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DIGITAL TRANSFORMATION OF FINANCIAL SERVICES: GLOBAL AND REGIONAL ASPECTS

Abstract: The digitalization of financial services, which is rapidly expanding, brings numerous changes through mobile banking, digital payments, and fintech innovations. The aim of this paper is to analyze global and regional trends and their application in Serbia. The study utilized secondary source analysis and a comparative method. The results indicate growth in digital services, accompanied by various regulatory and user trust challenges. Further development depends on regulatory support and digital education.

Keywords: Digitalization, financial services, fintech, regulatory challenges, user trust

1. INTRODUCTION

During the last two decades, the international financial system has undergone profound structural changes, which have significantly redefined global, regional and local flows in financial services. The growth of international financial flows, stimulated by the liberalization and privatization of financial markets, has changed the business conditions and the basic principles of market functioning at the global level (Vesić, Nikolić & Cogoljev, 2019).

Digital transformation encompasses a wide range of changes, including the digitization of all aspects of business, and by this is meant the transition from traditional to digital work models. The basic elements of this process are the application of data analytics, which enables financial institutions to better understand the needs and behavior of users, as well as the automation of business processes and user experience, which directly affects business efficiency. An essential part of the digital transformation is the implementation of digital payments, which provide users with faster, simpler and more secure transactions. The importance of digital transformation is reflected in its potential to enable financial institutions to improve the services they offer, reduce operating costs and gain a competitive advantage in the market.

One of the most important changes in this process is digital transformation and the development of Internet technologies, which have significantly affected the financial sector. In the Balkans and Serbia, these changes have accelerated the introduction of modern technologies, such as mobile banking, digital payments and fintech innovations. Digital transformation enabled faster and more economical money transfer, improved the quality of financial services and increased the availability of financial tools to users throughout the region (Vasić, Srebro & Cvetković, 2023).

At the global level, digitization implies the integration of information and communication technologies into financial processes, while at the regional level, as is the case with Serbia and the Balkans, it represents a key factor in the modernization of the financial sector. These technologies bring not only improvements in efficiency and productivity, but also significant changes in organizational structures, work skills and ways of doing business. However, the specificities of the market in the region, such as legislative challenges and the level of digital literacy, still represent key obstacles in further implementation. The paper will present key aspects of the digitalization of the financial sector, such as mobile banking, digital payments and the application of new technologies, as well as the challenges facing the region, including regulatory barriers, digital literacy and user trust.

2. LITERATURE REVIEW

Today's business environment is characterized by dynamic and rapid transformations, which are the result of the continuous development of technology and the increasing application of knowledge about its use. Technological innovations do not stay only in the sphere of information and communication technologies, but are gradually integrated into other areas of the economy and society. This process has a particularly strong impact on finance and financial services, where digitization brings changes in business models, user expectations and operational efficiency, redefining the basic principles of business in this sector (Stojanović, 2017).

The digital transformation of financial services began with the digitization of monthly reports, enabling paperless business. This process laid the foundation for further development, where financial institutions significantly expanded and deepened their offerings through digital delivery channels. In order to maintain a competitive edge and respond to increasingly complex market demands, financial institutions of all sizes are faced with the need to continuously improve their digital maturity. This process involves not only tactical projects focused on user experience in front offices, but also strategic investments in back-office processes and technological infrastructure. Such investments enable deeper business transformation, increase efficiency, reduce costs and ensure long-term development of digital solutions in the financial services sector (Zelenović & Mijatović-Dukić, 2019).

Technological innovations in financial services have had the greatest impact on payments and money transfers. They contributed to the strengthening of the trend of moving from traditional cash payments to various forms of electronic and mobile payments, as well as to the further development of card systems, including technologies such as PayPass, Gcas and mPOS. Services have been significantly improved through the wider use of ATM and POS devices, which enable quick and practical access. Technological progress has brought about the development of additional channels of communication and services, for example contact centers and SMS notifications, which has influenced the greater availability and accessibility of financial services for users. This advancement is not only changing the way financial institutions do business, but also transforming the daily experience of users, adapting to their needs for faster, safer and more convenient solutions (Dragišić, 2022).

The adoption of new technologies and digitization by financial institutions has brought significant benefits to their operations. These technologies have made it possible to increase benefits and wealth through more efficient management of resources and the provision of advanced services to clients. In addition, investments encouraged innovation and diversification of the offer, while the use of modern technologies contributed to the reduction of information asymmetries between financial institutions and their users. The needs of users of financial services have changed very quickly with the tendency of further change, which implies that there is an increased influence of these technologies on different layers of users of these services (Deutsche Bank, 2020).

As technology advances rapidly, numerous new opportunities are opening up, because through the Internet, users around the world and mobile networks connect faster and more efficiently, integrating into a single global market. This process of digital connectivity enabled the rapid expansion of the field of application of digital technologies in the financial sector. The result is the creation of a wide network of opportunities that enable financial institutions to improve business processes, introduce innovative services and better connect with clients (Kozarević & Ibrić, 2022).

3. GLOBAL TRENDS IN DIGITALIZATION OF FINANCIAL SERVICES

Digital technologies and modern information systems are key factors in the development of financial services and institutions, as they enable the implementation of innovative business models. In the context of the financial sector, these technologies not only enable faster, cheaper and more efficient transactions, but also play a significant role in differentiating banks, insurance companies and other financial institutions in the market (Čelik, 2020).

With the help of digital solutions, financial institutions can provide personalized services to their customers, improve the customer experience, as well as optimize internal processes, such as data analytics and risk management. Also, the application of modern information systems enables greater security in transactions, reduces the possibility of fraud and improves user confidence, which is crucial for establishing a competitive advantage in the market.

Digitization plays a key role in the transformation of the financial sector, as it enables financial institutions to provide services that are faster, more efficient and more accessible to users. In the banking sector, these technologies have enabled numerous innovations that have improved the quality and variety of financial services, increasing banks' competitiveness in the market.

One of the significant innovations was the introduction of automatic speaking machines, which enabled faster and easier interaction with clients. Credit and debit cards, as well as different types of loans, enabled users to have easier access to money and faster transactions. Also, innovations in the transfer of funds, such as electronic transfers, have improved the way in which international and domestic transactions are made (Mirković & Lukić, 2015). Some financial institutions have already introduced digital forms of financial instruments and assets, such as digital currencies, electronic transfers and online lending, which have significantly changed the way the money market works. For example, digital currencies like Bitcoin or stablecoins, as well as other blockchain technologies, enable faster, safer and cheaper transactions, thus

reducing costs for financial institutions and users (Malyshev, 2023). For the sake of illustration, a brief overview of the key aspects of digitalization of the financial sector at the global and regional level is provided.

Table 1: Overview of key aspects of digitalization in the financial sector at the global and regional level

Category	Description	Source
Productivity Growth Driven by Digitalization	A 10% increase in the level of digitalization in the financial sector is associated with an average productivity growth of 0.1 percentage points, with stronger effects in industries rich in intangible capital.	OECD, Digitalisation of Financial Services and Economic Performance, 2022
Access to Finance for SMEs	Digitalization facilitates better credit allocation and reduces credit constraints for small and medium-sized enterprises (SMEs), directly contributing to a more inclusive financial system.	OECD, Digitalisation of Financial Services and Economic Performance, 2022
Development of Advanced Technologies	Innovations such as Artificial Intelligence (AI), blockchain technology, and automation reduce data processing costs and increase operational efficiency in financial institutions.	BIS, The Future of Payments, 2022
Digital Maturity of Banking Institutions	Banks in the Southeast European region exhibit varying levels of digital maturity; leading institutions are introducing globally competitive digital services, while the average level of development remains lower.	Deloitte, Digital Banking Maturity Study, 2022
Regional Trends	Northern Europe leads in digital maturity and implementation of digital services in the banking sector, while Southeast Europe shows significant growth in this segment in recent years.	Deloitte, Digital Banking Maturity Study,

Source: Author's Research

Data from the OECD, BIS and Deloitte indicate that digitalization has a positive impact on productivity, improves access to finance for SMEs, and reduces operational costs through the application of advanced technologies such as artificial intelligence, blockchain and automation. In addition, an analysis of the digital maturity of banking institutions and regional trends shows a clear differentiation in the rapid adoption of digital solutions, with Northern Europe leading the way, while South-Eastern Europe has made significant progress in recent years. These trends clearly demonstrate how digitalization is shaping the global financial sector, as well as its evolution in regional markets.

The digital transformation of financial services brings both advantages and challenges. On the one hand, digitalization enables greater efficiency, faster services and increases the competitive advantage of financial institutions. Key aspects of this process include online cash loans, mobile banking and the development of digital payments, which are becoming more accessible and secure. Digitization also carries certain risks, such as data theft, fraudulent activities, money laundering and hacker attacks. These challenges require constant improvement of security systems and regulatory framework. In this sense, the application of modern technologies, such as artificial intelligence and cloud computing, enables better auditing, risk management and business compliance (Milanović, 2022). The digital transformation of financial services not only changes the way financial institutions operate, but also affects the development of the entire economy and financial system, making them more adaptable and resistant to future challenges.

4. THE IMPACT OF DIGITALIZATION ON THE FINANCIAL SERVICES SECTOR IN SERBIA

Digitization has profoundly transformed many aspects of our daily lives, and its impact is particularly pronounced in the financial sector. In Serbia, as in other countries, digital technologies have redefined the way financial institutions function and interact with users. In Serbia, digitization has enabled the growth of electronic payments and the development of innovative solutions, such as mobile applications for account management, online lending and advanced security systems for the protection of user data. Also, digitization has encouraged the growth of efficiency and

transparency of financial institutions, enabled better access to financial products and services, as well as improved user experience. A brief overview of examples of digitization of the financial sector in Serbia is provided:

1. Introduction of the Instant Payment System (IPS) by the National Bank of Serbia (NBS) - The National Bank of Serbia has implemented the Instant Payment System (IPS), enabling the transfer of funds between payment participants in real time, 24 hours a day, 7 days a week. This system allows users to make payments quickly and efficiently, regardless of the time or day of the week (<https://nbs.rs/sr/ciljevi-i-funkcije/platni-sistem/nbs-operator/ips-nbs/>);
2. Development of electronic and mobile banking - Banks in Serbia have significantly improved their electronic and mobile platforms, enabling clients to access various services such as checking account balances, transferring funds, paying bills and managing finances via the Internet or mobile applications. These services became especially important during the COVID-19 pandemic, when the need for digital channels of communication and transactions increased;
3. Digitization of the loan approval process - Some banks in Serbia have implemented digital platforms that allow clients to apply for a loan, submit the necessary documentation and monitor the status of their request completely online, without the need to physically come to the bank. This reduces application processing time and increases the efficiency of the loan approval process;
4. Implementation of contactless payment cards - Banks in Serbia have introduced contactless payment cards that allow users to make payments simply by touching the card to the POS terminal, without the need for physical contact or entering a PIN for smaller amounts. This technology increases the speed and security of transactions, which is especially important in the context of reducing physical contact during the pandemic (Živković & Vojinović, 2018).

In the context of digitalization of financial services, mobile and internet banking are key channels for performing payment transactions. We will present data on the number of users of these services in Serbia for the period of 2023 and 2024. The data were obtained from the statistical database of the National Bank of Serbia.

Table 2: Number of users by type of specific payment services (internet payment and mobile payment) in 2023.

	Reporting period (quarter)			
Type of service	I trimester	II trimester	III trimester	IV trimester
Internet payment	3.785.112	3.823.484	3.999.511	4.093.621
Mobile payment	3.494.654	3.657.691	3.866.868	4.044.357

Source: Author's Research

Based on the available data, an analysis of the change in the number of users for two types of payment services was performed: internet payment and mobile payment, in the period of 2023 and 2024, through three-month reporting periods.

Internet payment - 2023. year

The number of users in the second quarter increased by 1.01% compared to the first quarter. In the third quarter of the same year, a growth of 4.60% was recorded. During the 4th quarter, growth slowed to 2.35%

Mobile payment – 2023

During the second quarter, the number of users increased by 4.67%. In the third quarter, the growth was 5.72%, and during the last fourth quarter, the growth decreased to 4.59%.

Internet payment - 2024. year

In the second quarter, a growth of 1.65% was recorded. During the third quarter, growth increased to 2.06%, and in the fourth quarter of the observed year, a slight decrease was recorded to 1.91%.

Mobile payment – 2024

In the second quarter of the observed year, a growth of 2.61% was recorded. During the 3rd quarter, the growth was 3.78%, and in the 4th quarter there was a certain slowdown to 3.44%.

By comparing the number of users between 2023 and 2024, growth is observed in all quarters for both types of services during 2024. The number of internet payment users in the first quarter of 2024 is higher by 9.97% compared to the same quarter of 2023, while in the case of mobile payments, this growth is as much as 19.62%. In the second quarter, the number of internet payment users increased by 10.66% compared to the same period of the previous year, while the increase in mobile payment was 17.27%. In the 3rd quarter of 2024, internet payment recorded a growth of 7.97%, while mobile payment grew by 15.12%. In the 4th quarter of 2024, internet payment has an increase of 7.50% compared to the 4th quarter of 2023, while mobile payment grows by 13.86%. The number of mobile payment users is growing at a faster pace than internet payment. Also, growth was more pronounced at the beginning of the year, while it slowed down towards the end of the year.

What is noticeable is that the impact of digitization on the financial sector in Serbia is specific and characterized by challenges, such as the need to adjust the regulatory framework, increasing user trust in digital platforms, as well as continuous improvement of employees' digital skills. It is necessary to emphasize that when it comes to further development and progress in the sphere of digitization of financial services and the financial system in Serbia, it is the improvement of the security of digital transactions, the development of open banking where a step has already been

taken by the adoption of the Law on Amendments to the Law on Payment Services and more adequate support for fintech innovations.

CONCLUSION

Digital transformation is an inevitable process that significantly contributes to improving the competitiveness and efficiency of the financial sector. The use of advanced technologies enables the modernization of financial services, improves customer experience and facilitates business operations. The implementation of digital solutions plays a key role in creating a stable and innovative financial system, which not only supports economic growth, but also responds to the increasingly complex demands of the market and users.

Modern digitized financial institutions are increasingly adapting their business models to the needs of clients, instead of basing them exclusively on product categories. By focusing on customer segments, they enable personalized services, faster availability of financial products and more efficient interaction with users. This approach not only improves customer experience, but also contributes to greater customer loyalty and competitive advantage in the market.

Financial institutions, regardless of their size, are faced with the imperative to continuously improve their digital maturity. This entails strategic investments in modernizing back office operations and technology infrastructure, not just in initiatives that improve user experience at the surface level. An efficiently digitized back office enables faster data processing, greater operational efficiency, more secure transactions and compliance with regulatory requirements. Only through a holistic approach to digital transformation can financial institutions achieve long-term competitive advantage and ensure market stability.

Digitization of financial services in Serbia is becoming an increasingly important factor in improving the efficiency and availability of banking and payment services. Innovations in the financial technology sector, including automated processes and advanced analytical tools, enable faster data processing, cost optimization and improved customer experience. In addition, regulation in Serbia increasingly follows global trends in digital transformation, thereby additionally ensuring the safety and stability of digital financial operations. It is expected that the further modernization of digital services will contribute to greater inclusion of the population in the financial system and stimulate economic growth.

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