

## **Navigating the Digital Horizon: Unlocking Innovative Frontiers in Remote Banking Services**

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### **Abstract**

The rapid development of technology allows every industry including banking to adapt to integrate the banking business with technology. This research discusses the importance of digital transformation in the banking world, especially along with the COVID-19 pandemic. Digital transformation is the main key in increasing bank competitiveness, opening greater revenue opportunities, and increasing net profit efficiency. The utilization of digital channels during and after the pandemic has been an integral part of this change. The factors underlying digital transformation involve the increasingly high demands of technological trends. This study uses an analytical analysis approach from secondary data regarding digital banking. Methods of data comparison, data grouping and expert evaluation were conducted to ensure the analysis becomes more accurate. Research and analyses show that the operating costs of digital banks tend to be 40% lower compared to traditional banks. This cost reduction is largely due to increased efficiency, especially in terms of a 50% reduction in headcount. The future of banking cannot rely on the current cost structure, so digital transformation is a must. The importance of adapting to these changes is not only to survive during the crisis, but also to achieve long-term competitive advantage. Banks need to understand that successful digital transformation will open new opportunities and have a positive impact on financial well-being. Thus, this research underlines that digital transformation is not just a necessity, but a strategic investment that will shape the face of banking in the future.

**Keyword:** Digital horizon, digital banking, remote banking.

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## 1. Introduction

Banks are changing to address issues such as the digitalization of their businesses and the intensification of technological change, the emergence of various barriers, the need to change consumer demand and reduce costs. The pandemic has accelerated the transition to digital channels, had a serious impact on consumer and business finance, and increased financial pressure on banks. Banks are making some potentially significant changes to promote competition in the interests of consumers. Today, banks pay great attention to the development of modern banking technologies, expanding the range of services, providing fast customer service. This is evidenced by the fact that banks provide a wide range of banking services to customers based on remote and digital services. It should be noted that in recent years, banks have expanded their activities in this area, mobilizing large investments in this area to create additional convenience for customers.

As a result, the efficiency and quality of remote banking systems will increase, the scope of customer service of banks and the possibility of providing services without territorial boundaries. It saves banks costs, profits, and efficiency. Especially in the context of technologically developing economies around the world, work is underway to transform the banking system of Uzbekistan based on modern financial technologies. This requires, first, the creation of a regulatory framework in this area and the improvement of existing legislation based on the experience of developed countries.

There are many different interpretations of digital transformation in the available literature. Digital transformation is "a process aimed at improving an object by making significant changes to its properties through a combination of information, computing, communication and connection technologies." It covers a wide range of tasks such as document digitization, e-signature, e-learning, teleconferencing, e-commerce, e-statements, e-payment.

Digitization is the use of technology and innovative technologies to increase the efficiency of certain processes, the development of internal capabilities through cooperation with third parties. Today, the multi-faceted digital transformation is at the forefront of the banking industry. Due to the COVID-19 pandemic, the banking sector will serve to improve financial products, remote and digital services, accelerate banking services and reduce relevant costs for banks.

Digitization and digital transformation are often used as synonyms but differ slightly in meaning. The digital transformation manifests itself as a step after digitalization as a process of continuous interconnection of all business segments and the adaptation of business to the market conditions of the digital economy (Anvarovich, 2020). In addition, Unruh (2022) points out that the digital transformation opens the process of structural restructuring of the economy, financial institutions, and society through the spread of digital technologies. The term "digitization" is widely used in the field of technology, but they are not interchangeable. Digitization is used to describe the process of converting from analog data to digital data, and this is the basis for digitization. At the same time, digitalization (and later digital transformation) reflects any changes in the business model of the company and the firm, as integrated integration and digital technologies are increasingly used to increase business and company efficiency. In recent years, there have been significant changes in the provision and use of

financial services. As a result of the transformation of banks, technological progress and major changes are taking place in the banking sector.

## **2. Material and Method**

This research explains the factors that influence the increase in the provision of remote banking services and the related problems that are essential. Along with the complexity of the dynamics of technological change, a deep understanding of these factors is an important foundation for successful digital transformation in the banking sector. Therefore, the development of research methods is crucial to answer this challenge. The data comparison method is one of the approaches used to explore factors for improving long-distance banking services. Through data comparison, research can identify differences and similarities in the implementation of digital banking services in various financial institutions. This approach opens opportunities to understand best practices that have been implemented by leading banks, as well as identifying obstacles that other financial institutions may face. Thus, the data comparison method becomes the foundation for formulating recommendations and strategies that can increase the effectiveness of digital transformation in the banking sector.

Furthermore, the use of data grouping methods was also a strategic step in this research. Data clustering allows research to categorize banks based on certain characteristics, such as size, business model, or level of digital maturity. Thus, the analysis can be carried out more specifically, allowing researchers to explore variability in digital transformation strategies tailored to the specific context of each financial institution. The use of data clustering methods also helps in identifying emerging trends and patterns among certain groups of banks, thereby strengthening the research conclusions. The importance of expert evaluation is also recognized in the development of research methods. In the context of banking digital transformation, involving experts in the fields of financial technology, risk management and business strategy is a crucial step. These experts provide in-depth insights regarding industry dynamics, potential risks, and opportunities in facing the era of digital transformation. Expert evaluation methods are used to gather diverse views that can cover various aspects, from technological aspects to the sustainability of business strategies.

The importance of analytical methods is a strong foundation in the preparation of this scientific article. Comprehensive data analysis, including techniques such as cluster analysis, regression analysis, and correlation analysis, was used to gain a deeper understanding of the factors influencing banking's digital transformation. Through this method, research can provide a holistic picture of the dynamics of changes that occur in the provision of remote banking services. In line with the complexity of the problems faced, this research development method provides a solid foundation for formulating solutions that are sustainable and relevant to the demands of the times. By involving a variety of methods, this research not only provides an in-depth understanding of the problems faced, but also details implementation steps that can be implemented by financial institutions to achieve success in banking digital transformation.

## **3. Result**

Digitization of banking services, ie the emergence and development of "digital banking" has emerged with the growing demand for more efficient methods of financial transactions, which

can not be established by traditional bank branches, the use of banking services in accordance with the wishes of consumers. Today, the banking industry is undergoing major digital changes, in particular, online deposits, mobile applications, online loans, contactless payment systems and many other electronic accounts are changing radically. Digitization of banking services is based on the automation of back-office tasks such as administrative tasks and data processing, and artificial intelligence in it. This in turn reduces queuing service and pressure on customers in the performance of day-to-day tasks by employees. Digitization of banking services not only allows users to remotely manage their accounts, make deposits, make money transfers, apply for loans, and use personalized money management services.

Initially, traditional banking services were made available online because of technological advances, meaning that settlements and money transfers could be made. Later, online services began to be implemented through mobile banking because of the convenience of users of tablets, smartphones, and mobile devices. Mobile banking allows users to perform traditional banking services through mobile channels, and digital banking includes all banking services available digitally via the Internet. Although most banks still offer online services, only digital banks have developed banking services entirely electronically. Digital banks (virtual banks, neo bank) operate through digital platforms without relying on physical and territorial location. The pandemic has encouraged bank customers to switch from traditional branches to digital channels. According to a survey of retail banking by the Boston Consulting Group (BCG), an average of 13 percent of respondents in 16 major markets used online banking for the first time during a pandemic (an average of 12 percent through mobile banking) and in some markets that percentage is much higher. During the pandemic in China, the use of mobile banking increased by 30 percent, in South Korea by 21 percent, in Spain by 14 percent, in the United States and Italy by 13 percent, and in other countries as well.

Cashless payments also increased significantly during the pandemic. More than 20% of respondents said they had increased their use of digital payment solutions such as internet banking and mobile apps, while more than 10% said the same about credit and debit cards. Recently, especially after the pandemic, the bank has been conducting various business analyzes on the activities of its branches. According to the BCG survey, the use of bank branches during the pandemic decreased by 12 percent, and after the pandemic by 26 percent. During the pandemic, various barriers and social remote rules restricted access to bank branches and forced many customers to register for the first time online or mobile banking. This situation has been welcomed by most customers and, most importantly, the trend towards digital channels may continue even after the pandemic. The use of mobile apps increased by 30 percent during the pandemic and by 19 percent after the pandemic. Non-digital banks will soon cause a variety of problems as new and experienced users choose online banking and digital banking services rather than visiting branches. The risk is that customers who are aware of digital technologies may switch to digitally developed existing competing banks or innovatively developed banks. requires transformation. The results of research and analysis show that the operating costs of digital banks are already about 40% lower than the costs of traditional banks, and they employ about 50% fewer employees.

Effective banks carry out transactions through fewer branches. Time efficiency in branches in efficient banks is 69% higher and each customer carries out banking operations at a cost of 80%

less than the cost of servicing branches. In efficient banks, 65% of calls are made without a human factor, while in traditional banks the figure is 45%. In general, the transformation of traditional banks into efficient banks as a result of digital transformation will reduce the banking cost base by 39% and increase time efficiency by 53%. Even banks that are not currently planning drastic changes in their cost structure may find themselves in an awkward position in front of their competitors faster than they think. Even in the best banks, digitalization remains a priority. They are taking the first steps towards the widespread application of advanced technologies such as artificial intelligence in their business and throughout the bank. The transition to digital banking and the use of new technologies will increase the need for new skills. Financial institutions need staff who can innovate, adapt quickly to change, and collaborate with customers. To date, three-quarters of banks and credit unions have launched a digital transformation initiative, according to a study by Cornerstone Advisors '2022 on expected changes in banking performance in 2022. Another 15 percent of other banks and credit unions plan to develop a digital transformation strategy by 2022.

In 2021, 28 percent of those who started their initiative said they had already done half or more. Among those who started their strategy in 2020, almost half (46%) completed at least half of their strategy.

The digital transformation in banks is an important change in the way banks study the needs of customers, interact with them and improve the way they meet their needs. More specifically, an effective digital transformation begins with the study of customers' behaviors, preferences, choices, likes, objections, and other unspoken requirements. Technological trends that require digital transformation in banks are Requires risk analysis and effective management in banking operations. Fraud detection system and transaction verification eliminates possible mistakes made by customers and bank employees. Large-scale data processing systems with a microservice-based architecture allow for fast and secure processing of transactions to reduce the time spent on operations and transactions. Data encryption methods in data processing with enhanced security save banks from hackers from the disclosure of external and internal data and cases of fraud. As a result, transactions are made securely.

Another technological trend that requires digital transformation in banks is the ability to predict problems that may occur in the future. Reliable data on identifying different scenarios of the economic crisis will help banks to prepare in advance. Thus, before turning banks into other promising and financially profitable industries, it is necessary to make the right decisions and implement them with modern fintech solutions. The trend of digital transformation is accelerating as a result of increasing use of smartphones, improved connectivity to banking channels through them and becoming an important tool for users. The banking industry is also being modernized through multifunctional digital transformation capabilities. The following are the key factors that are important in the implementation of digital transformation in the banking sector.

1. Integration of bank data with the database of relevant government agencies and their effective use. The possibility of digitization of banking services will increase through the integration of banks in the provision of financial services with the database of relevant government agencies (Ministry of Internal Affairs, State Testing Center, Single interactive public services portal). Various practices related to data analysis will be the basis for

- customer learning. Data analysis and integration will help banks develop the desired product, accelerate and digitize services to meet customer needs. Offering new and improved products also serves to strengthen relationships with customers.
2. Modernization of banking infrastructure. The digital transformation of banks requires the integration of innovative digital technologies and databases of relevant government agencies, as well as the modernization of infrastructure. Digitization of infrastructure plays a crucial role in regulating the flow of information required for banking operations. The modernized infrastructure serves to support digital platforms. There has been an increase in the conversion of existing bank branches to digital channels, in particular, an increase in the number of new banks and the implementation of daily transactions through digital channels. That's why traditional banks need to move from having a physical branch to a banking service center that meets customer needs. As a result, the bank is increasing the number of interactive digital channels that connect customers with the bank in real time 24/7. In addition, banking service centers will be encouraged to provide prompt customer service, transparent information and advice. The use of digital tools such as mobile phones should be accelerated to enhance the service. Such digital tools can increase employee efficiency by automating processes and improve the customer experience. Tablet and mobile phone-based payment system forms have helped users reduce transaction times from 5 minutes to 2 minutes 30 seconds. This means that customer service is accelerated and the next customer spends less time waiting.
  3. Improving the bank on the basis of continuous innovation and customer demand requires monitoring the market trends in services to provide effective banking services to a growing number of bank customers, testing innovative products and developing operational service mechanisms. These processes today have a consistent trend of improvement in the banking sector. Banks need to constantly improve the implementation of services through innovative and digital channels, which will accelerate the attraction of customers.
  4. Professional development of bank employees. More than 55% of employees in the banking and financial sector need to improve their skills to meet the existing and changing requirements of functional capabilities. As a result of training of bank employees, employees will have operational and training strategies, thinking style and skills to work with modern financial technologies. In addition to the above, the digitization of banks will make it easier to manage documents, especially the digitization of paper-related transactions, document storage, simplify the search for documents and even provide information to banking regulators. At the same time, banks will be able to gain the trust of regulators and customers through their pursuit of transparency.

The digitalization of the banking system in Uzbekistan is a growing trend of customers, creating great opportunities for banks to increase their efficiency, optimize processes and create convenience for customers with innovative solutions. This is done through the creation of a variety of products, as well as the development of financial literacy and experience of bank customers (Gurendrawati et al, 2023). Banks also plan to take a positive approach to being digital, embracing rapid innovation, and even collaborating with financial market leaders.

The fact that digitalization is an inevitable solution for banks to become competitive, and the following factors contribute to the digitization of banks: growing need for increased security. Security groups in the banking system of Uzbekistan still perform manual risk management functions in banks is doing.

According to a report by Global Limited, banks are able to respond to a small number of threats in real time, while banks are not fast and prophylactic in this regard. All this will damage the reputation of banks, as it could lead to a loss of consumer confidence in the bank as a result of cyber-attacks on banks. Enlargement of the database and increasing demand for analysis. There is a growing need for more digital tools to collect and process large amounts of data. Unless banks invest in software and technologies that collect and automatically analyze digital data, they will not be able to use customer data effectively and create more value for their customers. Customer-friendly services. Traditional banks fight for their loyalty by offering their customers a range of business-related services. Fintex companies are gaining their trust through digital services based on customer service and recommendations. Cheaper prices for services. With appropriate virtual digital services, two-way banking and customers can have more flexibility in saving costs. This is due to the cost-effective processes of banks in attracting customers through competitive prices through the capabilities of modern financial technologies (Musyaffi et al, 2022).

allows you to attract customers. Long-term cost savings using digital approaches in banks, which can reduce the cost to professionals because of automated data analysis, automation and digitization of workflows in the back office. The use of automation and IT solutions will make it easier to do tasks that need to be done manually through software and automated systems. Digitalization creates innovative practices for banks, streamlines processes, and saves long-term costs. In fact, banks should strive to use digital technology tools to meet market demands more effectively.

#### **4. Discussion**

the ongoing progress of remote banking systems requires attention to both practical and theoretical dimensions. Firstly, there is a noticeable deficiency in innovations within the realm of providing banking services remotely. Currently, customers are unable to access the full spectrum of banking services solely through remote means, necessitating a physical visit to the bank for certain transactions. For example, the speed of the Internet and the fact that the Internet does not work well everywhere in the country, the slowness of all banks in the purchase of modern banking technologies and the digitization of banking services, and so on. Second, the risks associated with the digitalization and remote provision of banking services, as well as the increase in various threats. That is, the legal basis of customer services, legalization of money transfers, embezzlement of funds by knowing the one-time SMS-code, mobile applications, logins and passwords that give access to web applications to citizens using bank cards through various frauds, and more. The first steps have been taken to establish a FinCERT center to detect and investigate fraud and computer attacks in banking and financial institutions. By examining international practices in safeguarding information cybersecurity within the banking and financial sector, proposals and conclusions were formulated regarding the optimal model

and structure for a cybersecurity center. The study also focused on devising efficient tools to prevent and counteract financial fraud.

Third, even though the Central Bank of the Republic of Uzbekistan and commercial banks have developed measures to increase the financial literacy of the population and educational and informational materials, the low level of economic literacy of the population still causes some problems in the development of remote banking services. In addition, the Central Bank's financial literacy information and educational resource "Finlit.uz" was launched to reach the population through the Internet. Many animated videos on various topics (banking and financial system, budgeting, credit, deposit, stock market, financial security, insurance, consumer protection, monetary policy) were prepared to explain the essence of financial literacy. The videos are broadcast on TV channels and posted on the Internet (finlit.uz).

Fourth, the creation of an automated system of cashless payments requires the further expansion of contactless payment technology, resulting in the search for new modern forms and means that simplify and further accelerate the system of cash circulation. In particular, in order to expand contactless payment technology and create additional convenience for the population, the service of making payments at retail and paid services without using a bank card through the application "Humo Pay" (smartphone NFC system) installed in mobile applications. It is possible to receive HUMO and UZCARD cards through the Uzkassa device, which is an online NCM, and there is a single device used for payment for goods and services (for cash receipts and bank card payments) for trade and service entities. In addition, the mechanism of payment for services provided to the population by the Tashkent Metro and Toshshahartranshizmat enterprises (subways and buses) with contactless HUMO bank cards in ATTO system validators has been introduced. It should be noted that such work is positive, but not enough.

Fifth, it is necessary to increase the number of digital banks in the banking system of Uzbekistan based on digital banking services. Currently, only BANK APELSIN JSC and ANOR BANK JSC operate as digital banks in Uzbekistan. In particular, the Decree of the President of the Republic of Uzbekistan dated 09.01.2018 No PF-5296 "On measures to radically improve the activities of the Central Bank of the Republic of Uzbekistan" Special attention was paid to the establishment of specialized "digital" banks and banking divisions. The experience of developed countries also suggests the need to improve 7-mode self-service banking centers (Click, Easy, Payment and other applications).

## **5. Conclusion, Implication, and Recommendation**

In the banking system of Uzbekistan, it is impossible to imagine remote banking services without mobile banking, internet banking, ATMs and various applications. These simple-to-use devices today serve as a unique digital platform, ending the traditional interaction between customer and cashier. At present, these external means can be used not only to withdraw cash, get a loan, make a deposit, but also to make various payments for goods and services. It should be noted that customers can use mobile banking at any time, 24/7 smart offices, Click, Easy, Payme and other applications 7/24, ie 7 days a week.

The need for innovative forms of cashless payments is constantly growing. Entrepreneurs and the population are more interested in saving, time-consuming, financial transactions using high



information technology, information. Considering this need, commercial banks are also taking measures to expand the range of remote and digital channels of banking services, while effectively using the opportunities of the global Internet and mobile network. It should be noted that such directions of development have become one of the priorities of the world banking system and the national banking system. Therefore, it is important to rely on foreign experience in the development of remote and digital banking services.

Increasing the competitiveness of banks will enable them to have more revenue and save as much as possible in terms of net profit. Of course, the banks of the future will not be able to function as the current cost structure of banks will therefore require the digital transformation of banks. The results of the research and analysis show that the operating costs of digital banks are about 40% lower than the costs of traditional banks, and about 50% of them have been achieved by reducing staffing. This means that today, banks may be deprived of the ability to remotely identify traditional banking services, digitize them, and dramatically increase revenue and customer numbers unless they innovate in this area. In particular, the banking system of Uzbekistan will further develop the system of remote banking services, study the demand of the population for such products and services and, consequently, make appropriate changes in the banking strategy to ensure the bank's stability and competitiveness in this market segment.

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