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PRIORITY DIRECTIONS FOR ENHANCING FINANCIAL INCLUSION THROUGH INNOVATIVE BANKING SERVICES IN THE DIGITAL ECONOMY

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Abstract. This article examines the theoretical and methodological foundations and practical aspects of enhancing financial inclusion through the development of innovative banking services in the digital economy. The impact of fintech solutions, artificial intelligence, Open Banking, digital identification (e-KYC), mobile banking, and digital payment infrastructure on improving access to banking services is assessed. Based on an analysis of the digital transformation of the banking sector in Uzbekistan during 2024–2026, the study proposes a conceptual framework for expanding financial inclusion and improving the accessibility of banking services. The paper also develops practical recommendations aimed at increasing the efficiency, sustainability, and customer orientation of innovative banking services.

Keywords: digital economy, innovative banking services, financial inclusion, fintech, Open Banking, artificial intelligence, digital banking, mobile banking, digital transformation.

Аннотация. В статье рассматриваются теоретико-методологические основы и практические аспекты повышения финансовой доступности посредством развития инновационных банковских услуг в условиях цифровой экономики. Оценивается влияние финтех-решений, искусственного интеллекта, открытого банкинга, цифровой идентификации (е-KYC), мобильного банкинга и инфраструктуры цифровых платежей на расширение доступа к банковским услугам. На основе анализа цифровой трансформации банковского сектора Узбекистана в 2024–2026 годах предложена концептуальная модель расширения финансовой доступности и повышения доступности банковских услуг. Также разработаны практические рекомендации, направленные на повышение эффективности, устойчивости и клиентоориентированности инновационных банковских услуг.

Ключевые слова: цифровая экономика, инновационные банковские услуги, финансовая доступность, финтех, открытый банкинг, искусственный интеллект, цифровой банкинг, мобильный банкинг, цифровая трансформация.

INTRODUCTION

The rapid advancement of digital transformation processes in the global economy is fundamentally reshaping the development trends of financial markets and the banking sector. In the context of the digital economy, the transition from the traditional model of banking services to innovative digital platforms, accompanied by the widespread implementation of fintech technologies, artificial intelligence (AI), Big Data, blockchain, and Open Banking, has intensified competition in the financial services market while elevating the quality and accessibility of banking services for both individuals and business entities to a new level.

In recent years, financial inclusion has been widely recognized by international financial institutions as one of the key determinants of sustainable economic growth. In particular, expanding equal and efficient access to financial services contributes to poverty reduction, supports entrepreneurial activity, strengthens the financial resilience of the population, and constitutes an essential prerequisite for the development of the digital economy. From this perspective, the development of innovative banking services and the enhancement of their

accessibility and convenience for the population have become strategically important factors in ensuring the competitiveness of the national economy.

In recent years, a number of measures have been implemented in Uzbekistan to modernize the banking sector, expand digital banking services, increase the share of cashless transactions, promote remote banking services, and develop the fintech ecosystem. As a result, mobile banking services, QR code payments, electronic wallets, digital lending, biometric identification, and online banking services have become increasingly widespread. Nevertheless, the uneven development of digital infrastructure across regions, varying levels of financial literacy among the population, insufficient public confidence in certain innovative financial services, and cybersecurity-related risks continue to remain significant challenges to further enhancing financial inclusion.

The objective of this study is to comprehensively evaluate the role of innovative banking services in promoting financial inclusion under the conditions of the digital economy, identify the existing challenges, and develop scientifically grounded proposals and practical recommendations aimed at further advancing innovative banking services within the banking system of the Republic of Uzbekistan.

LITERATURE REVIEW

In the context of the rapid development of the digital economy, the improvement of innovative banking services and the enhancement of financial inclusion have become one of the priority areas of both international and national economic research. In particular, the advancement of fintech technologies, artificial intelligence (AI), Open Banking, digital identification, and digital payment systems has significantly expanded access to banking services for both individuals and business entities. The experience of developed countries demonstrates that the interrelationship between innovative banking services, financial inclusion, digital transformation, and digital financial infrastructure has been comprehensively investigated.

Foreign scholar B. Schneier has developed modern approaches to information security, data protection, and the management of cybersecurity risks. His research provides theoretical and practical foundations for improving the reliability and security of digital financial services and strengthening public confidence in the digital environment [5].

According to the Roubini ThoughtLab report, digital transformation is an important factor in the sustainable development of the financial services sector. The adoption of digital technologies may contribute to improving operational efficiency, identifying customer needs, and enhancing the quality of financial services [6].

Issues related to financial inclusion and the development of innovative banking services have also been extensively examined in reports published by the World Bank [11], the International Monetary Fund (IMF) [12; 13], the Bank for International Settlements (BIS) [14; 15], and the Alliance for Financial Inclusion (AFI) [16]. These organizations identify digital banking services, mobile banking, digital payment systems, Open Banking, and fintech solutions as important instruments for expanding financial inclusion and improving access to financial services.

In Uzbekistan, a number of scholars have conducted research on the digital transformation of the banking sector and the development of innovative banking services. In particular, the scientific works of F. Dodiev and D. Yusupova [7], M. Abdurakhmanova [8], and A. Azlarova [9] examine the digitalization of banking services, the transformation of commercial banks, the development of innovative banking products, and the expansion of remote banking services.

At the same time, the review of existing literature indicates that comprehensive approaches to evaluating the impact of innovative banking services on financial inclusion under the conditions of the digital economy remain insufficiently developed. In particular, there is still no universally accepted methodological framework for assessing the effectiveness of digital banking services through integrated indicators. Furthermore, comprehensive models capable of evaluating the impact of artificial intelligence, Big Data, Open Banking, and fintech ecosystems on financial inclusion have not yet been adequately developed. This highlights the need for further theoretical and empirical research in this area.

RESEARCH METHODOLOGY

The theoretical and methodological foundation of this study is based on the scientific works of domestic and international economists, reports of international financial institutions, official statistical data published by the Central Bank of the Republic of Uzbekistan, as well as regulatory and legal documents concerning the digital economy, innovative banking services, and financial inclusion.

The research employs a combination of scientific abstraction, systems analysis, comparative analysis, logical analysis, economic and statistical analysis, expert evaluation, comparative assessment, classification, synthesis, and inductive–deductive methods. Furthermore, an integrated analytical approach, including an

author's evaluation framework, was applied to assess the impact of innovative banking services on financial inclusion.

The study comprehensively evaluates the major trends in the development of innovative banking services, their accessibility and convenience for individuals and business entities, the level of digital financial service usage, and the relationship between the adoption of innovative banking services and financial inclusion. Based on the research findings, scientifically grounded conclusions, practical recommendations, and policy proposals have been developed to further promote innovative banking services and enhance financial inclusion within the banking system of the Republic of Uzbekistan.

ANALYSIS AND RESULTS

The rapid development of the digital economy is fundamentally transforming the mechanisms for delivering banking services. International experience demonstrates that the widespread adoption of digital technologies in the banking sector has accelerated the transition from traditional banking services to digital platforms, mobile applications, and intelligent banking services. Consequently, the efficiency, quality, and accessibility of banking services have significantly improved, thereby enhancing financial inclusion among the population.

In recent years, the Republic of Uzbekistan has also implemented comprehensive reforms aimed at the digital transformation of its banking sector. In particular, expanding digital banking services, promoting cashless payments, improving mobile banking services, and developing the fintech ecosystem have been identified as priority areas of banking sector reform. These initiatives have contributed to expanding access to banking services and improving financial inclusion.

Table 1

Credit Institutions and Their Structural Units in Uzbekistan (as of January 1, 2026¹)

Credit Institutions	01.01.2023	01.01.2024	01.01.2025	01.01.2026
Commercial banks, including	32	35	36	36
State-owned banks	12	10	9	9
Other banks (including microfinance banks)	20	25	27	27
Non-bank credit institutions, including	167	169	193	224
Microfinance organizations	85	84	100	132
Pawnshops	81	84	92	91
Mortgage refinancing organization	1	1	1	1
Total credit institutions	199	204	229	260

By the end of 2025, the country's financial sector comprised 36 commercial banks, 233 non-bank credit institutions, and 47 payment organizations. Furthermore, the number of banking service offices reached 1,729, while 5,615 banking service outlets operated on a 24/7 basis. The total number of ATMs and self-service banking kiosks exceeded 40 thousand, whereas the number of bank cards in circulation reached 68 million, and the number of electronic wallets amounted to 25 million. These indicators demonstrate the sustainable development of Uzbekistan's digital financial infrastructure and the increasing accessibility of modern banking services (Table 1).

The findings indicate that the growing accessibility of banking services is primarily associated with the introduction and expansion of innovative financial services. In particular, mobile banking, QR code payment systems, remote customer identification (e-KYC), digital lending, online deposit services, and artificial intelligence-based virtual assistants have substantially improved the convenience and accessibility of banking services for individuals and business entities.

Moreover, the development of innovative banking services has had a positive impact on the operational efficiency of commercial banks. The expansion of remote banking services has reduced the operational workload of bank branches and significantly shortened service delivery time. As a result, banks have been able to reduce operating costs while simultaneously improving customer satisfaction and enhancing the overall quality of banking services.

¹ Source: Compiled by the author based on data from the Central Bank of the Republic of Uzbekistan.

Table 2
The Impact of Innovative Banking Services on Financial Inclusion²

Innovative banking service	Impact on financial inclusion	Impact on banking efficiency
Mobile banking	Expands access to banking services for the population	Reduces operating costs
QR code payments	Increases the share of cashless transactions	Improves the speed of payment processing
Remote identification (e-KYC)	Enables remote account opening and customer onboarding	Reduces service delivery time
Open Banking	Facilitates the development of new digital financial services	Enhances the competitiveness of commercial banks
Artificial intelligence (AI)	Provides personalized banking services	Improves risk management and decision-making processes

The analysis indicates that the introduction of innovative banking services has contributed to reducing geographical barriers to access to banking services. Whereas banking services were previously used predominantly by urban residents, the expansion of digital financial services has enabled people living in remote and rural areas to actively access and utilize banking services. This, in turn, has contributed to improving financial inclusion in the country.

At the same time, the findings reveal the existence of several systemic challenges hindering the further development of innovative banking services. These include the uneven development of digital infrastructure across regions, disparities in the quality and availability of internet services, differences in the levels of financial and digital literacy among the population, cybersecurity risks, and varying degrees of public trust in digital financial services.

In the author's opinion, addressing these challenges requires commercial banks not only to introduce new technologies but also to establish a customer-oriented innovative ecosystem. In this regard, expanding cooperation with fintech companies, promoting the wider application of artificial intelligence technologies, and developing the Open Banking ecosystem are essential.

The research findings indicate a positive association between innovative banking services, digital infrastructure, and financial inclusion. As the adoption of innovative banking services increases, the coverage of banking services expands, the volume of cashless transactions grows, the number of users of digital financial services increases, and customer satisfaction improves. Therefore, in the digital economy, the development of innovative banking services may be considered an important direction for enhancing financial inclusion.

Although the range of digital banking services has expanded considerably in the banking sector of Uzbekistan, the effectiveness of their implementation varies significantly across commercial banks. Commercial banks are currently at varying stages of adopting artificial intelligence, Big Data, digital identification, Open Banking, and API-based platforms. Such disparities contribute to differences in the level of financial inclusion achieved by individual commercial banks.

To comprehensively assess the contribution of innovative banking services to financial inclusion, the author proposes the Innovative Banking Inclusion Index (IBII). This composite index incorporates several key indicators that reflect the level of digital transformation and the accessibility of banking services.

These indicators include the proportion of customers using digital banking services, the level of mobile banking activity, the share of cashless transactions, the extent of remote banking service utilization, the number of innovative banking products and services, and the customer satisfaction index.

² Source: Developed by the author.

Table 3
Priority Directions for the Development of Innovative Banking Services³

Priority area	Proposed measures	Expected outcomes
Open Banking	Implementation of API-based platforms	Expansion of innovative digital financial services
Artificial Intelligence (AI)	Deployment of AI-based customer service solutions	Improvement in service quality and operational efficiency
Big Data	Analysis of customer behavior and preferences	Development of personalized banking products
Remote Identification (e-KYC)	Expansion of biometric identification technologies	Wider adoption of remote banking services
Fintech Collaboration	Strengthening partnerships with fintech companies	Acceleration of financial innovation
Cybersecurity	Implementation of advanced cybersecurity technologies	Enhancement of customer trust and protection of digital financial services

The integration of these indicators into a single assessment framework provides a comprehensive evaluation of the effectiveness of innovative banking services in promoting financial inclusion. Unlike individual performance indicators, the proposed index enables a multidimensional assessment of banking activities by considering both the accessibility and quality of digital financial services.

Table 4
SWOT Analysis of Opportunities for Enhancing Financial Inclusion through Innovative Banking Services⁴

Strengths (S)	Weaknesses (W)
Well-developed digital infrastructure	Uneven quality of internet services across regions
Expansion of mobile banking services	Varying levels of digital literacy
Institutional support for digital transformation	Areas requiring further cybersecurity improvement
Rapid growth of the fintech market	Differences in access to innovative banking services
Opportunities (O)	Threats (T)
Expansion of Open Banking	Growing cybersecurity risks
Development of Artificial Intelligence (AI) technologies	Data privacy and protection concerns
Attraction of international investment	Increasing competitive pressure from fintech companies
Continuous growth of the digital economy	Technological risks and uncertainties

According to the author, the proposed IBII may serve as an effective analytical instrument for strategic planning in commercial banks, evaluating the effectiveness of digital transformation initiatives, monitoring the development of innovative banking services, and conducting comparative assessments of banks based on their contribution to financial inclusion. Furthermore, the application of the index can support evidence-based managerial decision-making and facilitate the formulation of policies aimed at expanding access to innovative financial services and improving the overall level of financial inclusion.

The SWOT analysis indicates that Uzbekistan's banking sector possesses significant potential to enhance financial inclusion through the development of innovative banking services. Institutional support for digital transformation, the expansion of mobile banking, and the development of the fintech ecosystem

³ Source: Developed by the author.

⁴ Source: Developed by the author.

create favorable conditions for increasing access to financial services. However, regional differences in digital infrastructure, varying levels of digital literacy, and cybersecurity risks may affect the effectiveness of these initiatives. Therefore, the further development of Open Banking, AI-based banking solutions, and digital and financial literacy may support sustainable financial inclusion.

CONCLUSION AND SUGGESTIONS

The findings of this study indicate that the development of innovative banking services in the digital economy is an important factor in enhancing financial inclusion. The broader adoption of digital technologies in the banking sector may contribute to expanding access to financial services, improving service quality, increasing the efficiency and security of banking operations, and supporting the competitiveness of commercial banks.

Based on the analysis of international and national experience, the study comprehensively assessed the impact of innovative banking services on financial inclusion. The results indicate that mobile banking, digital payment systems, Open Banking, artificial intelligence, Big Data technologies, and remote customer identification (e-KYC) play a significant role in increasing the accessibility of banking services for both individuals and business entities.

At the same time, the research identifies several challenges that continue to constrain the further expansion of financial inclusion in Uzbekistan. These include regional disparities in digital infrastructure, insufficient levels of digital and financial literacy, cybersecurity risks, and relatively low public confidence in certain digital financial services.

As the main scientific contribution of this research, the author proposes the Innovative Banking Inclusion Index (IBII) as an integrated framework for assessing the contribution of innovative banking services to financial inclusion. The proposed index incorporates indicators such as the level of digital service usage, mobile banking activity, the share of cashless transactions, the number of innovative banking products, and customer satisfaction, thereby enabling a comprehensive evaluation of banks' performance in promoting financial inclusion.

Furthermore, the study develops a conceptual framework for enhancing financial inclusion through innovative banking services and demonstrates its practical significance for managing digital transformation processes within both commercial banks and public institutions.

Overall, the implementation of integrated approaches to the development of innovative banking services may contribute to improving the effectiveness of digital transformation in Uzbekistan's banking sector, expanding access to financial services, and increasing the availability of modern banking products for households and business entities.

Practical Recommendations

Based on the research findings, the following recommendations are proposed:

1. Commercial banks are recommended to adopt the Innovative Banking Inclusion Index (IBII) as a comprehensive tool for evaluating the effectiveness of innovative banking services in promoting financial inclusion.
2. The digital financial ecosystem should be strengthened through the expansion of API integration among commercial banks, fintech companies, and payment service providers based on Open Banking principles.
3. Commercial banks should further implement artificial intelligence and Big Data technologies to improve credit scoring systems, provide personalized financial advisory services, forecast customer needs, and develop customized banking products.
4. To enhance financial inclusion in rural and remote areas, priority should be given to improving digital infrastructure, expanding high-speed internet coverage, and further developing remote banking services.
5. Banks, higher education institutions, and government agencies should jointly implement educational programs, online learning platforms, and awareness campaigns aimed at improving digital and financial literacy among the population.
6. Commercial banks should strengthen cybersecurity by adopting international security standards, expanding the use of biometric identification, multifactor authentication, and real-time cybersecurity monitoring systems.
7. Economic incentive mechanisms should be introduced to encourage commercial banks to invest in the development of innovative digital banking products and services.
8. The Central Bank of Uzbekistan should establish a unified monitoring and rating system for evaluating the development of innovative banking services, the effectiveness of digital transformation, and the level of financial inclusion across commercial banks.
9. Commercial banks are encouraged to promote ESG-based green digital banking services by expanding paperless banking technologies and implementing sustainable finance practices.

10. It is recommended to develop measurable indicators, key performance indicators (KPIs), and evaluation criteria for innovative banking services, supported by a systematic monitoring mechanism to assess implementation outcomes.

REFERENCES

11. Republic of Uzbekistan. (2024, September 20). Law No. O'RQ-964 "On Amendments and Additions to Certain Legislative Acts of the Republic of Uzbekistan in Connection with the Improvement of Legislation in the Field of Ensuring Cybersecurity." National Database of Legislation of the Republic of Uzbekistan, Lex.uz. Effective December 22, 2024. <https://lex.uz/uz/docs/-7108720>
12. President of the Republic of Uzbekistan. (2026, March 10). Decree No. PF-38 "On Defining the Cybersecurity Strategy of the Republic of Uzbekistan and Improving the System for Preventing Cybercrime." National Database of Legislation of the Republic of Uzbekistan, Lex.uz. Effective March 11, 2026. <https://lex.uz/docs/8084828>
13. President of the Republic of Uzbekistan. (2020, May 12). Decree No. PF-5992 "On the Strategy for Reforming the Banking System of the Republic of Uzbekistan for 2020–2025." National Database of Legislation of the Republic of Uzbekistan, Lex.uz. Effective May 13, 2020. <https://lex.uz/uz/docs/-4811025>
14. President of the Republic of Uzbekistan. (2023, November 20). *Transformation Processes in the Banking System Considered*. Official Website of the President of the Republic of Uzbekistan.
15. Schneier, B. (2015). *Data and Goliath: The Hidden Battles to Collect Your Data and Control Your World*. New York: W. W. Norton & Company.
16. Roubini ThoughtLab. (2017). *The Path to Digital Leadership*. Philadelphia: Roubini ThoughtLab. The report was prepared in cooperation with Cisco and other financial and technology organizations.
17. Dodiev, F., & Yusupova, D. (2020). Innovative development of banks in Uzbekistan. *International Finance and Accounting*, 2020(5), Article 9.
18. Abdurakhmanova, M. (2024). Transformation of commercial banks in the conditions of digital technology development. *Economic Development and Analysis*, 2(3), 210–215.
19. Azlarova, A. (2023). Features of the development of the banking system of the Republic of Uzbekistan at the present stage. *Economics and Innovative Technologies*, 11(5), 1–7. doi:10.55439/EIT/vol11_iss5/a1.
20. Sudakova, A. E. (2017). Financial literacy: Theoretical understanding and practical research. *Finance and Credit*, 23(26), 1563–1582. doi:10.24891/fc.23.26.1563.
21. Klapper, L., Singer, D., Starita, L., & Norris, A. (2025). *The Global Findex Database 2025: Connectivity and Financial Inclusion in the Digital Economy*. Washington, DC: World Bank. doi:10.1596/978-1-4648-2204-9.
22. International Monetary Fund. (2025). *Financial Access Survey: 2025 Annual Report*. Washington, DC: International Monetary Fund.
23. International Monetary Fund & World Bank. (2018). *The Bali Fintech Agenda*. Washington, DC: International Monetary Fund and World Bank.
24. Committee on Payments and Market Infrastructures & World Bank Group. (2020). *Payment Aspects of Financial Inclusion in the Fintech Era*. Basel: Bank for International Settlements.
25. Consultative Group on Innovation and the Digital Economy. (2020). *Enabling Open Finance through APIs*. Basel: Bank for International Settlements.
26. Alliance for Financial Inclusion. (2025). *Policy Development and Implementation Guide for Inclusive Open Finance*. Kuala Lumpur: Alliance for Financial Inclusion.
27. Central Bank of the Republic of Uzbekistan. (2025, August 1). *Resolution No. 19/1 on approval of the Regulation on minimum information security and cybersecurity requirements for commercial banks of the Republic of Uzbekistan*. Registered by the Ministry of Justice on August 18, 2025, Registration No. 3669.
28. Central Bank of the Republic of Uzbekistan. (2026). *Annual Report of the Central Bank of the Republic of Uzbekistan for 2025*. Tashkent: Central Bank of the Republic of Uzbekistan.

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