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FinTech and Pakistan's Banking Industry: An Exploratory Study

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Abstract

Technological development in the financial sector has influenced different segments of consumers differently. In the last decade, like other industries, driven by technological adaptation, the banking industry has also undergone regulatory changes and has, therefore, influenced how consumers interact with traditional financial services. FinTech has contributed to some of this transformation. Numerous new startups are already transforming the financial technology sector by creating cutting-edge financial services and products for consumers. This study provides a better understanding of the current position and FinTech implementation strategy in Pakistan's commercial banking sector. It also investigates the barriers to adopting Fintech and its impact on the banking sector. Twelve in-depth interviews were conducted with the assistant manager, operations manager, and bank branch manager as part of the qualitative study. These interviews provided insights into the current situation of the banking industry to Fintech. The factors reported in this study are Challenges and Barriers to the adoption of Fintech. Factors are Lack of Budget, Lack of Rules and Regulations, Cybercrimes, and Hacking. Requirements for the adoption of Fintech factors are E-commerce activities, SBP Role, Training, and Advanced ICT Infrastructure. The impact of Fintech on Pakistan's banking sector is efficiency, innovation, competitiveness, and customer service. The study contributes to the knowledge of practice-related stakeholders, offering valuable insights into Fintech and its effects on the banking industry in Pakistan. The study thus offers valuable insights for policy managers who are engaged with promoting Fintech in Pakistan's banking sector to offer better services to customers and upgrade industry practices.

***Keywords*:** Banking Sector, Financial Technology, Innovation, Pakistan

1. Introduction

In the banking sector, Fintech plays a role in the digitalization, innovation, and adaptation of technological business models (Elia, 2023). Fintech refers to an innovation that can enhance existing facilities of financial institutions and industry (Rauniyar, 2021), provide services directly to the customer (Puschmann, 2017), transform traditional firms and industry services magnificently (Gomber, 2018), facilitate entrepreneurship with new gateways (Maghawry, 2022), provide financial services in standardize mode and can mitigate the risk of leaking private information (Stulz, 2019). Some of the innovations that are central to Fintech include artificial intelligence, P2P lending, e-banking, m-banking, crowdfunding, and blockchain (Chen et al., 2019). Traditional institutions are modifying their services to reach the standards of fintech companies to narrow the gap between them, although the path to modification is full of challenges (Pollari, 2016).

Fintech as a topic to understand and explore the interaction between information technology and financial services has recently attracted the attention of researchers from across the economies (Galchenkova & Chupsa, 2020). Fintech services go beyond the services provided by traditional financial institutions. Due to the efficient services possible through Fintech, it has offered itself as a competitive intervention within the financial markets to attract many customers (Kaur et al., 2021). One of the main reasons that have spurred the growing adoption of Fintech is the less efficient old services of banks and the rising demand from customers to serve their needs at a faster pace and with greater convenience. Hence, banks are adopting advanced technology platforms for delivering their services in new, faster, and more reliable ways (Romānova & Kudinska, 2016).

As compared to conventional banking, Fintech does not need to make long-term relationships with its customers. It is because the access to information depends on big data (Wang et al., 2021) readily available to customers. The exchange of services is developed through an internet platform, which helps to reduce the risk for the investment or borrowing, providing great confidence to investors or lenders and borrowers who do not need to communicate through a third party because they interact directly with each other (Berg et al., 2022; Audi et al., 2023). Some other services provided by Fintech, similar to banks, are payment services. Due to such a competitive environment between Fintech and banks, banks have started to introduce innovation in their activities, which can cause interference with the clients (Romānova & Kudinska, 2016). While the services of the banking sector and Fintech seem familiar, the way to perform operations in different banking activities relies more on the bundled method compared to the unbundled approach that Fintech takes (Navaretti et al., 2018; Audi et al., 2022).

The combination of financial technology and banking services plays a vital role in the development of the banking sector (Basdekis, 2022; Ali & Audi, 2023). In fact, with the growth of Fintech firms, the consumption, savings, investment, and production activities in the economy have started to match with international markets (Zhang et al., 2020). The innovations developed by Fintech firms would be an advantage in improving the imperfections in

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financial systems, for example, addressing challenges related to tax invasion, regulatory activities, payment transactions, and fake information (Lukonga, 2018). The financial industry has a significant role in the growth of the economy (Drigă, 2014; Audi & Ali, 2023), and its importance has increased internationally after the financial crisis of 2008. Internationally, the adoption of Fintech has been witnessed to have attracted growing investments (Frost, 2020). Although the adoption of fintech services in Pakistan's financial sectors is new and limited, it is growing (Butt, 2019).

The purpose of this paper is to investigate and understand the impact of financial technology on the banking sector in Pakistan. The rationale is that the existing literature on the impact of Fintech on the banking sector needs to be revisited in the Pakistani context. As emerging technologies and regulatory environments continue to develop, previous studies need to be updated. The current paper offers a literature review based on the most recent findings to fill this gap and further both the evidence and debate. Moreover, this qualitative study examines the perceptions and experiences of banking industry stakeholders to understand better the impact financial technology is having on the traditional financial services model and how the existing banks, as well as new entrants, are perceiving the challenges and the support it offers. Thus, the paper contributes to the extant literature by exploring the adoption of Fintech in a developing economy context, Pakistan, which is limitedly researched in this area. Another contribution relates to informing the practice and policy-related stakeholders who can support technological innovations and their adaptation to make the country's banking sector more competitive locally and internationally.

The study is led by an overarching question, i.e., How does Fintech impact the practices, services, and, therefore, efficiency of the banking sector in Pakistan? Led by this question, the study examines the (a) growth of Fintech in banking sector services, (b) explores challenges to the execution of Fintech in Pakistan's banking sector, (c) investigates the various requirements for the implementation of Fintech in the country's banking industry, and (d) ascertains how Fintech can improve the efficiency of the banking sector helping employees and is favorable for customers.

2. Literature Review

Fintech is a developing structure that is increasing and creates bad news for traditional banks (Frost, 2020; Nguyen, 2019; Stulz, 2019). According to Schindler (2017), Fintech is getting more attention as compared to traditional banks because of the more profound and excellent innovations that change the method of performing financial services. The alliance between the banking sector and financial technology improved the services and made customers pay attention to modern activities (Leach, 2002; Ryals, 2001). Traditional approaches offer limited service satisfaction to customers, which hurts banks' profitability (Sadigov et al., 2020). Fintech has the potential effect on the financial industry as the new product entrants from Fintech pose challenges to the financial industry (Philippon, 2016). The development of financial technology can have a positive effect on economic development. This is seen in the case of Pakistan as well, where the economy is in a transformational phase, and the adoption of Fintech services by the banking sector offers positive outcomes (Sadigov et al., 2020).

With the rapid growth of Fintech, the service of lending and borrowing has become more accessible (Chishti, 2016). Frame et al. (2018) stated that the change in the banking sector started at least 30 years ago due to technological advancements. However, in recent years, the introduction of Fintech has had a dramatic effect on the banking sector. It has played a vital role in the modern world in performing financial services and operations.

2.1. Fintech – A Historical Perspective

The first phase of Fintech starts from 1866 to 1967. There is a connection between finance and technology making these work together. Financial technology is used in the banking sector, insurance companies, and stock exchange for stock and cash transactions. Currently, the structure of Fintech is based on the modern phase (Cuesta et al., 2015), which has led the 19th-century Fintech to enter its second phase. The second phase of Fintech is from 1967 to 2008. Since the 1960s, the system of payment has been developed and established in the banking sector. For example, in 1968, the inter-bank computer was set up in the UK, and inter-bank paying transactions started in the US in 1970, respectively. Interbank financial communication was established worldwide in 1973, and the Basel Committee on Banking Supervision (BCBS) was built in 1975 to set the standards for bank regulations. These establishments led the world in the agreement of Fintech internationally and worked to develop this technology over time (Gyntelberg et al., 2009). In the second phase of Fintech, the banking sector started to adopt Fintech innovations, such as ATMs, which were adopted globally (Shah & Ali, 2022). However, there are many challenges attached to the adoption of Fintech in the field of banking and financial systems. There were dangers of risks exposed like black Monday, which had a global impact in 1987, and from 1997 to 1998, there was a considerable collapse in Asia and Russia, which caused the financial crisis (Arner, Barberis, & Buckley, 2016).

The third phase of Fintech started in 2008 and continues to the present day. Over the past few years, the adoption of technology and innovation in society has convinced customers to make their financial transactions from digitalization rather than performing from traditional methods. The involvement of Fintech started to have a more substantial impact on society when a financial crisis happened from 2007 to 2009. Consumers lost faith in traditional institutions for dealing with their finances. According to Buchi et al. (2019), in the year 2015, customers

started to have confidence in Fintech innovation rather than using services provided by people in the US as 72% of consumers had faith in Fintech, and 28% in the banking sector. Fintech provides its services at less cost than banks, which makes it more attractive to people. The development of Fintech is different in developed countries than in developing countries. Developed countries like the US, the UK, and European countries focus on the four main areas of Fintech. The first are payment systems, lending services, and robotic advice services, which make financial and investing areas develop that cannot be done by traditional banks (Santos, 2018; Ali et al., 2023). Secondly, Fintech is beneficial for managers; it reduces risk and makes better compliance in handling banking operations and risk management. Thirdly, with the rapid growth of Fintech, cybercrimes also increased. Cyber security plays a significant role in protecting consumers, regulations, and the government against crimes. Thus, FinTech is creating systems with safe and sound data to protect its business from cybercrimes. Finally, Fintech builds better payment systems for both local and global payments, which helps to develop infrastructure for both information and communication technology (Arner et al., 2020; Shah & Ali, 2023).

Fintech services offer challenges to the traditional banks that provide innovative products to consumers in the financial area. In developing countries, Fintech services are attracting the interest of the stakeholders. Governments are encouraging the adoption of Fintech policies in developing countries such as in Asia and Africa for the development of economies. In 2016, these countries had more than 1.2 billion people who still needed bank accounts. Fintech can cater the needs of such segments of people through offering them access to better financial services (Arner, Barberis, & Buckey, 2016). In the 21st century, Africa started to develop in the field of Fintech by interlinking its underdeveloped banks with the rapidly growing innovation of Fintech, making financial services through mobile phones. For example, in 2007, M-Pesa was launched in Kenya. According to Dotsika (2019), more than 43% of transactions are made through M-Pesa accounts.

2.2. Fintech in Pakistan

In the last five years, there has been rapid growth in the inclusion of digital payment; one of the reasons for this change is due to COVID-19 which make a necessary attempt to utilize Fintech in Pakistan. In recent years, several fintech companies have started to rise in Pakistan. However, the first attempt to adopt Fintech was made by the banking sector. It is believed that Fintech can help to save time, introduce innovative products, and make Pakistani banks compete on an international level. The banking sector in the country has started to change due to the inclusion of Fintech, which has become the main reason for the success of banks. The products introduced by banks with the help of Fintech are mobile banking, electronic banking, and internet banking. For keeping the long-term relationship with customers, implementation of Fintech becomes the most important key factor (Butt & Khan, 2019). However, there is considerable scope for bank managers to take the responsibility of training their employees on fintech services to create reliable relations between banks and clients.

2.3. Regulations for Fintech

Regulators and institutions are developing policies for the smooth adoption of Fintech services. However, the rules and regulations are not uniform across countries, which invites some uncertainties on how to deal with fintech adoption challenges following common principles at the global level. The UK is leading in fintech services., and has established the Fintech policies that are leading the world (Gulamhuseinwala et al., 2015). After the financial crisis, FCA provided supportive Regulation to the UK for the entire financial sector, mainly in the area related to Fintech. The policies made for Fintech are accessible, transparent, and have a leading approach.

First, FCA supported the development of Fintech for innovation projects in businesses and issued a banking license to Atom, which was the first Fintech service in the UK and is now known as a challenger bank {Lu, 2018 #43}. Furthermore, FCA also supported the 2015 approval of 300 above innovations for the firms. Second, to test the innovative Fintech products produced, FCA provides a sandbox where these companies take tests with safety and space (Gulamhuseinwala et al., 2015). On 1 February 2019, FCA finalized rules for Fintech's services in electronic money and implemented these rules on 1 August 2019. Furthermore, in 2020, due to the COVID-19 situation, many significant innovations to develop the fintech area were delayed. For example, regulations related to crowdfunding decided to be published in October, but regulators officially applied these rules in 2021(Ashurst & Tempesta, 2021).

From 2006 to 2015, regulators from China published a laissez-faire approach for the management industry at the early stage of the Fintech area (Rupeika-Apoga & Thalassinos, 2020). The regulators did not focus on recognizing the occurrence of these industries, which caused circumstances like not being able to publish rules and tools for this financial practice (Ranchordás, 2015). Many consequences appear for this free stage, for example, liquidity scarcity, fraud in the payment system, and closure of Fintech. This also impacted the financial system, while the protection of Fintech institutions and the license for financial services were also discharged.

The regulation framework for China is known as ONE plus THREE for the Fintech development. The ONE in this approach represents online lending. In 2016, the agreement on the online lending issue in China described the requirements of Fintech practices that need to be followed. The ONE also describes the position of Fintech, which includes banks and central regulation that is related to financial technologies. The THREE represents Recordation Act 2016, Payment Deposit Management System 2017, and Disclosing the Information of Fintech 2017. These acts provide a detailed list of regulations that the Fintech sector needs to go along with and also provide consumers

from whom they can do an investigation of Fintech service background (Chen et al., 2021). Besides the UK and China, Australia also plays a vital role in the Fintech regulatory development.

The regulator system in Australia, known as ASIC, provides similar services to its economy as the UK regulator supply sandbox, which gives the Fintech industry space and flexibility to develop the Fintech market. Apart from these, regulators offer their help to build innovative products by giving guidance that helps to understand regulations. ASIC also enters into agreements with other Fintech regulator countries to gain knowledge about the Fintech market (Reeves et al., 2019).

In the context of Pakistan, many regulators are operating Fintech and related technology. These include the SBP, SECP, PTA, NADRA, and MIT. According to (Noreen et al., 2022), from the 55 countries surveyed, Pakistan is ranked 21st for the regulation environment to monitor the rapidly growing financial technology in the field of mobile transactions. In Pakistan, SECP encouraged Fintech innovation by launching a startup portal in November 2019. This startup portal includes many features like online videos for starting a new business, simple registration tutorials, contact with mentors, and online guidelines for financial technology (Leghari, 2020). In 2016, PTA published regulations for mobile banking implementation technology (Noreen et al., 2022). PTA should provide the license for the approval of using mobile banking for any entity, and then it should also be approved by SBP (Leghari, 2020). In Pakistan, verification issued by the NADRA to the specific industry consumers charged fees on selected inquiries for commercial sources. At the level of the industry, the inquiry cost was reduced to 10 rupees for verification on opening a mobile account in the year 2018 (Noreen et al., 2022). Pakistan's government needs more time to develop Fintech aspects, which can affect financial inclusion. The recognition update in 2018 includes promoting digital payment transactions, lowering the cost of verification for opening digital accounts, encouraging developing innovation, easy accessibility of ATMs, and linking the microfinance sector to the digital sector.

3. Methodology

This study is supported by an exploratory approach, which helps to understand and seeks new perspectives into what is going on and how much the findings seem to be valuable. It also sheds new light on assessing requirements and challenges for achieving the research objective by conducting questioning (Schell, 1992). The researchers conducted a qualitative investigation using in-depth semi-structured interviews. An interview lasted for approximately 30 minutes and explored the perceptions and lived experiences of respondents to understand the dynamics of Fintech in the context of Pakistan's banking industry.

Twelve semi-structured comprehensive interviews were conducted with the Assistant Managers, Operations Managers, and Bank Managers in the Lahore region, which is an urban setting and offers rich exposure to customers coming from across the country. So indirectly, the sample captures the dynamics of the country also, but indeed with the limitation of not generalizing the findings. Saturation point was achieved after twelve interviews, and therefore no more respondents were recruited as new insights into the conceptual categories started to produce similar evidence. To achieve a fair representation, the sample was diverse by age, years of experience, occupation, and gender. In line with research ethics, participants' identities have been withheld to maintain confidentiality. Table 1 captures the diversity of sample respondents.

Table 1: Sample Diversity

Sr. No.	Names	Age	Experience in years	Gender	Job Role
1	Respondent 1	53	26	Male	Branch Operations Manager
2	Respondent 2	56	24	Female	Branch Operations Manager
3	Respondent 3	49	26	Male	Branch Operations Manager
4	Respondent 4	47	26	Male	Branch Manager
5	Respondent 5	42	20	Male	Branch Manager
6	Respondent 6	40	16	Male	Branch Manager
7	Respondent 7	38	20	Male	Branch Manager
8	Respondent 8	35	17	Female	Branch Manager
9	Respondent 9	37	20	Male	Assistant Branch Manager
10	Respondent 10	40	10	Female	Assistant Branch Manager
11	Respondent 11	34	9	Male	Assistant Branch Manager
12	Respondent 12	32	10	Male	Assistant Branch Manager

The 12 participants had diversified experience ranging from 9 to 30 years. The interviews constituted a long relative and informative discussion regarding the *practices, services, efficiency, and challenges of the Fintech in Pakistan's banking sector*. The interviews were carefully transcribed, and thematically analysed to inform the findings presented in the next section.

4. Findings and analysis

4.1. Challenges and Barriers to the Adoption of Fintech

Many things are required to implement technology in an industry (Zawra, 2017). The banking sector is an important industry and vital for the economy (Kamel, 2005) because many settlements and payments are made through banking channels locally as well as internationally (Mills, 2016). The respondents reported a number of barriers which need to be addressed for offering effective banking services in Pakistan.

4.1.1. Lack of Budget

To run any program effectively or enjoy long-term benefits, budget and funds and required for meeting the investment needs or bearing the expenses related to organisational operations (Bloomfield, 2006; Braunstein & Welch, 2002). In Pakistan, investors hesitate or avoid bearing expenses. They are hesitant to bear high costs but still need assurance all work would be done effectively. That is why they hesitate to issue funds for Fintech Technology, and that is why Pakistan's banking system is not using better technology. So, lack of budget is a great challenge and barrier for the banking sector to implement Fintech as the following representative evidence suggests.

"It is a need of the hour that all organizations use Fintech as it may solve many issues of the organization. However, the main hurdle to adopting Fintech within the organization is a lack of budget, as some organizations' leaders do not want to enhance their expenses" R12.

The perennial barrier for any bank to adopt Fintech is funding by the top management, as many banks are still developing their product and services in the market" R5.

"It is considered that FinTech is based on new technologies, and many banks' management cut their expenses and do not replace their existing machinery with new ones. To replace existing machinery with the new one, there is a need for capital funding, which is a significant barrier to adopting Fintech" R6.

4.1.2. Lack of Rules and Regulations

Lack of well-developed regulatory framework was also identified as a barrier to the adoption of Fintech platforms hence limited services. Implementation of rules and regulations is necessary for the success of any organization (Kerwer, 2005). An organization or even a country, cannot run properly without rules and regulations (Florini, 2013). These are made and followed for the long-term benefits. There is a deficiency in Pakistan's banking sector; rules and regulations are violated, which is a significant hurdle to implementing fintech in the banking industry.

"The respondent asked that barriers to entering Fintech in the banking industry included technological innovation, licensing, and supervisory regulations" R3.

"The barrier to adopting Fintech in the banking sector is the lack of regulation and rules because there are chances that these are violated in Pakistan easily" R4.

4.1.3. Cybercrimes and Hacking

Cybercrime and hacking are a significant threat to implementing Fintech in Pakistan. Many people have relatively limited technological knowledge and still prefer to use conventional methods to deal with banking matters due to the fear of cybercrimes and hacking. This undermines the efforts of banking sector to deploy Fintech service.

"Cyber hacking and scams are significant challenges for the banking sector to adopt fintech technology as many managers think that Fintech can damage their organization" R11.

"Risk increment is one of the barriers to implementing Fintech, as there is a significant risk of cyber theft, which can cause the organization's worth to be lost" R7.

4.2. Requirements for the adoption of Fintech

Banks need technology adoption but are trying to substantiate whether to outsource their development or build their Fintech products (Saksonova & Kuzmina-Merlino, 2017). This is an essential step because the speed of marketing and costs attached to the technology adoption are critical factors. There is a need for different types of requirements that can help implement Fintech in Pakistan's banking sector.

4.2.1. E-commerce activities

E-commerce is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet (Gupta, 2014). Consistent with Lestari et al. (2023), our data suggest that Pakistani banks can focus on promoting e-commerce activities to implement fintech: *" […] banks should increase their e-commerce activities for which fintech is necessary to offer proper customer service" R2.*

4.2.2. SBP Role

The State Bank of Pakistan is the head of commercial banks and implements rules and regulations in the financial sector (Ishaq Bhatti et al., 2011). Evidence suggested that the SBP bank can enforce such rules strictly for all banks that use fintech to enhance the efficiency of the banking sector:

"*SBP's role is crucial to convince banking organizations that they implement Fintech for services […] Banks should use MIS-based computers for implementing fintech services that can make organizations more profitable and productive" R6.*

4.2.3. Training

Training is the best source to get fruitful results for any project (Dixit & Sinha, 2022). If someone invested heavily but was not trained, then the chances of success are few. The whole staff should be trained so that fintech

technology can be used properly and can get a good result. In our study, training was also identified an essential factor for the implementation of fintech in the banking sector, as the following representative evidence shows.

"There is a need to motivate leaders and managers and train them as their minds should be prepared to use Fintech, as Fintech can enhance banking efficiency" R5.

"There is a need to train employees to implement Fintech in the banking sector, as training plays an essential role in any project's success" R8.

4.2.4. Advanced ICT Infrastructure

Our data also suggested that the banking industry should use advanced ICT infrastructure, adopt new technological strategies, and abandon traditional methods to enhance efficiency, which is a significant requirement.

"For implementing Fintech in the banking sector, banks have to abandon paper transactions and switch to electronic transactions" R10.

"The banks have to advance ICT infrastructure for fintech implementation" R12.

4.3. Impact of Fintech on Banking Sector of Pakistan

Fintech has a positive impact on the banking industry in advanced countries (Kowalewski & Pisany, 2023). It has been seen to have improved the efficiency of the banks offering easy, rapid and reliable ways to satisfy needs of customers and employees, hence saving them time.

4.3.1. Efficiency

Literature suggests that Fintech can enhance the overall efficiency of the financial industry, expands traditional economic limits, and alters consumer purchasing habits through the use of information technology (Abbasi et al., 2021). The financial services industry can be drastically transformed by technological innovation to the advantage of society as a whole (Gomber et al., 2018). It can replace the obsolete systems of individual banks, enhance procedures, boost efficiency, and bolster control. They can also present chances for developing new customer-beneficial products and services. Our data supports most of the points, as the following representative responses show.

"Banks give the best services, but via collaboration with Fintech, banks may boost the efficiency of their advantages in a manner that is distinct and unbundled. Similarly, to banks, crowdfunding sites convert funds into loans and investments" R3.

"Financial institutions continue to assist FinTech functions, such as payment systems. Banks lose a portion of their margins but retain the last interface with their customers; as a result of these new systems that improve service efficiency, they can expand their scope of activities. Therefore, there may be considerable complementarities between banks and FinTech in this instance" R4.

"When FinTech products are successfully implemented in banks, bank profitability and efficiency increase, customer interactions are improved, and new customer segments are created. FinTech enables banks to provide seamless and improved financial services (e.g., new applications, products, business practices, and procedures)" R5.

"Banks should examine and utilize the information they possess about their customers and their transactions, not only for the sake of the know-your-customer policy but also for general. Using fintech innovation will improve understanding customer needs and behavioral patterns and increase organizational efficiency and effectiveness" R6.

"Fintech increases efficiency in the volume of digital transactions and online banking, making many consumers oppose cash" R7.

"Fintech boosted the efficiency of bank transaction methods (e.g., payments, clearing and settlement, online banking, and lending transaction), hence altering the significance of distance in the banking sector" R8.

4.3.2. Innovation

Innovation is a new process or even a new way of thinking and doing things. Innovations in FinTech have raised the need for creative banking solutions (Glushchenko et al., 2019). FinTech has become a fundamental component of banking services, and banks have started to compete outside financial services in the face of heightened competition (Van Loo, 2018). Fintech related innovations can enable financial organizations to service clients in unique and unanticipated ways. In Pakistan also, the financial sector is experimenting with automation, predictive analytics, new delivery platforms, digital-only banking, blockchain technology, and other innovations. These modifications can enable institutions to provide services of higher quality at cheaper rates in the country, as some of our respondents asserted:

"Fintech has an innovative impact in the banking sector that shifts the inclination of consumers for new services with characteristics like adaptability, accessibility, user-friendliness, and personalization, which has increased the acceptance of Fintech in the banking industry" R1.

"Fintech played an innovative role in revolutionizing Pakistan's banking sector. For example, branchless banking facilitates the payment of utility bills, domestic remittances, airtime purchases, other bill payments, salary disbursements, foreign remittances, loan disbursements/repayments, and savings products linked with insurance" R2.

"Fintech provides many Innovative services for customers, e.g., ATMs, VTMs, and M-banking, which encourage broad financial services and offer a new encourage inclusive financial services and a new push for the banking sector to enhance its performance in several ways, promote inclusive financial services" R3.

"Banks have created many innovative payment services with the help of Fintech; for example, credit cards and online banking have become unsuitable for the evolution of smartphones, social media, and cloud computing" R4.

"Fintech enables the banking industry to service consumers in innovative and unanticipated ways. Automation, predictive analytics, new delivery platforms, digital-only banking, and other innovations are being tested by the financial sector. These modifications enable institutions to provide services of higher quality at cheaper costs" R5.

4.3.3. Competitiveness

The financial services and banking industries are adapting and evolving Fintech regularly in order to remain competitive (Dapp, 2017). Commercial banks can increase their overall competitiveness by modifying their traditional business models, reducing operational expenses, enhancing service efficiency, bolstering their risk control skills, developing more appealing business models for clients and utilizing internet-based digital technology. Fintech can also make the banking sector competitive by mobile technologies, data analysis and implementation of artificial intelligence. Moreover, Fintech can provide diverse financial institutions with global insight and capabilities in digital payments, innovative technologies; enabling them to realize the potential of Fintech and create a banking sector that improves bottom-line performance, satisfies customer demands and gain a competitive advantage. Thus, Fintech has stood out for banking entities to make them competitive by replacing their infrastructure with new and innovative solutions, as many of our respondents shared:

"Payment systems and distribution channels are changing rapidly, which helps banking businesses remain in a competitive position compared to other financial institutions" R7.

"Currently, banks will have no choice but to prioritize Fintech to stay competitive to reach a more significant number of people and facilitate transactions for their users" R8.

"Developing Fintech in the banking sector is making the bank more competitive. Fintech is a sector that is expanding rapidly at the convergence of financial services and cutting-edge technologies. It is a potent engine of technological advancement, growing its global influence annually" R9.

"Banks with Fintech facility can attract more customers by providing low-cost transactions that make them more competitive compared to those banks that offer services with the old method of operation" R10.

"To attain competitiveness and consistent success in the banking business, it becomes vital for banks to innovate processes and services. Adopting and utilizing fintech-enabled products and distribution enables expansion" R11.

"Banks utilize Fintech app development services, which can create long-term estimates for prosperous growth and to remain highly competitive" R12.

4.3.4. Customer Service

Banks that provide FinTech services develop customers' interest to use services effortlessly (Riemer et al., 2017). Fintech has generated an industrial revolution in which services are enhanced and reinvented to maximize customers' interests. FinTech service availability, accessibility, simplicity of use and performance, transaction costs, service security all have had a positive and significant impact on banks capacity to attract customers. Customers' interest in Fintech products is thus increasing, as the following evidence suggests.

"Customers' interest in fintech goods is increasing by the availability of services that enable them to make all of their payments whenever, wherever, and in whatever manner they like using a variety of online financial services" R4.

"Banks that implement fintech operations attract more customers than banks that use the traditional method. At the same time, the modern process develops more interest among customers because it offers an efficient and easy way to transact money" R5.

"FinTech has developed a new payment approach that develops interest in customers by which customers can do their daily transactions with ease and efficiently" R6.

"Banks with Fintech's facility attract more customers by providing low-cost transactions" R7.

"Banks create digital channels and online transactions to attract more customers in the short run" R8.

"[…] commercial banks keep track of new technologies to attract customers with the best solutions, not expensive, quick, and accessible services" R9.

"Through the application of Fintech, commercial banks have adopted innovative services and products for the customer interest" R10.

5. Conclusion

This qualitative study was conducted to investigate the dynamics of Fintech in the context of Pakistan's banking industry. It is one of the pioneering studies in Pakistan and thus offers an empirical contribution to literature. Through in-depth semi-structured interviews, respondents' perceptions and experiences related to the dynamics of Fintech adoption in Pakistan's banking sector were explored. Challenges and barriers to the adoption of Fintech include lack of budget, lack of rules and regulations and cybercrimes and hacking. Requirements for the adoption of Fintech factors are the development of E-commerce activities, activities supervision from the SBP, training, and development of advanced ICT infrastructure. The impact of Fintech on Pakistan's banking sector indicates towards achieving efficiency, innovation, competitiveness, and better customer service.

According to the most common opinion, banks benefit from adopting Fintech in terms of customer networks, size, and reputation. They are now investing in e-banking services. Regarding the change in banking products with the development of Fintech, most of the banks interviewed said that their products were, are, and will change a lot compared to other banks, especially for traditional products, such as deposit or payment products. Currently, banks provide electronic banking services and connect payment gateways with Fintech in the payment field. Regarding the change of the bank's management structure in the process of competition - cooperation with Fintech, the bank commented that there is a change in the management structure as well as some technology software needs to be integrated for banks and Fintech, leading to changes in personnel and management structure.

Industry experts are predicting the fall of traditional banks as new entrants look to disrupt the traditional model within the financial services sector. Banks may effectively need to adapt to respond to these changes or embrace them through other collaborative means. In interviews, most managers talked about how the banking model had changed drastically over the past ten years, and this trend was set to continue as technology had reduced the barriers to entry for all banks in Pakistan. Findings of this paper also suggest that there is scope to investigate the Pakistani FinTech market further and analyze what has worked there in much more detail. For example, has Fintech disrupted the old financial services business, or is there greater cooperation? Interviewing more business professionals, starting with those working for FinTech startups like Jazzcash, Easypaisa, Finja, and Ypay, would be an intriguing additional research topic. Since these are all examples of Pakistani success, their expertise in the field would be an excellent source of information about the direction that FinTech can take both in Pakistan and other developing countries.

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