. According to Capgemini, more than 63% of bank customers also use fintech services [10]. The widespread use of payment applications and digital money has led to a decreased demand for cash and slower growth in the use of credit cards.

These changes force banks not only to implement digital solutions but also to rethink internal processes — to carry out business process reengineering. Reengineering makes it possible to redesign key bank operations (lending, settlement and cash services, risk management) using digital tools and adapting to changing customer expectations. Digital transformation without deep process restructuring can be fragmented and ineffective; at the same time, reengineering ensures alignment between technology, organizational structure, and corporate strategy.

Today, the digitalization of banking services has become an integral part of the profound transformation necessary to ensure competitiveness and strengthen the stability of the banking system. This comprehensive approach — combining reengineering with digital solutions — allows banks to optimize operational costs, speed up customer service, and improve the quality of financial products.

In accordance with the Decree of the President of the Republic of Uzbekistan dated October 5, 2020, No. 5296 “On the approval of the Digital Uzbekistan–2030 Strategy and measures for its effective implementation” [1], more than 220 priority projects have been planned. These include improving the e-government system, further developing the domestic software and IT market, and achieving, by January 1, 2022, the full digital transformation of commercial banks. This aims to ensure that banks can provide a wide range of online services, including the issuance of credit products, opening deposits and settlement accounts remotely, and expanding access to digital banking.

LITERATURE REVIEW

Digital transformation is a process in which organizations use digital technologies, such as cloud computing, mobile technologies, and virtualization, to integrate all components of the system. This process can be seen as a combination of business and digital innovations that lead to changes in structure, values, processes, and ecosystems both inside and outside the organization. In the era of digitalization, digital transformation is essential to ensure sustainable growth and improve business efficiency, as companies and their clients increasingly depend on data and technologies. This process is expected not only to optimize operations but also to create additional value for customers.

The issue of digital transformation in the banking sector has also been studied by domestic researchers. For example, G. Makhmudova, in her work, notes that despite infrastructure improvements, the share of e-commerce in Uzbekistan’s retail trade is only 1%. For comparison, this figure reaches 9.6% in Kazakhstan, 16.1% in the USA, and 46.3% in China. This indicates a significant growth potential for e-commerce in Uzbekistan, which has yet to be realized [2].

In her research, L. Muradova emphasizes the trend of increasing investments in innovative digitalization technologies. This demonstrates how innovations in digitalization allow banks to introduce additional services, differentiate products, increase sales, enhance competitiveness, and respond to the growing needs of customers through digital devices. At the same time, operational risks and security risks of digital banking are highlighted, which affect the brand and reputation of banks, customer trust, and the quality of services [3].

Among Russian authors, the works of G. S. Dmitrieva [4], A. A. Kairbekov [5], and I. E. Mamedov [6] can be noted. These authors evaluate the trends and patterns of digitalization in the banking sector, with a focus on the factors and development trends of digitalization in modern Russian banks, as well as on the advancement of modern banking technologies.

METHODS

This study uses a qualitative descriptive analysis to identify the opportunities and challenges of digital

transformation in the banking sector. A research type known as library or literature study is applied, where researchers rely on various literature sources to obtain data and use a qualitative approach, as the data is presented in the form of narratives or descriptions.

RESULTS AND DISCUSSION

Digital transformation is a key component of the overall business transformation strategy. While it is not the sole factor determining success, it largely shapes the outcome of any change project. Properly selected technologies, combined with employee competencies, efficient processes, and well-structured operations, enable organizations to quickly adapt to complex conditions, seize new opportunities, meet evolving customer needs, drive growth, and implement innovations.

In the banking sector, digital transformation is closely linked to business process reengineering (BPR). Simply introducing digital services (such as online banking, mobile apps, chatbots, and remote service channels) without revisiting and redesigning core processes can lead to fragmented improvements that fail to address underlying issues — high costs, slow transaction processing, and limited customer focus. BPR makes it possible to fundamentally rebuild key banking operations — including lending, risk management, payment processing, and customer service — by integrating digital technologies, thereby increasing efficiency, transparency, and resilience.

Digital transformation in financial services also allows for highly personalized offerings, expanded mobile capabilities, and remote access to complex products such as financial planning, credit management, and investment solutions. According to the JD Power Report (2020), banks that combine digital technology adoption with the restructuring of internal processes show a marked increase in both adaptability and satisfaction among customers and employees [9].

According to Roberto Akiuenu, Senior Executive Analyst at Indonesia's Financial Services Authority, there are nine key challenges associated with digital transformation in banking [7]:

- Data breach risk — the need for systematic information protection and effective incident response mechanisms.
- Strategic IT investment risk — errors in selecting technology solutions or vendors may cause data loss and system failures.
- Cyberattacks — the threat of hacking requires establishing strong cybersecurity teams.
- Human resources — insufficient employee readiness for change and the need for retraining.
- Communication infrastructure — demand for reliable and fast networks to support new digital services.
- Regulatory framework — the importance of adapting legislation to the new digital environment.
- Digital opportunities — leveraging demographic potential and the growth of online users.
- Customer digital behavior — device ownership and habits of using mobile apps.
- Digital transactions — expansion of e-commerce, online banking, and electronic money.

To successfully adapt to these new conditions, a comprehensive approach is required. This includes implementing advanced data protection technologies, training staff, modernizing infrastructure, and improving the regulatory environment. Business process reengineering becomes the methodological foundation of this process, ensuring alignment between digital solutions, organizational structure, risk management strategy, and customer expectations.

Such an approach enables banks to:

- reduce costs and accelerate service delivery;
- increase operational transparency and customer trust;

- minimize cyber risks and data breaches;
- respond flexibly to external

Table 1. Key challenges of digital transformation in banks and the role of business process reengineering (BPR)

Challenge	Description	Solutions through Business Process Reengineering
Data breach risk	Outdated IT systems and weak protection of customer information increase the likelihood of cyberattacks and reduce customer trust.	Redesign of information security processes: centralized data management, encryption, multi-level access control, regular audits, employee training.
High operating costs	Duplicated functions, manual data processing, and complex approval chains lead to excessive expenses and slow operations.	Process optimization: automation of routine tasks (RPA), migration to cloud platforms, elimination of redundant approval stages.
Slow customer service	Lengthy identification and application review procedures reduce customer loyalty and satisfaction.	Customer journey redesign: digital identification, online scoring, CRM and big data integration for personalized service.
Competition with fintech companies	Fintech providers deliver faster, simpler, and cheaper solutions, eroding traditional banks' customer base.	Product line reengineering: development of in-house digital services, implementation of open APIs, faster launch of innovative products.
Low digital skills among staff	Employees are not adequately prepared to work with new technologies and processes.	Training system redesign: creation of corporate academies, continuous upskilling and reskilling, mentorship programs.

Source: compiled by the author based on analysis of modern banking digital transformation practices.

Business Process Reengineering (BPR) plays a decisive role in overcoming the key challenges of digital transformation in banking. By radically redesigning outdated workflows and eliminating redundant procedures, banks can reduce operating costs and accelerate decision-making. Enhanced data management processes and robust cybersecurity frameworks mitigate the risk of breaches and strengthen customer trust. At the same time, BPR enables the integration of advanced digital tools — such as automation, big data analytics, and open APIs — helping banks compete with agile fintech companies and deliver faster, more personalized services. Finally, the reengineering of training and knowledge-sharing systems supports continuous staff development, ensuring that employees can effectively adapt to new technologies and sustain innovation.

Digital transformation has a profound impact on the banking sector and shapes its future. In this section, we will consider the prospects for the development of the banking industry, taking into account the influence of digitalization and modern technologies. Digitalization encourages banks to reconsider their business models. Traditional models based on branches and physical offices are giving way to more flexible and digital approaches. This includes:

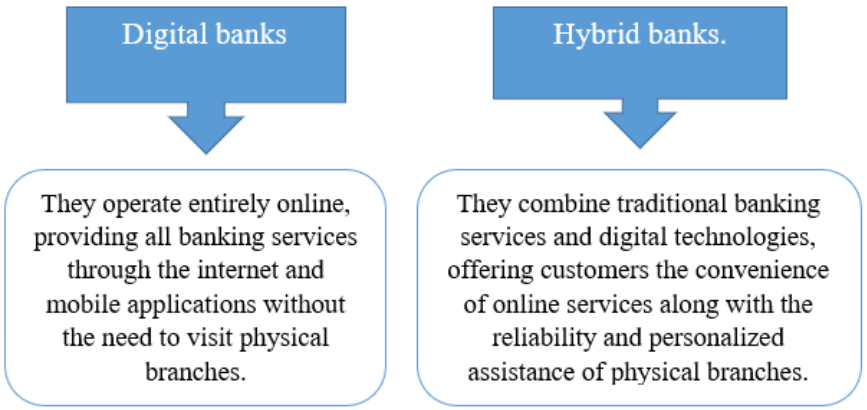

Figure 1. Business Models of Banks

Digitalization is radically transforming the banking sector, creating new opportunities for developing products and services that better meet customer needs**.** Today, banks can use data to design personalized financial products tailored to clients' individual goals and risk profiles. This means that instead of standard offers, customers receive solutions that most effectively help them achieve their financial objectives.

In the field of investment services, digital platforms provide access to a wide range of opportunities, making investments more accessible and convenient. Clients can easily manage their portfolios and monitor their performance through online services. In addition, digitalization promotes financial education: banks can now provide customers with tools and resources to improve their financial literacy. This helps people better understand how to manage their money and plan for the future.

Fintech companies, which integrate technology with financial services, play an important role in modernizing the banking sector. Collaboration with such companies helps banks:

- foster innovation, as fintech startups are often sources of new technological solutions and ideas that can significantly improve banking services;
- enhance service quality, making them more convenient and efficient for customers.

Artificial Intelligence (AI) is also becoming an essential tool in banking. In the near future, AI will be able to predict risks by analyzing data and forecasting financial trends, helping banks better manage risks and plan their strategies. AI will also simplify self-service, giving clients access to virtual assistants and chatbots that can quickly answer questions and resolve issues.

The development of digital technologies and the transformation of the banking industry open new horizons for the sector. Innovation in products and services, cooperation with fintechs, and the introduction of AI help banks remain competitive and adapt to the rapidly changing world of financial technology.

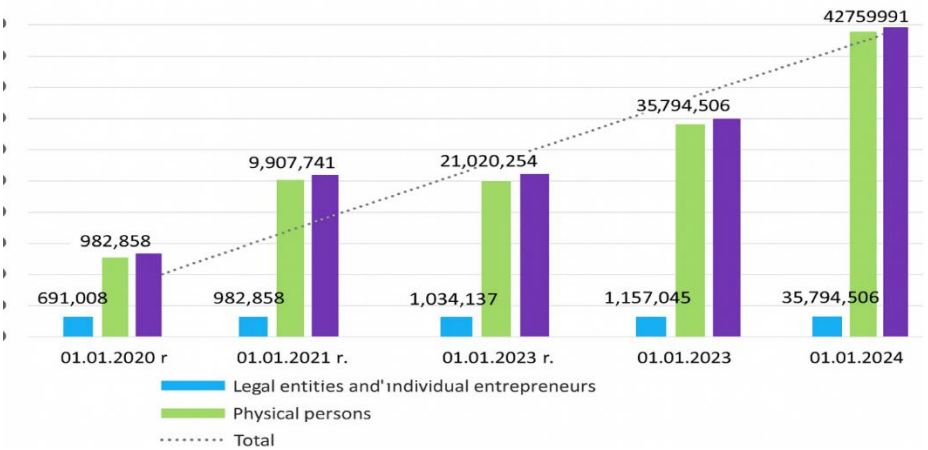

Figure 2. Number of remote banking service users [13]

As a result of banking sector reforms in the Republic of Uzbekistan over the past three years, banks' capital has increased 1.8 times, and the annual volume of lending has doubled. Four banks issued Eurobonds for the first time, raising $1 billion on the international capital market. A strategic foreign investor was attracted to "Ipoteka-Bank." Thirteen new private banks opened, and leading banks from Hungary, Kazakhstan, and Georgia began operating in the country. The volume of online banking services grew 2.7 times. At the same time, competition in the banking sector — as well as demand for its services — is increasing every day, requiring accelerated transformation processes and the identification of key priorities for the future [8].

Today, 22 million people in Uzbekistan — more than half of the country's population — use remote banking services. Public acceptance of bank cards as a convenient payment method, along with the expanding reach of digital banking, is driving demand for bank cards. (Fig. 2)

In particular, the number of bank cards issued into circulation in 2024 reached 49.8 million, having increased 2.2 times compared to 2020. This growth not only reflects digitalization but also demonstrates the successful application of business process reengineering: revisiting and redesigning key operations (card issuance, payment infrastructure, and processing) have enabled banks to speed up services, reduce operating costs, and improve customer convenience.

CONCLUSION AND RECOMMENDATIONS

The findings show that digital transformation, combined with business process reengineering, has a significant impact on the development of the banking sector. Digitalization creates new opportunities for growth and efficiency but also introduces challenges — from workforce adaptation to data protection and cybersecurity.

One of the key challenges is the transition of employees from traditional systems to digital platforms. Successful integration of new technologies requires staff training, development of digital skills, and restructuring of internal processes. Equally important is robust protection against cyberattacks, requiring continuous IT infrastructure upgrades and the creation of strong cybersecurity teams.

As noted by Capgemini analysts, banks in 2024 need to maintain a balance between business resilience and innovation to overcome global macroeconomic challenges and remain competitive [11].

For the further advancement of digital transformation and reengineering of banking processes in Uzbekistan, the following steps are advisable:

1. Implement cloud solutions for data storage and processing to ensure scalability and operational reliability.
2. Expand the use of artificial intelligence (AI) and machine learning (ML) to automate decision-making, customer data analysis, risk management, and client support systems.
3. Develop the infrastructure for digital payments and contactless transactions, including super apps that integrate banking and non-banking services.
4. Create regulatory sandboxes for fintech startups, providing a safe legal environment to test and implement innovations.

Such a strategy will accelerate digital transformation, reduce costs, improve service quality, and strengthen the competitive position of banks in a rapidly evolving financial landscape.

REFERENCES:

1. Decree of the President of the Republic of Uzbekistan dated October 5, 2020 No. 6079 "On the approval of the strategy 'Digital Uzbekistan-2030'."

2. Makhmudova G.N., Karimov D.M., Kholmatov S.I. Main achievements and problems of digital economy development in Uzbekistan // Organizer of Production. 2024. Vol. 32. No.1. pp. 97–106. DOI: 10.36622/1810-4894.2024.68.94.008
3. Muradova Lyudmila Fathiddinovna. The role of digital banking in the modern banking system and conditions of its formation in the Republic of Uzbekistan // Scientific electronic journal "Economics and Innovative Technologies". No. 2, March–April 2021, pp. 29–35.
4. Dmitrieva G.S. Digital technologies in the banking sector of the economy // Proceedings of St. Petersburg State University of Economics. 2020. No.1 (121). pp. 49–53.
5. Kairbekov A.A. Factors and trends in the development of digitalization of modern banks // Economics: Yesterday, Today, Tomorrow. 2021. Vol. 11. No. 3A. pp. 34–41.
6. Mamedov I.E. Problems of development of the banking sector in the context of the digitalization of the economy // Economics and Business: Theory and Practice. 2021. No. 4-1 (74). pp. 245–249.
7. Walfajri, Maizal. (2022). "There are 9 Challenges to Digital Banking Transformation According to the OJK, See How to Anticipate Them." Newssetup Kontan, https://newssetup.kontan.co.id/news/ada-9-tantangan-transformation-digital-perbankan-menurut-ojk-simak-cara-anticipation. Retrieved June 5, 2022.
8. Fattakhova M. (2023). The impact of digitalization on the competitive advantages of commercial banks. Topical Issues of Social and Human Sciences, 3(5), 108–117.
9. https://www.jdpower.com/business/press-releases/2020-us-retail-banking-advice-satisfaction-study
10. Capgemini highlighted the advantages of fintech startups over banks — Electronic resource / https://frankmedia.ru/15435
11. Capgemini expects strong global bank competition for deposits in 2024 — Electronic resource / https://frankmedia.ru/152623
12. www.cbu.uz