Fintech in Pakistan: Current Landscape, Challenges, and Global Insights

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Abstract

Fintech has been a global phenomenon and trend lately. Fintech can completely revolutionize the financial industry. The paper seeks to determine how fintech may help promote economic development in Pakistan, particularly by increasing access to financial services for those in rural and unreached areas. This study will do an in-depth analysis of challenges for Fintech adoption In Pakistan and provide solutions, policy recommendations for them. In an economy like Pakistan, where financial inclusion rates are below average Fintech can prove to be a game changer. Modern Fintech facilities like digital banking, online payments, alternative lending, micro-finance, and robo-advisory can help promote financial inclusion in Pakistan. Fintech has been proven to increase efficiency and cut down the cost of providing financial services. The main aim of this study is to analyze the current Fintech landscape in Pakistan and understand the obstacles hindering its adoption in Pakistan. This study will also suggest areas where fintech can be applied and derive lessons from other countries where Fintech has been successfully applied. This paper is a systematic review of the already existing literature and uses secondary data. We will use this already existing data to provide a clearer picture of what fintech innovations can be applied in Pakistan according to its financial landscape and how we can learn from other countries. Overall, the results of this study will help in understanding the fintech situation in Pakistan.

Keywords: Fintech, financial inclusion, digital finance, Fintech barriers, Fintech acceptance, financial services

1. Introduction

Fintech is expanding and growing quickly and taking the financial industry by storm. Estimates suggest that in 2024, investments in fintech will see a global rise with deals worth about $15.9 billion. (The Pulse of Fintech – Q4 2016 - KPMG Bermuda, 2017) .But the question arises what exactly is fintech and what does it include? .To put it simply fintech can be described as technological innovations in providing financial services (Leong, 2018). As the term "Fin-tech" implies, it combines Finance and technology. There are various services like digital payments, Peer-to-peer (P2P) lending platforms, asset management, and many more under the wide range of fintech. Fintech has been a wave in the financial industry overseas from a long time, but in recent years fintech has seen a rapid increase in Pakistan too. In a country like Pakistan, where most of the population is unbanked and has no access to financial services fintech can play a major role. To boost fintech adoption, the Government of Pakistan has also taken several initiatives to promote and increase it. State bank Of Pakistan and government both have partnered together and launched a number of programs. According to some sources, by 2025 the digital financial services business will have increased up to a value of $36 billion in Pakistan. This will also help decrease unemployment rates as it will create about 4 million jobs and increase GDP by 7% (SDPI, n.d.). Even though the future of fintech might be bright in Pakistan, there are many hurdles in way of fintech adoption such as a lack of proper infrastructure and digital literacy. In Pakistan, there can be seen efforts to increase fintech adoption for a while but still, the growth rate of fintech is slower than expected. For instance, Pakistan became a member of the United Nations "Better Than Cash Alliance" in 2014 in response to the global shift towards a cashless economy but still, there is not much progress to see. This indicates that without overcoming the issues and challenges currently presented it is nearly impossible to increase fintech and digitalization in Pakistan's financial ecosystem. Although there is existing literature and research work available regarding the Scope of fintech in Pakistan, how it can help boost Pakistan's economy, and how it will increase efficiency there is a lack of literature explaining and analyzing the various challenges hindering its growth. This gap in literature emphasizes the importance of understanding fintech adoption in Pakistan's context. Therefore, the purpose of this study is to determine the barriers to fintech adoption suggest solutions, and give recommendations based on lessons learned by incorporating knowledge from other countries.

2. Literature Review

The term " Fintech" first started to appear at the beginning of the 1990s, while the first academic study on fintech was published in 2015(Puschmann, 2017). Ever since then, fintech has been defined by many scholars in many different ways. According to the OECD (2018), fintech can be defined as the creative and innovative use of technology in providing financial services. To explain it simply fintech can be described as using technology to increase efficiency and reduce costs associated with providing financial services. In the past using financial services was expensive but now it is much more affordable all because of fintech startups. In comparison to traditional financial institutions, fintech startups provide additional value at affordable costs. Fintech startups pose a threat to traditional financial institutions as they provide innovative and more convenient financial solutions to consumers. The main question here arises what exactly is included in fintech, the answer to that question is given by many researchers. Mainly there are six primary fintech business models including payments, asset management, crowdfunding, lending, insurance services, and capital markets (Accenture, 2016). Government and it's representatives can influence greatly the working and facilities effectively strategy making (Ramzan et al., 2023). The most popular fintech business models among them are of payments such as peer-to-peer mobile payments and digital wallets. Even though fintech startups are increasing competition for existing financial institutions some researchers argue that fintech can help increase the efficiency of existing institutions. Researchers like Sloboda *et al.* (2018) have demonstrated that banks that incorporate financial innovation in their services are more efficient and profitable. The main aim of all these fintech innovations is to provide better and additional value to consumers. Fintech greatly enhances the client experience by providing them with convenient financial services like enabling transactions via mobile devices etc.

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Prominent online payment services like PayPal, Amazon pay, and Alipay are offering efficient and convenient payment services. Different P2P payment solutions have also been introduced by companies like Google Wallet, WeChat, Venmo and Facebook Messenger. These services make transactions more feasible for consumers as compared to transferring through banks or in person (McCaffrey & Schiff, 2017). Artificial intelligence is used for cognitive impact on language communication (Javaid et al., 2024). Media sensitisation and technological responses affects perception(Iqbal et al., 2024) and motivation (Ramzan et al., 2023) ;also encourages remote work options (Fatima et al., 2024) which eventually makes convenient the use of services.

Fintech has not only revolutionized the financial industry in developed countries, but its effect is also significant in poorer nations. Fintech has been proven to increase financial inclusion in underdeveloped nations. However, in Pakistan, there are several challenges in the way of fintech adoption such as low literacy rates, lack of customer trust in fintech products, inadequate infrastructures, and lack of proper regulatory framework (Qayyum et al., 2020; Sulheri et al., 2024). There is a lack of financial cooperation among South Asian countries which reduces the growth potential of the financial sector (Javed, 2019; Ali & Sajid, 2020). Pakistan lags behind other South Asian countries significantly as most customers in Pakistan still prefer cash over online payments.

2.1. Research Gap

A significant amount of literature has been written about the scope, advantages, and potential benefits of fintech adoption in Pakistan but there is limited research on what specific fintech initiatives can be implemented in Pakistan as well as challenges linked to them. This study's main objective is to identify relevant fintech initiatives and determine obstacles in their way. In this study, we will also try to find out how other countries successfully integrated fintech and what we can learn from them.

2.2. Research Approach and Methodology

This study uses a qualitative approach by examining already available literature and secondary data. A range of fintech initiatives are explored in Pakistan by doing a thorough review and analysis of selected literature. By using lessons from other countries, this study also highlighted obstacles hindering fintech growth in Pakistan. Additionally, current data and figures regarding the financial ecosystem of Pakistan are analyzed such as the proportion of persons with bank accounts etc. Global Findex database and the State Bank of Pakistan have been used for this purpose.

3. Fintech

After the crisis of 2008, a series of new financial services integrated with technology known as fintech began. Fintech in simpler terms is the application of technology in financial services. Many researchers have categorized it in many different ways, but according to Dorfleinter *et al . (2017)* fintech can be divided into four major categories.

These segments are given below:

- Financing
- Asset Management
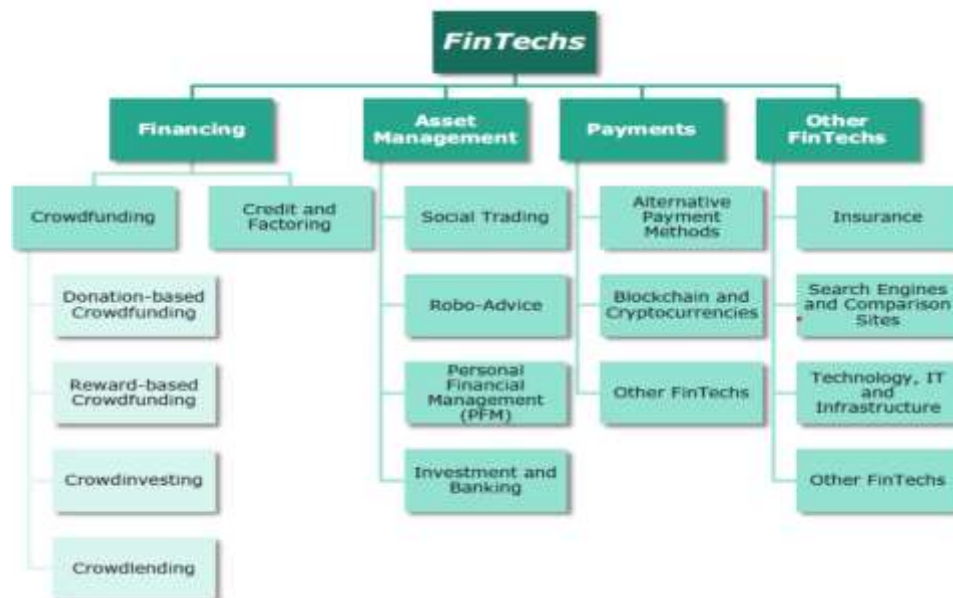- Payment
- Other Fintechs (Insurance etc.)

Figure 1: Categories of Fintech (Dortfleitner et al.,2017)

3.1. Financial Inclusion in Pakistan

According to the State Bank of Pakistan, financial inclusion is the ability of people and businesses to use different types of financial services. The percentage of people with bank accounts shows the level of financial integration in the economy. Among all SAARC countries, in terms of financial inclusion, only Afghanistan has a lower percentage than Pakistan. In Pakistan as of 2017, only 21% of the entire adult population have bank accounts. On the other hand, the percentage of persons with bank accounts is much higher in Bangladesh, India, Nepal, and Sri Lanka.
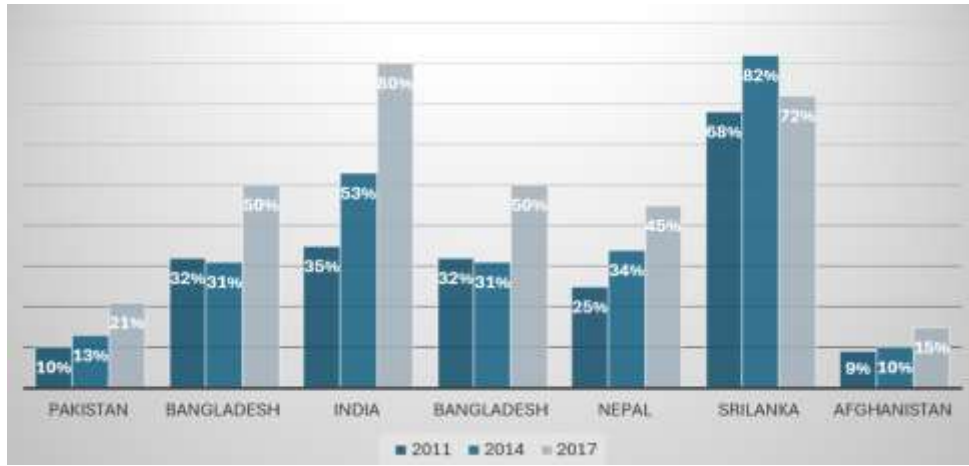
Figure 2: Percentage of adults with bank accounts in SAARC countries. (source: author)

In a country like Pakistan, where most of the population is financially excluded fintech has appeared as a magical solution to this problem.

3.2. Fintech Initiatives in Pakistan

From the early 2000s, when mobile banking services first started to appear, fintech has begun to gain momentum. Mobile money platforms like Easypaisa introduced by Telenor Pakistan give Pakistan's unbanked population access to financial services (Khattak & Ullah,2019). With Easypaisa doing financial transactions like paying bills, depositing and withdrawing cash, and sending money have become extremely convenient for users. In 2012, Mobilink (now Jazz) and the National Bank of Pakistan (NBP) collaborated to introduce another mobile money platform named JazzCash (Akhtar & Ghani, 2018). Following the trend, several banks have also introduced mobile banking services. To promote and increase Fintech adoption in Pakistan many initiatives have been taken by the State Bank Of Pakistan and the government. Programs like the National Payment Strategy (NPSS), MPG initiatives, and the Digital Onboarding system have been introduced by SBP recently. According to recent statistics, internet-based payments have also increased significantly with a 53% growth rate in transaction volume only between 2017 -2018. Microfinance institutions in Pakistan have embraced fintech to increase efficiency and boost productivity. Telenor Microfinance Bank introduced the Khushhal Digital Platform in 2018 to provide its clients with digital financial services (Telenor Microfinance Bank, 2018). Furthermore, a rise in the number of fintech startups in Pakistan is also observed recently. According to some sources, there are around 422 fintech businesses in Pakistan. We can understand this rise in demand for fintech among Pakistan's consumers by increasing the popularity of various fintech startups like Abhi , NayaPay ,and many others .

Table 1: Top Fintech Startups in Pakistan

Company Name	Category	City	Total Funding
Abhi	Earned Wage Access (EWA) Platform	Karachi	$19.1M
Bazar	Retail Fintech Platform	Karachi	$108M
Finja	AI-Driven Digital Wallet and Payment Solutions Platform	Lahore	$25M
CreditBook	Bookkeeping and Cash Flow Management Platform	Karachi	$12.5M
NayaPay	Digital Wallet and Payment Services Platform	Karachi	$13M

Source: Tracxn.(August 16, 2024). FinTech startups in Pakistan

The future of fintech seems bright in Pakistan, but widespread public acceptance of fintech icurrently facing many challenges and issues.

3.3. Challenges For Fintech Adoption in Pakistan

After examining data from various secondary sources, we have found that the major challenges hindering fintech growth in Pakistan include lack of infrastructure, lack of digital literacy, insufficient banking facilities, and lack of trust in fintech.

3.3.1.   Lack of Infrastructure

The lack of proper infrastructure for fintech is one of the main challenges in the way of fintech adoption in Pakistan. Various issues like slow internet speed, and frequent electricity outages make it difficult to completely shift to digital means. In Pakistan regulatory system is also unclear, which makes it difficult for fintech companies to operate. Also, there is a huge lack of fintech talent in Pakistan, all these issues make it extremely difficult to completely shift towards digitalization and fintech.

3.3.2.   Lack of digital literacy

Another major challenge presented in the way of Fintech adoption is the lack of digital literacy among consumers in Pakistan. Using fintech services is difficult for most consumers since they are not familiar with digital technology. Fintech services appear difficult to understand and use for those who are not tech-savvy, which blocks their broad acceptance (Naeem *et al.*, 2018).

According to research, consumers who find fintech services difficult to use and understand are most likely going to use traditional solutions even if they provide less value. Our findings concur with those of several investigations (Bommer et al., 2023; Ashraf et al.,2021; Majid, 2021). Low levels of digital literacy led to persistent dependence on obsolete methods in many rural areas. Consumer's view of how easy a fintech service influences their acceptance of them (Tun-Pin et al., 2019). This poses a serious threat to fintech adoption in Pakistan because the majority of the population doesn't know how to use digital technologies, especially women (Zulfiqar, Chaudhary, & Aslam, 2016).

3.3.3. Insufficient Banking Facilities

Various factors such as low income, illiteracy, lack of financial education, remote location of banking facilities, lengthy opening procedures, and high service cost all contribute to Pakistan's low usage of banking services which is a serious problem. On the other hand, 78% of Indians older than 15 years of age had a bank account in 2021. Another example is China where around 80% of adults own a bank account. In 2015, when China had around 76 ATMS per 100,000 adults, Pakistan only had 9 ATMS per 100,000 adults. This shows that sufficient banking facilities are not available to users. Giving people access to non-traditional financial institutions and technologies can help increase financial inclusion in Pakistan.

3.3.4. Lack of Trust in Fintech Services

Many studies revealed that lack of trust is one of the main reasons of low fintech adoption rates . As using fintech services involves managing money, security is a concern for many. These security issues impact fintech acceptance. Researchers like Cao (2016) argue that security concerns negatively impact fintech adoption. After examining a huge body of research, the lack of trust among consumers comes out as a huge issue. However this lack of trust varies among various age groups, several studies have found that Pakistani youth (aged 18- 30) are more accepting of fintech services.

3.3.5. Opportunities and Areas for Application in Pakistan

Despite all these challenges, Pakistan due to its huge unbanked population presents a huge opportunity for fintech companies. Fintech has the power to enhance financial inclusion and improve efficiency. The main areas where fintech can be utilized include payments, digital lending platforms, advisory services, and the insurance sector.

3.3.6. Payments

Making payments used to be a costly and time-consuming process in the past, but now thanks to fintech which has made it convenient, more efficient, and cost-effective. Globally cashless society is the recent trend. More and more companies are developing payment solutions for their customers. For payments, there are generally two main types of markets: consumer and retail payments and wholesale payments. Consumer and retail payments deal with mobile wallets, peer-to-peer mobile payments, and digital currency settlements. On the other hand, wholesale transactions mainly deal with interbank transactions (Mellon, 2015). The use of mobile payments has gained popularity in recent years globally. Mobile payments can also be successfully adopted in Pakistan as they can help in increasing financial inclusion. Mobile payment platforms like Easypaisa and JazzCash are gaining popularity recently, especially among the youth of Pakistan. A study conducted by Nazir *et al.* (2021) found that mobile payments can increase efficiency and reduce the costs of the payment system in Pakistan.

3.3.7. Digital Banking

In a country like Pakistan, where traditional banking is prevalent digital banking has the potential to transform the banking sector completely. Digital banking can help increase financial inclusion by bridging this gap and providing financial services to individuals who are excluded by traditional banking frameworks. Many studies have found that banking reduces transaction costs and enhances operational efficiency, improving financial access, especially for low-income individuals and small businesses. In Pakistan during the COVID-19 pandemic, customers have shifted increasingly towards digital banking. Furthermore, the increasing number of internet users also suggests a promising future for fintech services in Pakistan. Even though most users prefer cash transactions, but COVID-19 crisis has greatly affected the user's perception of digital banking. State Bank of Pakistan has also taken various initiatives to promote branchless banking.

3.3.8. Alternative Lending

Fintech has simplified the borrowing process for those segments of banking, which traditional banks refuse to lend. In Pakistan, such platforms can increase entrepreneurship by enabling P2P lending, where borrowers can get loans at lower interest rates and benefit from a more efficient loan process.

3.3.9. Insurance-Type Fintech

Insurance-type fintech companies mainly use data analytics to measure and control risk and provide customized services to clients. Currently, there are many online marketplaces where customers can evaluate different insurance plans and select from them. Fintech can completely transform the insurance industry in Pakistan, where the insurance penetration rates are low.

3.4. Lessons for Pakistan from Other Countries

We assessed a great number of literature to derive lessons for Pakistan from experiences of other countries where fintech has been successfully applied. Countries like China, the United Kingdom, and India are studied carefully for this purpose.

3.4.1. India

In India, the government has been pushing for the adoption of fintech and digital payments. The development of the Unified payments Interface (UPI) has increased financial inclusion and fintech adoption in India (Saini & Bhati, 2019). UPI has made it simpler and easier to use online financial services. India is among the world's top fintech nations, accounting for 40% of all real-time digital transactions as of 2021. According to IMF, programs like India Stack and JAM Trinity have encouraged financial inclusion. Both technological and non-technological enablers such as strong government support, regulatory environment, and incentives for innovations all contribute to this widespread digitalization of India. The government, banks, and other sectors all have joined forces to build a financial ecosystem suitable for fintech in India. Pakistan can take lessons from these strategies and adapt them to address its challenges.

3.4.2. China

China presents us with another example of the magnitude of influence fintech has on the financial industry. The success of businesses like Tencent's WeChat Pay and Alibaba's Ant Group have increased the use of online financing and digital payments dramatically (Chen, Wei, & Wang, 2018).

3.4.3. United Kingdom

The UK is named among the most fintech-friendly nations, with over 1600 fintech enterprises operating currently. By 2030, it is estimated that the number of fintech companies will have doubled. Despite several obstacles like Brexit, the UK is still a top location for fintech investments.

3.5. Inferences and Suggestions for Pakistan

3.5.1. Increasing Financial Services Accessibility

The National Payments Corporation of India (NPCI) in India teaches us that creating a solid digital infrastructure is critical in enhancing access to financial services. Real-time payment systems have the likelihood to completely transform financial activities, as evidenced by the NPCI's international expansion and fast money transfer capabilities. Pakistan must invest in a similar digital infrastructure. Wider fintech adoption can result from using technology to make difficult financial procedures simpler and easier to use. As shown by India's EASE 3.0 framework, the use of user-friendly procedures and interfaces can help accelerate processes such as loan processing, which in turn will increase user acceptance.

3.5.2. Making Use of Innovation Hubs and Regulatory Support

The UK has developed various innovation centers and regulatory sandboxes, which have led to fintech growth. In Pakistan, similar initiatives can be taken to support fintech innovation.

3.5.3. Getting Used to Technologies That Change Rapidly

India has demonstrated perfectly that adapting according to changing technologies is very important. The shift towards cashless transactions and the development of various new technologies like DigiLocker are clear illustrations of it. In Pakistan, similar technologies can be adopted to improve the security of fintech services. Many new technologies like Web 3.0 and blockchain can be utilized to their maximum potential.

3.5.4. Talent Development and Attraction

After deeply analyzing the factors responsible for fintech success in the UK, we come to know that the UK's access to worldwide fintech talents is one of the most important reasons. High educational standards and access to a talented diverse workforce have driven the growth of fintech in the UK. While in Pakistan there is a big shortage of skilled fintech professionals, so to handle this issue Pakistan must invest heavily in education, especially in finance and technology.

3.5.5. Building Consumer Trust and Adoption

In countries like the UK, tech-savvy consumers have high trust in fintech services which contribute to its widespread adoption. Whereas in Pakistan, the majority of the users are reluctant to use fintech services due to a lack of trust and digital literacy. Pakistan should focus on developing strategies to provide financial and digital education. There should be a special focus on educating rural and underserved communities.

3.5.6. Stabilizing and fortifying Infrastructure

It is seen that in countries where fintech adoption rates are high, there is a presence of strong infrastructure and a stable regulatory environment. Pakistan should focus on developing its financial and digital infrastructure. Maintaining a stable environment will promote fintech growth and investments even more.

4. Conclusion

In conclusion, in this study, we have highlighted the importance of fintech globally and its benefits in increasing efficiency and reducing costs of providing financial services. Not only in developed countries, fintech has been proven as a game changer for developing countries too. In Pakistan, fintech adoption can increase financial inclusion and foster economic growth. Despite the bright future of fintech in Pakistan, there are many challenges in its adoption. Without understanding and solving them growth in fintech adoption cannot be achieved. This systematic review identified the challenges currently present in Pakistan's financial ecosystem. This study identified various key barriers such as lack of infrastructure, lack of digital and financial literacy, insufficient banking facilities, and security concerns. Additionally, the current condition of financial inclusion is not encouraging as Pakistan lags behind others in this aspect. Then we also identified key areas where fintech can be applied in Pakistan such as payments, alternative lending, advisory services, and many more. To solve and tackle all these problems we must learn from the experiences of other countries. The government should develop strategies to solve these challenges. This involves investing in developing strong infrastructure, providing financial and digital education and establishing a regulatory framework for fintech growth. Even though there are many challenges in fintech adoption in Pakistan, evidence also suggests a bright future for fintech in Pakistan.

In Conclusion, fintech has the potential to completely transform Pakistan's financial ecosystem. But for it to achieve widespread acceptance, the challenges must be tackled. By overcoming these issues, Pakistan the utilize the potential of fintech to its maximum and achieve its goal of financial inclusion and development.

5. Limitations and Future Research Opportunities

The biggest limitation of this study is that it uses already existing secondary data. Pakistan's fintech landscape is changing continuously so this study might not accurately represent it. Additionally, this study only looked at overall trends and interests in Pakistan and did not thoroughly investigate regional differences or requirements of different demographics. Future researchers can carry out different empirical studies, to acquire a more detailed understanding of fintech in Pakistan. Various studies that examine the impact of technologies like blockchain, artificial intelligence, and big data analytics in developing fintech solutions can be carried out.

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