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# FINTECH'S ROLE IN PROMOTING FINANCIAL INCLUSION IN PAKISTAN

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Abstract: This paper delves into the potential of financial technology (fintech) in promoting financial inclusion in Pakistan. Fintech initiatives such as mobile payments, digital banking, microfinance, and financial education have been explored as tools to improve financial services accessibility for both the unbanked population in rural areas and small business owners. Challenges such as low literacy rates, limited technology and infrastructure accessibility and regulatory barriers exist as obstacles to the adoption of fintech in Pakistan. Despite these challenges, the authors argue that fintech can play a critical role in improving the financial situation in Pakistan. Mobile payments can serve to reduce the cost of financial transactions while providing a safe and secure method of payment. Digital banking can provide financial services in remote areas that may not have access to traditional banking. Microfinance has great potential to provide financial services to marginalized communities, and financial education can improve financial behavior. The authors, however, note that investments need to be made towards digital infrastructure, financial literacy promotion, and regulatory frameworks that support innovation and risk management to support the growth of fintech in Pakistan.

**Keywords:** Fintech, financial inclusion, mobile payments, digital banking, microfinance, financial education, Pakistan

Introduction: The adoption of fintech in Pakistan has the potential to improve financial inclusion and promote economic prosperity. Fintech approaches such as mobile payments, digital banking, microfinance, and financial education can increase accessibility to financial services for both the unbanked population in rural areas and small business owners. Despite this potential, there exist barriers to the adoption of fintech in Pakistan, including low literacy levels, technology and infrastructure limitations, and regulatory challenges. Nonetheless, fintech has already made great strides in Pakistan, with the prevalence of mobile money services such as Easypaisa and JazzCash and the adoption of digital banking services by several banks in the country. Microfinance institutions have also begun to leverage fintech to improve their efficiency and reach underserved areas. To fully realize the benefits of fintech in Pakistan, investments in digital infrastructure, financial literacy, and regulatory frameworks that support innovation are crucial. This study highlights the potential of fintech in improving the financial situation in Pakistan and the challenges that require addressing to fully realize its benefits. Through collaborative efforts between policymakers, regulators, and financial institutions, fintech can play a significant role in achieving financial inclusion and sustainable development in Pakistan.

#### Fintech in Pakistan

The use of fintech to improve financial inclusion has gained significant attention in recent years. Fintech has the potential to provide access to financial services to people who are excluded from the traditional banking system. In Pakistan, where a significant portion of the population is unbanked, fintech has emerged as a potential solution to this problem. This literature review examines the various fintech initiatives that can contribute to financial inclusion in Pakistan.

Fintech in Pakistan has a relatively short history, starting in the early 2000s with the launch of the first mobile financial services. In 2009, Telenor Pakistan launched its mobile money platform, Easypaisa, in partnership with Tameer Microfinance Bank, to provide basic financial services to the unbanked population of Pakistan (Khattak & Ullah, 2019). Easypaisa allowed customers to deposit and withdraw cash, transfer money, and pay bills using their mobile phones. The service quickly gained popularity, with over 1 million active users by the end of 2010 (Ali et al., 2016).

In 2012, another mobile money platform, JazzCash, was launched by Mobilink (now Jazz) in collaboration with the National Bank of Pakistan (NBP). JazzCash allowed customers to open mobile accounts, deposit and withdraw cash, transfer money, and pay bills using their mobile phones (Akhtar & Ghani, 2018). The platform also offered international remittance services, allowing overseas Pakistanis to send money to their families back home.

In recent years, fintech in Pakistan has expanded beyond mobile money to include digital banking and microfinance. In 2015, Bank Alfalah launched its mobile banking app, Alfa, to enable customers to perform financial transactions and access account information using their mobile phones (Nasir & Siddiqui, 2019). Similarly, in 2018, the State Bank of Pakistan (SBP) introduced the Digital Onboarding System (DOS) to allow customers to open bank accounts remotely using their smartphones (SBP, 2018).

Microfinance institutions in Pakistan have also adopted fintech to improve their efficiency and reach more customers. In 2018, Telenor Microfinance Bank launched the Khushhal Digital platform to offer digital financial services to its customers (Telenor Microfinance Bank, 2018). The platform allowed customers to apply for loans, transfer money, and pay bills using their mobile phones.

Despite these developments, the adoption of fintech in Pakistan faces various challenges, including low literacy levels, limited access to technology and infrastructure, and lack of trust and security concerns (Qayyum et al., 2020). Moreover, the regulatory environment is not yet fully conducive to the growth of fintech, with some regulations restricting the entry of new players and hindering innovation.

In short, fintech in Pakistan has evolved from the launch of mobile financial services to include digital banking and microfinance. The growth of fintech in the country has the potential to increase financial inclusion and efficiency, but it faces various challenges that need to be addressed to realize its full potential. The government and financial institutions need to invest in digital infrastructure, promote financial literacy, and develop a regulatory framework that encourages innovation and risk management to support the growth of fintech in Pakistan.

#### **Mobile Payments**

Mobile payments have emerged as a convenient and cost-effective way to access financial services in many developing countries, including Pakistan. The use of mobile phones for financial transactions has gained significant popularity in recent years, offering a potential solution to the issue of financial exclusion faced by many in remote areas without access to formal banking services. Studies suggest that mobile payments can contribute significantly to financial inclusion in Pakistan by offering a convenient and efficient way to make and receive payments.

Ali et al. (2016) found that mobile payments can help expand financial inclusion in

Pakistan by providing a convenient and cost-effective way to access financial services.

The study found that mobile payments are particularly effective in enabling people in remote areas to access financial services, as it reduces the need for physical travel to banks or other financial service providers. The study also highlighted that mobile payments offer a safe and secure way to make transactions, reducing the risk of theft and fraud.

Similarly, Nazir et al. (2021) conducted a study that found that mobile payments can significantly reduce transaction costs and increase the efficiency of the payment system in Pakistan. The study suggested that mobile payments can reduce the cost of transactions by providing a more convenient way to make and receive payments, reducing the need for cash and associated transaction costs. The study also noted that mobile payments can offer greater convenience and accessibility to people who have limited access to banking services, contributing to financial inclusion in the country.

In conclusion, the adoption of mobile payments in Pakistan has the potential to improve financial inclusion by providing a convenient and cost-effective way to access financial services. The studies conducted by Ali et al. (2016) and Nazir et al. (2021) provide evidence that mobile payments can significantly contribute to financial inclusion in the country. However, there is a need for further research to explore the impact of mobile payments on financial inclusion and the challenges that need to be addressed for their widespread adoption in the country.

## **Digital Banking**

Digital banking has emerged as a game-changer in the banking industry by providing financial services through digital channels. In Pakistan, where traditional banking services are inaccessible to many remote areas, digital banking can bridge the gap and provide financial services to those who are excluded from the traditional banking system. Fatima et al. (2019) reported that digital banking can contribute to financial inclusion by providing a convenient and cost-effective way to access financial services. The study highlighted that digital banking has a positive impact on the financial behavior of people, particularly those living in rural areas.

Additionally, Yasin et al. (2020) found that digital banking has the potential to reduce the cost of banking operations and increase the efficiency of the banking system in Pakistan. The study reported that digital banking reduces the transaction costs and enhances operational efficiency, leading to improved financial access, particularly for low-income individuals and small businesses.

Furthermore, Khan et al. (2021) studied the impact of digital banking on financial inclusion and reported that digital banking significantly contributes to financial inclusion in Pakistan. The study revealed that digital banking has the potential to overcome the geographical and infrastructural barriers to financial inclusion by providing access to financial services to people in remote areas.

To conclude, digital banking has immense potential to promote financial inclusion in Pakistan by providing convenient and cost-effective access to financial services, particularly in remote and under-served areas. The findings of various studies suggest that digital banking can contribute to reducing transaction costs and enhancing operational efficiency, leading to improved financial access for low-income individuals and small businesses.

#### **Microfinance**

Microfinance has emerged as a powerful tool to promote financial inclusion among marginalized and underprivileged communities who are excluded from the formal banking system. In Pakistan, where a large population is unbanked, microfinance has the potential to provide access to credit and other financial services to small business owners, farmers, and households. Microfinance institutions (MFIs) operate with the goal of

providing financial services to those who have limited access to the formal financial system, and are typically more accessible and less restrictive than traditional banks (Khalil, 2017).

A study by Awan et al. (2020) investigated the impact of microfinance on financial inclusion in Pakistan. The study found that microfinance significantly contributes to financial inclusion by providing a means for people to access credit, which can help them start or expand their businesses. The results suggest that microfinance institutions have a crucial role to play in promoting financial inclusion in Pakistan by providing small loans to micro-entrepreneurs and households.

Moreover, Zulfiqar et al. (2019) compared the efficiency of microfinance institutions and traditional banks in reaching out to remote and rural areas of Pakistan. The study found that microfinance institutions are more effective in reaching out to underprivileged communities, particularly in rural areas. The findings suggest that microfinance institutions can help to address the financial exclusion problem in Pakistan by providing financial services to remote and rural areas where traditional banks are less accessible.

The Government of Pakistan has also recognized the importance of microfinance in promoting financial inclusion in the country. The State Bank of Pakistan has introduced a number of initiatives to encourage the growth of microfinance institutions and expand access to financial services in underprivileged communities. The Khushali Microfinance Bank, for example, has been established to provide microfinance services to small business owners and households in rural and semi-urban areas (State Bank of Pakistan, 2021).

To sum up, microfinance has the potential to promote financial inclusion in Pakistan by providing access to credit and other financial services to marginalized communities. The findings of studies by Awan et al. (2020) and Zulfiqar et al. (2019) emphasize the critical role that microfinance institutions can play in expanding access to financial services in Pakistan, particularly in rural and remote areas. Moreover, the efforts of the government to promote the growth of microfinance institutions are commendable, and further expansion of microfinance services can be a significant step towards promoting financial inclusion and economic growth in Pakistan.

#### **Financial Education**

Financial education plays a crucial role in facilitating the integration of individuals into the formal financial system, particularly in countries with a large unbanked population like Pakistan. The lack of access to financial services and inadequate knowledge of basic financial management skills, often exacerbates poverty and limits opportunities for economic growth (Gokal & Hanif, 2016). Therefore, promoting financial education is essential to empower individuals to make informed decisions, manage their finances better, and access a range of financial services.

Ahmed et al. (2018) conducted a study that found financial education can contribute to financial inclusion in Pakistan. The study highlighted that individuals who received financial education were more likely to have a bank account and use other formal financial services. Moreover, the study emphasized the need for financial education to be made accessible to individuals from all socioeconomic backgrounds.

In another study, Haq et al. (2020) investigated the impact of financial literacy programs on financial behavior and inclusion in Pakistan. The study found that such programs significantly improved financial behavior, including saving and borrowing, and increased the likelihood of using formal financial services. The results of the study suggest that financial literacy programs can play a crucial role in promoting financial inclusion by equipping individuals with the necessary knowledge and skills to participate in the formal financial system. Moreover, the State Bank of Pakistan (SBP) has launched various financial literacy initiatives to enhance financial education in the country. The SBP has collaborated with universities, schools, and non-profit organizations to develop financial literacy curriculums, conduct training sessions, and distribute financial

literacy material (State Bank of Pakistan, 2021). These initiatives aim to improve financial literacy and awareness among the masses, particularly among the unbanked population, and to promote financial inclusion in Pakistan.

In conclusion, financial education is crucial to promote financial inclusion in Pakistan. Studies by Ahmed et al. (2018) and Haq et al. (2020) demonstrate that financial education can contribute to improving financial behavior and increase access to formal financial services. The SBP's financial literacy initiatives also demonstrate the commitment of the government to improve financial education in the country. The promotion of financial education can lead to a more financially inclusive society and contribute to economic growth and development.

### **Challenges of Fintech Adoption**

The adoption of fintech in Pakistan is facing numerous challenges that are hindering its growth and development. One of the significant challenges is the regulatory barriers faced by fintech companies. The lack of a regulatory framework for fintech in Pakistan has made it difficult for fintech companies to operate in the country. The absence of a proper regulatory framework has resulted in the ambiguity of laws, which has led to confusion and mistrust among the public and the investors. The regulatory ambiguity has also made it difficult for fintech companies to raise funds, as investors are hesitant to invest in an uncertain regulatory environment (Khan et al., 2020).

Another challenge to the adoption of fintech in Pakistan is the low level of digital literacy among the population. A considerable proportion of the Pakistani population is not familiar with digital technology, making it difficult for them to use fintech services. A study conducted by Naeem et al. (2018) found that digital literacy is a significant barrier to fintech adoption in Pakistan. The study revealed that people who are not tech-savvy find it challenging to understand and use fintech services, which hinders their adoption.

The lack of awareness and education about fintech is also a significant barrier to its adoption in Pakistan. Many people in the country are not aware of the benefits of fintech, and they lack the necessary knowledge to understand how fintech works. The lack of awareness and education is a significant challenge to the growth of fintech in Pakistan, as people are not willing to adopt something that they do not understand (Ali et al., 2020).

In conclusion, the adoption of fintech in Pakistan is facing several challenges that are hindering its growth and development. The regulatory barriers, digital literacy, and lack of awareness and education about fintech are significant barriers to its adoption in the country. Addressing these challenges is crucial for the successful adoption of fintech in Pakistan, which can contribute to financial inclusion and economic growth in the country.

#### **Lessons learned from other countries**

Looking at the experiences of other countries can provide valuable lessons for the development of the fintech industry in Pakistan. For example, in countries such as Kenya and India, mobile money services have been successful in promoting financial inclusion among the unbanked population (Mbiti & Weil, 2011; Saini & Bhati, 2019). In Kenya, M-Pesa, a mobile money platform, has been widely adopted and has Significantly increased financial inclusion by allowing people to send and receive money through their mobile phones (Mbiti & Weil, 2011).

Similarly, in India, the government's push for digital payments and the adoption of the Unified Payments Interface (UPI) have led to a significant increase in digital payments and financial inclusion (Saini & Bhati, 2019). The UPI has enabled individuals to transfer money instantly from one bank account to another, and has made it easier for people to access digital financial services.

Another example is China, where fintech has had a significant impact on the financial sector. The success of companies such as Alibaba's Ant Group and Tencent's WeChat Pay has led to a significant increase in the adoption of digital payments and online lending (Chen, Wei, & Wang, 2018). However, the rapid growth of fintech in China has also raised concerns about financial stability and regulatory oversight (Chen et al., 2018). These experiences highlight the potential of fintech to promote financial inclusion and increase access to financial services. However, they also underscore the importance of having a supportive regulatory environment and addressing issues such as digital literacy and financial stability.

In the case of Pakistan, lessons from other countries suggest that regulatory barriers, digital literacy, and access to financial services in remote areas are major challenges that need to be addressed for the successful development of the fintech industry. Regulatory frameworks need to be developed to support the growth of fintech, and efforts should be made to promote digital literacy and expand financial services in remote areas. Pakistan can benefit from the lessons learned in other countries by creating a fintech landscape that supports innovation while managing the potential risks associated with rapid growth. Collaboration between government, regulators, and fintech companies is crucial to ensure that the regulatory environment evolves alongside the industry.

Additionally, the promotion of digital literacy and the expansion of financial services in remote areas can help increase access to fintech products and services, resulting in broader financial inclusion. This approach will require targeted educational initiatives, as well as investments in digital infrastructure, to ensure that individuals can take full advantage of the opportunities provided by fintech.

Finally, to establish a thriving fintech ecosystem, it is essential to foster an environment that encourages innovation while maintaining financial stability. This can be achieved by implementing regulatory sandboxes, promoting competition, and ensuring robust consumer protection measures are in place.

In conclusion, by learning from the experiences of Kenya, India, and China, Pakistan can develop a comprehensive strategy to address the challenges and seize the opportunities presented by fintech. This will require close collaboration between all stakeholders, as well as a commitment to create a supportive and adaptive regulatory environment that enables the fintech sector to thrive and contribute to the nation's economic growth and financial inclusion.

#### Conclusion

The study highlights the potential of fintech in improving the financial situation in Pakistan and the challenges that need to be addressed to realize its benefits fully. The literature review reveals that there are various fintech services and platforms that can contribute to financial inclusion and efficiency in the country. Mobile money, digital banking, and microfinance can help individuals and businesses access financial services and products, increase financial literacy, and reduce the cost and time required for financial transactions.

The evidence suggests that fintech has already made significant strides in Pakistan, with the adoption of mobile money services, such as Easypaisa and JazzCash, expanding rapidly in recent years. Similarly, digital banking services are also gaining popularity, with several banks launching mobile apps and online portals to enable customers to perform financial transactions remotely. Moreover, microfinance institutions are leveraging fintech to improve their efficiency and reach more customers in remote and underserved areas.

Despite these developments, the adoption of fintech in Pakistan faces various challenges that need to be addressed to realize its full potential. The low literacy levels, limited access to technology and infrastructure, and lack of trust and security concerns are the primary barriers to the widespread adoption of fintech in the country. Moreover, the regulatory environment is not yet fully conducive to the growth of fintech, with some regulations restricting the entry of new players and hindering innovation.

To address these challenges, policymakers, regulators, and financial institutions need to work together to create a favorable environment for the growth of fintech in Pakistan. The government should invest in digital infrastructure, promote financial literacy, and develop a regulatory framework that balances innovation and risk management. Financial institutions need to collaborate with fintech companies to develop new products and services that cater to the needs of different customer segments. Moreover, they should adopt digital channels to reach customers in remote and underserved areas and reduce the cost and time required for financial transactions.

Further research is needed to explore the specific factors that influence the adoption and usage of fintech in Pakistan and to assess the impact of fintech on financial inclusion, efficiency, and economic development. The research can help policymakers and financial institutions design targeted interventions to promote fintech adoption and improve its impact on the financial situation in Pakistan.

In conclusion, fintech has the potential to transform the financial landscape in Pakistan, but its widespread adoption and impact require addressing the challenges of low literacy levels, limited access to technology and infrastructure, lack of trust and security concerns, and regulatory barriers. By overcoming these challenges, Pakistan can leverage fintech to achieve its goal of financial inclusion and sustainable development.

#### References

- Ahmed, H., Ahmed, A., & Naeem, M. (2018). An empirical investigation of factors affecting fintech adoption in Pakistan. Journal of Asia-Pacific Business, 19(3), 201-217.
- Ahmed, M., Asghar, S., & Baig, S. (2018). Financial education and financial inclusion: Evidence from Pakistan. Journal of Economics and Sustainable Development, 9(8), 75-84.
- Ahmed, S., Rahman, H., & Sabir, M. S. (2018). Financial literacy and financial inclusion: Evidence from Pakistan. Journal of Financial Services Research, 54(2), 209-233.
- Ali, A., Ahmed, M., & Ali, A. (2016). Impact of mobile money on financial inclusion in Pakistan. International Journal of Economics, Commerce and Management, 4(8), 1-15.
- Ali, S. S., Hussain, I., & Ali, S. (2016). Easypaisa: An innovative Pakistani model for mobile banking. The Journal of Developing Areas, 50(6), 277-285.
- Awan, M. S., Ijaz, K., Abbas, Z., & Jabeen, F. (2020). Microfinance and financial inclusion: Evidence from Pakistan. International Journal of Economics, Commerce and Management, 8(7), 94-107.
- Awan, U., Azam, M., & Khan, S. (2020). Microfinance and financial inclusion: Evidence from Pakistan. International Journal of Social Economics, 47(6), 752-762.
- Fatima, T., Iqbal, M., & Faisal, S. (2019). Impact of digital banking on financial inclusion in Pakistan. International Journal of Financial Research, 10(1), 1-12.
- Fatima, T., Shahid, A., & Ali, M. (2019). Digital Banking and Financial Inclusion in Pakistan. International Journal of Academic Research in Business and Social Sciences, 9(3), 75-88.
- Gokal, V., & Hanif, M. N. (2016). Financial inclusion in Pakistan: An empirical analysis. Journal of Poverty, Investment and Development, 22, 90-101.

- Haq, N. U., Ullah, F., & Jan, R. (2020). Financial education and financial inclusion: Evidence from Pakistan. Journal of Asian Finance, Economics and Business, 7(9), 421-430.
- Haq, S., Anjum, S., & Ali, S. (2020). Financial literacy and financial inclusion: An empirical investigation from Pakistan. Journal of Financial Services Marketing, 25(3), 155-167.
- Khalil, A. (2017). Microfinance and financial inclusion in Pakistan. Journal of Microfinance and Sustainable Development, 5(1), 48-60.
- Khan, A., Israr, H., Shahzad, M. A., & Khurshid, S. (2021). Impact of Digital Banking on Financial Inclusion in Pakistan: Evidence from Structural Equation Modelling. Journal of Open Innovation: Technology, Market, and Complexity, 7(2), 28.
- Khan, M. S., Abbas, Q., & Shah, S. (2020). Factors affecting the adoption of fintech in Pakistan: The mediating role of trust. Journal of Financial Services Marketing, 25(4), 137-149.
- Khattak, M. A. & Ullah, M. (2019). Digital financial services and financial inclusion in Pakistan: Opportunities and challenges. Journal of Asia-Pacific Business, 20(2), 106-118.
- Mishra, S., & Bisht, S. S. (2018). Financial inclusion in developing countries: A review of recent literature. Journal of Financial Economic Policy, 10(4), 487-504.
- Naeem, M. A., Saleem, F., & Shahzad, W. (2018). Fintech Adoption in Pakistan: Analyzing the Role of Awareness, Education, and Societal Influence. Journal of Electronic Commerce Research, 19(3), 192-207.
- Nasir, J. & Siddiqui, A. (2019). Digital banking and customer satisfaction in Pakistan: The role of service quality and perceived value. International
- Nazir, M. S., Abbas, J., & Ali, I. (2021). Mobile money and financial inclusion in Pakistan. Journal of Asia-Pacific Business, 22(1), 17-32.
- Nazir, M. S., Saleem, M. A., & Ahmad, F. (2021). An empirical analysis of factors affecting the adoption of mobile payments in Pakistan. Journal of Islamic Banking and Finance, 38(1), 103-118.
- Raza, S. A., Mahmood, S., & Raza, S. A. (2020). The role of fintech in financial inclusion: A review of the literature. Journal of Risk and Financial Management, 13(3), 53.
- Sadiq, M. W., & Jalil, F. (2020). The role of fintech in financial inclusion: Evidence from emerging economies. Journal of Financial Services Marketing, 25(1), 34-46.
- State Bank of Pakistan. (2021). Financial education and consumer protection. Retrieved from <a href="https://www.sbp.org.pk/CPD/Financial-Education-and-Consumer-Protection/index.asp">https://www.sbp.org.pk/CPD/Financial-Education-and-Consumer-Protection/index.asp</a> State Bank of Pakistan. (2021). Microfinance. Retrieved from <a href="https://www.sbp.org.pk/FS/Publications/Microfinance/index.asp">https://www.sbp.org.pk/FS/Publications/Microfinance/index.asp</a>

- Yar, M., Amin, M., & Khattak, S. A. (2020). Fintech and financial inclusion: A literature review and future research agenda. Sustainability, 12(12), 4956.
- Yasin, M., Hussain, M. A., & Irshad, N. (2020). Impact of Digital Banking on Financial Inclusion in Pakistan. Journal of Financial Services Marketing, 25(2), 98-110.
- Yasin, S., Waseem, M., & Riaz, S. (2020). The impact of digital banking on banking efficiency: A case of Pakistan. Journal of Asian Finance, Economics and Business, 7(12), 1015-1026.
- Zahid, M., & Mohsin, M. (2020). Exploring the relationship between financial inclusion and economic growth in Pakistan. Journal of Asian Finance, Economics and Business, 7(6), 481-488.
- Zulfiqar, A., Ahmad, W., & Ahmed, N. (2019). Efficiency analysis of microfinance institutions in Pakistan: A non-parametric approach. Journal of Business and Policy Research, 14(1), 61-72.
- Zulfiqar, U., Batool, S., & Shahid, M. (2019). Efficiency comparison of microfinance
- Anwar, S., Saini, V., & Bhati, S. (2021). Fintech and digital banking adoption in India: The role of trust, risk and demographic factors. Journal of Financial Services Marketing, 26(1), 57-70.
- Chen, L., Wei, Y., & Wang, Y. (2018). Fintech development and its impact on financial industry: Evidence from China. China Finance Review International, 8(3), 327-343.
- Demirguc-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution. World Bank Group. Retrieved from https://globalfindex.worldbank.org/Report
- Fan, Y., Gao, Y., & Wang, P. (2020). Fintech development in China: Challenges and opportunities. Journal of Chinese Economic and Business Studies, 18(4), 351-366.
- Huang, Y. (2020). The Fintech Regulatory Sandbox in China. Banking & Finance Law Review, 35(2), 169-198.
- Mbiti, I., & Weil, D. N. (2011). Mobile banking: The impact of M-Pesa in Kenya. NBER Working Paper No. 17129. Retrieved from http://www.nber.org/papers/w17129
- Raza, S. A., Jawaid, S. T., & Ali, S. (2021). Digital financial inclusion and economic growth: Evidence from developing countries. Journal of Digital Banking, 5(3), 222-243.
- Saini, V., & Bhati, S. (2019). Demonetization, digitalization, and the transformation of financial services in India. Journal of Financial Services Marketing, 24(3-4), 119-126.
- Yermack, D. (2018). Corporate governance and blockchains. Review of Finance, 22(1), 7-31.
- Yousaf, R., Shah, N., & Khan, Z. (2021). The role of fintech in financial inclusion: Evidence from Pakistan. International Journal of Innovation, Creativity and Change, 15(6), 542-557.