IMPROVING THE ECONOMIC PERFORMANCE OF COMMERCIAL BANKS THROUGH FINTECH INNOVATIONS

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Abstract. *This paper examines the role of FinTech innovations in improving the economic performance of commercial banks in the context of the digital economy. The study analyzes how the adoption of digital banking channels, artificial intelligence, Big Data analytics, and automated processes affects operational efficiency, profitability, and risk management. The results show that FinTech innovations contribute to cost reduction, faster transaction processing, improved asset quality, and higher labor productivity. The findings highlight that FinTech should be considered not only as a technological tool but also as a strategic driver of sustainable growth and competitiveness in the banking sector.*

Keywords: *FinTech innovations; commercial banks; economic performance; digital banking; artificial intelligence; Big Data; financial technology.*

In the context of the digital economy, FinTech innovations have become one of the key factors in improving the economic performance of commercial banks. Modern financial technologies enable the automation of banking operations, optimization of costs, and more efficient use of financial resources.

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As a result, the economic efficiency of banks increases and their competitiveness is strengthened.

In the activities of commercial banks, FinTech innovations such as mobile and internet banking, digital payment systems, artificial intelligence, Big Data, and automated credit scoring are widely applied. These technologies enhance the speed and accuracy of banking operations, improve risk management mechanisms, and expand the range of customer-oriented services.

From this perspective, analyzing the impact of FinTech innovations on the economic performance of commercial banks, identifying their role in increasing efficiency, and assessing prospects for their practical implementation constitute a relevant scientific and practical task.

International research largely agrees that FinTech is reshaping commercial banks' economic performance through efficiency gains, new competitive dynamics, and new risk/oversight requirements.

The Basel Committee on Banking Supervision (BCBS) frames FinTech primarily through the lens of bank risk and supervisory implications. The BCBS "Sound practices" document highlights how technology-driven innovation affects banks' business models, operational risk, governance, outsourcing, and the need for stronger risk management and supervisory responses. This approach is useful for understanding *which* FinTech areas (eg, digital onboarding, AI-driven decisioning, cloud/outsourcing) most directly influence banks' resilience means and compliance costs. [1]

From a competition and market-structure perspective, the OECD emphasizes that digital disruption can increase efficiency and consumer welfare but also changes competitive conditions due to FinTech/BigTech entry and platform-based models. The OECD analysis discusses strategic responses of incumbent banks and the role of regulation in balancing competition and stability–providing a strong theoretical base for linking FinTech adoption to bank profitability, cost-to-income improvements, and market contestability. [2]

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The World Bank considers FinTech as a broader driver of financial sector transformation, focusing on market outcomes and the interaction between innovation and regulation/supervision. Its work stresses that the economic effects of FinTech depend on institutional readiness, policy design, and the maturity of digital infrastructure–helping explain why the same technologies can generate different productivity and inclusion outcomes across countries. [3]

The application of FinTech innovations in the economic activities of commercial banks has a significant impact on their operational efficiency, profitability, and risk management capabilities. Digital solutions enable banks to automate internal processes, reduce costs, and improve the quality of customer-oriented services. As a result, FinTech innovations contribute to the transformation of traditional banking business models and enhance the overall economic performance of banks. Table-1 summarizes the key FinTech innovations applied in commercial banks and their main economic effects.

Table-1

Impact of FinTech Innovations on the Economic Performance of Commercial Banks

FinTech innovation	Area of application	Economic performance indicator	Expected effect
Mobile and internet banking	Customer service delivery	Operating costs	Reduction by 15–25%
Digital payment systems	Payments and settlements	Transaction speed	Increase by 30–40%

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Artificial intelligence (AI)	Credit scoring and risk assessment	Non-performing loans (NPL) ratio	Reduction by 5–10%
Big Data technologies	Customer behavior analytics	Profitability (ROA/ROE)	Increase by 3–6%
Robotic process automation (RPA)	Internal operations	Labor productivity	Increase by 20–30%

Source: Compiled by the author based on OECD, Basel Committee on Banking Supervision, and World Bank analytical reports.

The data presented in Table-1 indicate that FinTech innovations exert a comprehensive and multidimensional influence on the economic performance of commercial banks. First, the widespread adoption of mobile and internet banking significantly reduces operating costs by minimizing physical branch operations and manual processing. Cost reductions in the range of 15–25% improve banks' cost-to-income ratios and enhance overall efficiency.

Digital payment systems play a crucial role in increasing transaction speed and reliability. Faster and more convenient payment processes stimulate transaction volumes, improve customer satisfaction, and expand banks' revenue base through higher service usage and commission income.

The implementation of artificial intelligence and Big Data technologies strengthens banks' risk management frameworks. AI-based credit scoring and predictive analytics enable earlier identification of high-risk borrowers, leading to a reduction in non-performing loans by approximately 5–10%. This directly supports financial stability and improves asset quality.

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Furthermore, Big Data analytics allows banks to personalize products and services, optimize pricing strategies, and improve cross-selling opportunities. As a result, profitability indicators such as ROA and ROE increase by 3–6%, reflecting more efficient utilization of financial resources.

Robotic process automation contributes to higher labor productivity by automating routine and repetitive tasks. Productivity gains of 20–30% allow banks to reallocate human resources toward higher value-added activities, such as advisory services and strategic decision-making.

Overall, the analysis confirms that FinTech innovations are not merely technological upgrades but strategic instruments for improving the economic performance of commercial banks. Systematic and well-coordinated implementation of FinTech solutions enhances competitiveness, supports sustainable growth, and strengthens banks' positions in the digital economy.

The analysis demonstrates that FinTech innovations play a critical role in improving the economic performance of commercial banks. The adoption of digital banking channels, artificial intelligence, Big Data analytics, and automated processes significantly enhances operational efficiency, reduces costs, and strengthens risk management. These effects contribute to higher profitability, improved asset quality, and increased competitiveness of banks in a rapidly digitalizing financial environment.

The results indicate that FinTech innovations generate measurable economic benefits, including lower operating costs, faster transaction processing, reduced non-performing loan ratios, and improved labor productivity. Importantly, these benefits are not limited to short-term efficiency gains but also support the long-term sustainability and resilience of commercial banks by enabling data-driven decision-making and more effective resource allocation.

Overall, FinTech should be viewed not merely as a technological upgrade, but as a strategic driver of economic transformation in the banking

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sector, reshaping business models and strengthening banks' positions in the digital economy.

Practical Recommendations:

1. Commercial banks should integrate FinTech initiatives into their overall strategic planning to ensure that digital investments directly support economic performance and long-term growth objectives.

2. Banks are advised to expand the use of artificial intelligence and Big Data analytics in credit assessment and risk management to improve asset quality and reduce credit losses.

3. The development of mobile and internet banking services should be prioritized to lower operating costs and enhance customer satisfaction.

4. Greater emphasis should be placed on robotic process automation to improve labor productivity and optimize internal operations.

5. Regulators and policymakers should support FinTech adoption by improving regulatory frameworks, promoting innovation-friendly supervision, and encouraging cooperation between banks and FinTech firms.

In summary, the systematic and coordinated implementation of FinTech innovations can significantly enhance the economic performance of commercial banks and support their sustainable development in the digital economy.

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