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MANAGEMENT OF THE FINTECH INNOVATIONS IN BANKING

The management of fintech innovations in banking during the COVID-19 pandemic refers to the specific strategies, responses, and oversight mechanisms employed by banks and financial institutions to leverage, integrate, and adapt financial technologies during a time of global crisis. The pandemic not only disrupted traditional banking operations but also accelerated the need for digital financial solutions. As a result, the management of these innovations during this period took on unique characteristics and urgencies. The main purpose of the article is to analyze the management strategies and innovations characteristics in fintech to understand whether these innovations are destructive in nature or will phase out with time in post Covid era. Inductive research approach used to examine the characteristics of innovations that influenced the management strategies of fintech innovations during the pandemic. Mixed methods, qualitative and quantitative research methods carried out on this research. Authors focus on primary data collection by secondary data from various sources to understand and interpret innovation management strategies by examining the non-numerical data and analyzing the statistical data.

Keywords: *fintech, banking, management strategies, financial services, innovations, digital economy, COVID-19 pandemic.*

Кілт сөздер: *финтех, банктік қызмет, басқару стратегиялары, қаржылық қызметтер, инновациялар, цифрлық экономика, COVID-19 пандемиясы.*

Ключевые слова: *финтех, банковская деятельность, стратегии управления, финансовые услуги, инновации, цифровая экономика, пандемия COVID-19.*

Introduction. The management of fintech innovations in banking during the COVID-19 pandemic refers to the specific strategies, responses, and oversight mechanisms employed by banks and financial institutions to leverage, integrate, and adapt financial technologies during a time of global crisis. The pandemic not only disrupted traditional banking operations but also accelerated the need for digital financial solutions. As a result, the management of these innovations during this period took on unique characteristics and urgencies.

With physical branches either closed or operating with reduced hours, there was an immediate need to accelerate digital banking solutions to serve customers. Banks had to quickly deploy and scale digital tools, platforms, and services, often at speeds they were unaccustomed to. Many customers were using digital banking tools for the first time. Banks had to provide resources, tutorials, and support to help them navigate these platforms. With an increased volume of digital transactions and queries, banks enhanced their digital customer support through chatbots, helplines, and online FAQs. The surge in online banking activities meant that IT infrastructures were tested. Banks had to ensure their systems were robust, scalable, and resilient. For bank employees, there was a need for secure remote working solutions, including VPNs, collaboration tools, and cybersecurity measures.

The shift to digital and the chaos of the pandemic provided an opportune moment for cybercriminals. Banks had to bolster their cybersecurity frameworks. With phishing scams on the rise, banks took initiatives to educate customers about potential threats and safe online banking practices. As banking operations shifted online, there was a need to ensure regulatory compliance in a new environment. Banks engaged more closely with regulatory bodies to understand, adapt to, and even shape evolving regulations pertinent to the pandemic-driven landscape. With cash handling becoming a concern, banks promoted and sometimes launched new digital payment solutions. The pandemic underscored the importance of financial inclusion. Banks leveraged fintech to reach and serve marginalized populations. Banks had to envisage and plan for multiple scenarios given the uncertainty of the pandemic. Fintech solutions were central to contingency plans, from contactless payment solutions to AI-driven customer support tools.

In essence, the management of fintech innovations in banking during the COVID-19 pandemic was about agility, resilience, and rapid response. It entailed not just the integration of technology, but also the foresight to anticipate challenges, the flexibility to adapt, and the commitment to serve customers in unprecedented times.

Managing fintech innovations in banking post-pandemic requires a careful combination of proactive strategy, agility, and adaptability to the changing financial landscape. The banking sector underwent a rapid transformation during the COVID-19 pandemic, driven by fintech innovations and changing customer needs. While these innovations presented significant opportunities, they also came with associated risks. Effective management and forward-thinking strategies were crucial for navigating these challenges and leveraging the potential of fintech innovations.

The main purpose of the article is to analyze the management strategies and innovations characteristics in fintech to understand whether these innovations are destructive in nature or will phase out with time in post Covid era.

Inductive research approach used to examine the characteristics of innovations that influenced the management strategies of fintech innovations during the pandemic. Mixed methods, qualitative and quantitative research methods carried out on this research. Authors focus on primary data collection by secondary data from various sources to understand and interpret innovation management strategies by examining the non-numerical data and analyzing the statistical data.

Literature review. Inducing innovation in the banking sector during the COVID-19 pandemic has been crucial to adapt to the rapidly changing landscape and meet the evolving needs of customers. The pandemic accelerated the adoption of digital banking services. The COVID-19 pandemic prompted significant innovation in the banking sector, driven by the need to adapt to new challenges and customer expectations. These innovations have not only improved the resilience of the banking industry but also paved the way for a more digitally connected and customer-centric future.

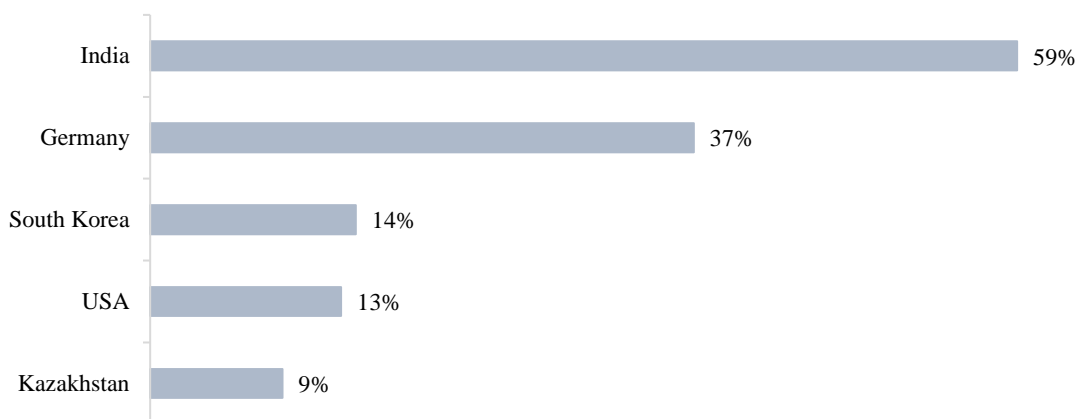
The COVID-19 pandemic accelerated digital transformation in the banking sector, pushing financial institutions to adapt to the changing landscape and meet customer demands for contactless and online services. Banks enhanced their digital banking services, including mobile apps and online platforms, to provide customers with access to their accounts and banking services from the safety of their homes. Virtual customer service options, such as chatbots and video conferencing, were introduced to assist customers remotely and maintain personalized interactions. Many banks expedited the development of digital onboarding processes to allow customers to open accounts and access financial products without visiting physical branches [1]. AI-driven solutions were used to analyze customer data, personalize offerings, detect fraud, and optimize customer experiences [2]. The use of contactless payment methods, such as mobile wallets and contactless cards, surged, reducing the need for physical cash and in-person transactions. With increased digital transactions, banks invested in strengthening cybersecurity measures to protect customer data and transactions from evolving threats [3]. Banks collaborated with fintech companies to leverage their innovative solutions, facilitating the introduction of new payment methods, lending platforms, and digital wallets. Banks played a crucial role in the distribution of government-backed economic stimulus programs by providing loans and grants to individuals and businesses affected by the pandemic. Cloud computing solutions were adopted to ensure scalability and flexibility for the increased digital demand and remote work scenarios [4]. Kazakhstan's fintech sector, though emerging, demonstrates promising potential due to growing investments, government support, and increasing consumer interest [5], [6]. In Kazakhstan, digital innovations like those offered by Kaspi.kz were particularly transformative. The integration of digital technologies not only enhanced customer engagement through user-friendly mobile applications and payment systems but also helped sustain economic activities during the pandemic. The Kaspi App model, for instance, demonstrated the importance of combining various financial services into a single, easily accessible platform, fostering rapid growth in digital transactions [7].

During the COVID-19 pandemic, fintech played a pivotal role in helping banks navigate economic challenges, manage risk, and maintain essential banking services. Researchers identified in their works the digital transformation in the banking sector. In this article authors tried to analyze banks comprehensive digital transformation strategies which helped to adapt to the new normal and remain competitive in a rapidly evolving financial landscape.

Results and Discussion. Financial technologies have witnessed significant innovations in the banking sector, especially in response to the challenges posed by the COVID-19 pandemic. The COVID-19 pandemic ushered in a new era of innovation in the fintech and banking sectors. These innovations have

played a crucial role in ensuring the continuity of financial services while adapting to the new normal. To determine whether fintech innovations are destructive in nature or simply temporary trends that might fade in the post-COVID era, needs to analyze some of the main strategies and innovations that emerged or accelerated during the pandemic.

Banks played a crucial role in implementing economic relief programs during the COVID-19 pandemic to support individuals and businesses facing financial hardships. These programs involved providing loans, grants, and other financial assistance to mitigate the economic impact of the pandemic (Figure 1).



India – 1.7 trillion, Germany – 1,4 trillion, Korea – 200 billion, USA – 3 trillion, Kazakhstan – 14 billion

Figure 1 – **Government support as a result of Covid as a share of 2019 GDP**

**Completed by author according to KPMG and Deloitte data [8, 9]*

These programs aimed to provide financial stability, maintain employment, and stimulate economic recovery in the face of unprecedented disruptions.

In the table 1 some strategies and approaches that banks have adopted to foster innovation during the COVID-19 pandemic is shown.

Table 1 –

Strategies, inducing innovation in the banking sector*

Digital transformation acceleration The pandemic accelerated the shift towards digital banking. Banks expedited the development of contactless payment options, online account opening, and virtual customer service.
Remote work solutions Banks adopted remote work technologies and solutions to ensure business continuity. This included the rapid deployment of secure remote access and collaboration tools.
Data analytics and AI Banks leveraged data analytics and artificial intelligence to understand changing customer behaviors and offer personalized financial advice. These technologies also helped improve fraud detection and credit risk assessment.
Economic relief programs Many banks collaborated with governments to facilitate the disbursement of economic relief funds to individuals and businesses. They developed digital platforms for processing loan applications and payments quickly.
Cybersecurity enhancements Banks invested in strengthening cybersecurity measures to protect against the increased threat of cyberattacks during the pandemic. This included advanced threat detection and employee cybersecurity training.

**summarized by the authors in accordance with the performed analysis*

The World Bank's Global Findex Database shows the emphasizing the global shift towards digital banking due to the pandemic (Figure 2).

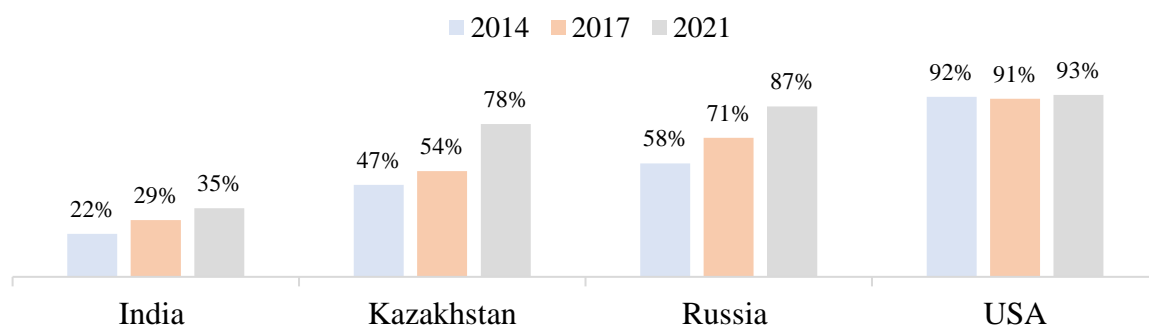


Figure 2 – **Made or received a digital payment (% age 15+)**
 *completed by author according to World Bank's Global Findex Database [10]

According to the analysis, electronic payment in Kazakhstan three times increased comparing with 2017 (Figure 3).

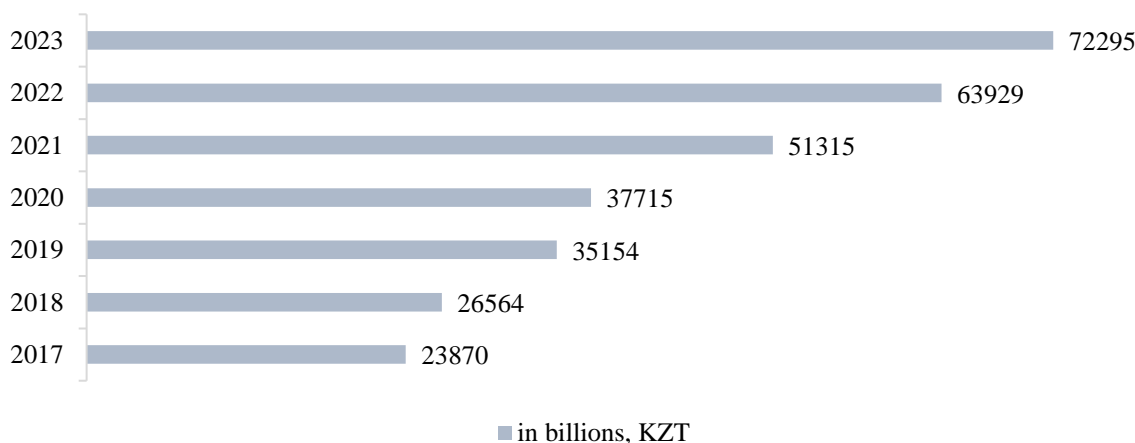


Figure 3 – **Electronic payment statistics in Kazakhstan**
 *completed by author according to data from the National Bank of Republic of Kazakhstan [11]

Every country in a survey by eMarketer was reported to have experienced an increase in mobile contactless adoption between 2019 and 2021. China is the leader when it comes to mobile payments, with 87.3% of the population reported to use contactless payment methods. However, the US saw the greatest increase in adoption within the two years of period, rising from 29.0% to 43.2% and overtaking India (Figure 4).

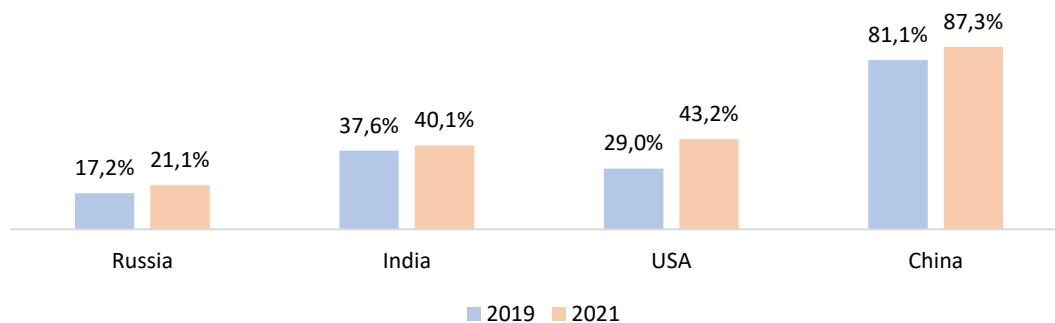


Figure 4 – **Mobile contactless payments in 2019 and 2021**
 *completed by author according to the data from eMarketer.com

The management of financial technologies during the Covid-19 pandemic was pivotal in sustaining economies, businesses, and individual lives. Financial institutions, fintech startups, and governments had to rapidly adapt and evolve to meet changing customer behaviors, preferences, and needs during the crisis.

Banks and financial institutions have been on a digital transformation journey for years. The pandemic simply expedited this shift. Many banks fast-tracked their digital transformation strategies, focusing on providing customers with a seamless online experience. Banks intensified their focus on providing comprehensive online services, as physical branch visits became limited. This is not a temporary change. The convenience, efficiency, and global reach provided by digital platforms are too substantial to be reversed.

The demand for and adoption of contactless payment solutions soared as people preferred touch-free transactions to minimize virus transmission. To minimize physical contact, there was a marked shift towards contactless payment methods, such as mobile wallets and contactless cards. Contactless payments are not only hygienic but also offer unparalleled convenience. They reduce the time of transaction and also decrease the physical infrastructure (like POS machines) needed. Given their convenience, it's likely that contactless payments will continue to grow, even in the post-COVID era.

The need for social distancing pushed banks to adopt digital onboarding processes, which allowed customers to open accounts and access services without visiting a branch. Digital onboarding processes, including remote identity verification tools, became essential to continue acquiring new customers. It reduces paperwork, speeds up processing times, and provides customers with instant access to financial products. This trend is expected to persist given the clear advantages in efficiency and customer experience.

With physical branches less accessible, many banks integrated AI-driven chatbots for 24/7 customer service. AI-powered chatbots became more prominent to handle customer inquiries around the clock, especially when call centers were overwhelmed or under-staffed. These chatbots were vital in ensuring uninterrupted customer support. AI solutions can handle a vast number of simultaneous inquiries. Their cost-effectiveness and scalability ensure that AI-powered solutions will continue to be integral in fintech.

With increased digital activities, there was a parallel rise in cyber threats, prompting fintech solutions to focus on bolstering cybersecurity. With an uptick in digital banking activities, cybersecurity measures were bolstered to protect against an increase in cyber threats and fraud. With the rise of digital transactions, cybersecurity becomes paramount to protect user data and maintain trust. As digital interactions increase, the focus on cybersecurity will only intensify.

The pandemic led to a surge in demand for loans and credit. There was a push for digital-first loan application and processing, especially for pandemic-related relief efforts. Many banks adopted fintech solutions for faster loan processing, especially relevant for the distribution of pandemic-related relief funds. Fintech platforms offered digital lending solutions, enabling customers to apply for loans and receive approvals online. Digital loans, especially microloans, provide quick solutions for users in need of funds. Their automated risk assessment often speeds up approval times. Their convenience ensures they'll likely continue, although there might be more regulatory scrutiny to ensure fair lending practices.

As consumers faced financial strains, fintech innovations centered around tools and apps to help users track, manage, and optimize their finances. Personal financial management tools provide users with insights into their spending habits, investments, and savings, promoting financial literacy. As consumers become more finance-savvy, these tools will likely persist and evolve.

The need for transparent, secure, and swift cross-border transactions led to heightened interest in blockchain solutions during the pandemic. Blockchain provides a transparent, immutable ledger, making transactions more secure and traceable. While blockchain has applications beyond fintech, its adoption within fintech will continue, especially in areas like cross-border payments.

Adoption of cloud technologies surged, allowing banks to be more resilient and agile in their operations and service delivery. Cloud technologies offer scalability, flexibility, and cost-saving advantages over traditional IT infrastructure. The shift to cloud is a strategic move and will continue as institutions look for efficient operational models.

Fintech has significantly transformed the activities of banks, reshaping their operations and customer interactions. These technologies have enhanced service delivery by introducing digital platforms such as mobile banking apps, online payments, and digital mortgages, providing customers with seamless and user-friendly experiences.

Fintech has driven the evolution of new business models, with banks becoming comprehensive service providers through digital ecosystems. These innovations have boosted competitiveness, allowing banks to

meet evolving customer expectations and effectively compete with fintech startups. The role of regulatory support and partnerships with technology providers is critical in strengthening this competitiveness.

Conclusion. The COVID-19 pandemic significantly influenced fintech innovations in the banking sector. The urgency to meet changing consumer needs and the challenges posed by the pandemic environment fostered rapid advancements in technology, prioritizing digital solutions, and enhancing cybersecurity. These innovations have not only helped banks adapt to the challenges of the pandemic but also laid the foundation for a more digitally-driven and customer-centric banking industry. The COVID-19 pandemic accelerated many trends that were already emerging in fintech and banking. The industry's focus became primarily centered on providing safe, secure, and efficient services in an increasingly digital world.

Most fintech innovations that gained traction during the COVID-19 pandemic have foundational benefits that are likely to ensure their longevity. They aren't merely reactionary measures to the pandemic but are rather aligned with the long-term trajectory of the financial industry towards digital, efficient, and customer-centric solutions.

However, challenges remain, including customer readiness, high investment costs, and cybersecurity risks. Addressing these challenges requires ongoing innovation, robust regulatory frameworks, and enhanced customer education. Fintech's integration into banking continues to reshape the sector, enhancing efficiency, accessibility, and innovation while presenting new complexities in the financial landscape.

While it's termed "disruptive", this doesn't imply destructiveness in a negative sense. Instead, fintech innovations disrupt traditional banking models by introducing more efficient, customer-friendly alternatives. Given their inherent advantages, it's unlikely that these innovations will phase out in the post-COVID era. Instead, they'll likely evolve and further integrate into the mainstream financial ecosystem.

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Дугта А., Досжан Р.Р., Куанова Л.А.

БАНК ҚЫЗМЕТІНДЕГІ ФИНТЕХ ИННОВАЦИЯЛАРЫН БАСҚАРУ

Андатпа

COVID-19 пандемиясы кезінде банк ісіндегі финтех инновацияларын басқару жаһандық дағдарыс кезінде қаржылық технологияларды пайдалану, біріктіру және бейімдеу үшін банктер мен қаржы институттары пайдаланатын нақты стратегияларды, әрекет студі және қадағалау тетіктерін білдіреді. Пандемия дәстүрлі банк операцияларын бұзып қана қоймай, цифрлық қаржылық шешімдерге деген қажеттілікті арттырды. Нәтижесінде, осы кезеңде инновацияларды басқару бірегей сипаттамалар мен өзектілікке ие болды. Мақаланың негізгі мақсаты – бұл инновациялардың жойқын сипатқа ие екендігін немесе Ковидтен кейінгі дәуірде жойылып кететінін түсіну үшін қаржылық технологиялар секторындағы инновацияларды басқару стратегиялары мен сипаттамаларын талдау. Индуктивті зерттеу әдісі пандемия кезінде финтех инновацияларды басқару стратегияларына әсер еткен инновациялық сипаттамаларды зерттеу үшін қолданылды. Бұл зерттеуде аралас әдістер, сапалық және сандық зерттеу әдістері қолданылды. Авторлар сандық емес деректерді зерттеу және статистикалық деректерді талдау арқылы инновацияларды басқару

стратегияларын түсіну және түсіндіру үшін әртүрлі көздерден бастапқы деректер мен қосымша деректерді жинауға назар аударады.

Дутта А., Досжан Р.Р., Куанова Л.А.

УПРАВЛЕНИЕ ФИНТЕХ-ИННОВАЦИЯМИ В БАНКОВСКОЙ ДЕЯТЕЛЬНОСТИ

Аннотация

Управление финтех-инновациями в банковской сфере во время пандемии COVID-19 относится к конкретным стратегиям, мерам реагирования и механизмам надзора, используемым банками и финансовыми учреждениями для использования, интеграции и адаптации финансовых технологий во время глобального кризиса. Пандемия не только нарушила традиционные банковские операции, но и усилила потребность в цифровых финансовых решениях. В результате управление этими инновациями в этот период приобрело уникальные характеристики и актуальность. Основная цель статьи – проанализировать стратегии управления и характеристики инноваций в сфере финансовых технологий, чтобы понять, носят ли эти инновации деструктивный характер или со временем исчезнут в постковидную эпоху. Индуктивный исследовательский подход использован для изучения характеристик инноваций, которые повлияли на стратегии управления финтех-инновациями во время пандемии. В ходе данного исследования проводились смешанные методы, качественные и количественные методы исследования. Авторы сосредотачивают внимание на сборе первичных данных и вторичных данных из различных источников, чтобы понять и интерпретировать стратегии управления инновациями, изучая нечисловые данные и анализируя статистические данные.

