FINTECH IN PAKISTAN[5]

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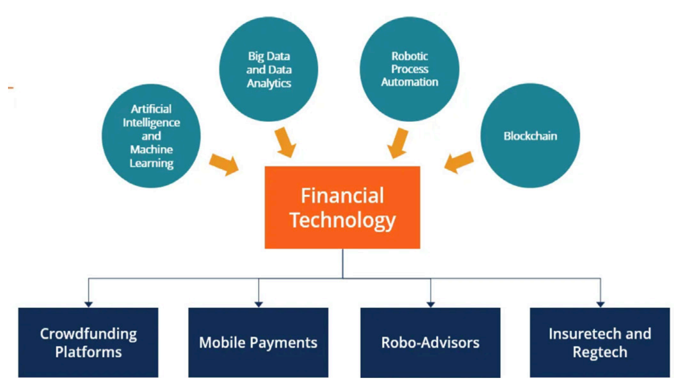
Traditional banks are playing key role in the financial industry but the rapid technological development in financial sector has evolved the world economy to shift to digital channels gradually. Financial technology (FinTech) is a revolutionary contribution to fasten the pace of financial services. There is no doubt that the Internet is the main enabler for the FinTech industry. Leong and Sung (2018)[6] defines FinTech as “any innovative ideas that improve financial service processes by proposing technology solutions according to different business situations”. Thus FinTech is the segment of industries consisting of technology-focused companies with innovative products and services, traditionally provided by the financial services industry. To date there are six FinTech business models: insurance services, crowdfunding, payment, lending, wealth management, and capital markets. Overall FinTech developments have impacted financial planning, financial well-being and economic inequality (Frame, Wall, and White 2019)[7].

Globally, FinTech market is continuously evolving and expanding with an increasing diversity of funding sources, scope of business and geographic spread. Improved financial and other (technological, political health, environmental) literacies enable individuals to better engage with artificial intelligence. The role of financial institutions, corporations and entrepreneurs is important for the formation of supply-side solutions which enhance financial literacy and reduce inequalities across groups in society. There are four main technologies that contribute to FinTech i.e., Artificial Intelligence and Machine Learning, Big data and data analytics, Robotic process automation and Blockchain. The following five applications are widely used for FinTech, Crowdfunding platforms, Mobile payments, Robo-advisors, Insuretech and Regtech.

There are four broad categories of users for FinTech: 1) B^2B for banks and 2) their business clients, and 3) B^2C for small businesses and 4) consumers. However, FinTech developments may also damage financial well-being by triggering impulsive consumer behavior while interacting with financial technologies and platforms. For example, mobile apps could attract impulsive and unsophisticated individuals, who lack the necessary skills to forecast future preferences. As such, mobile apps can lead to individuals making faulty decisions in ‘hot’ states or under sales pressure. In such cases, the reduced time between the purchase and ultimate consumption of financial services is likely to be detrimental to consumer welfare.



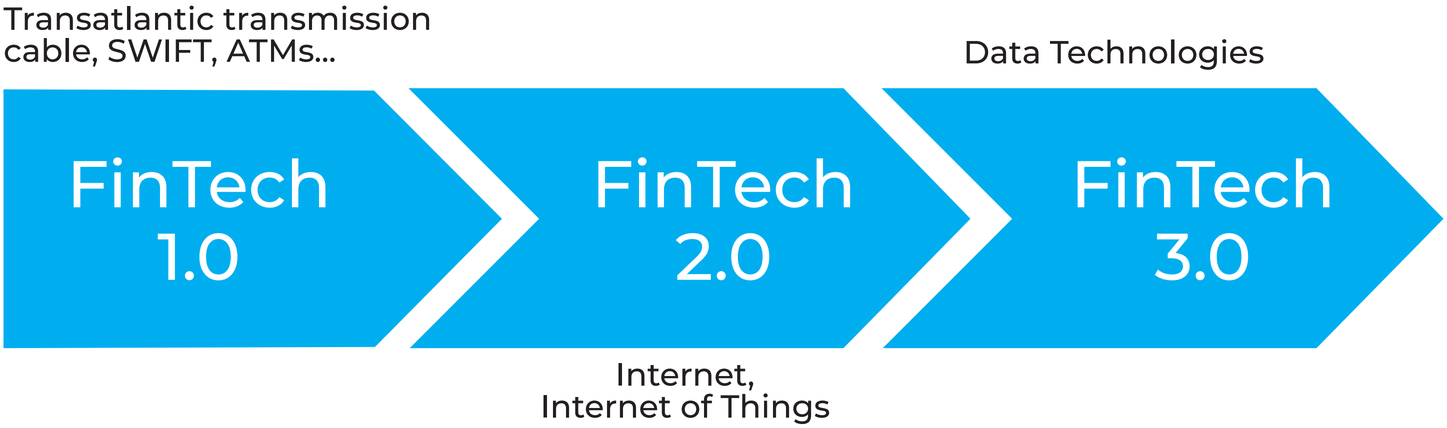


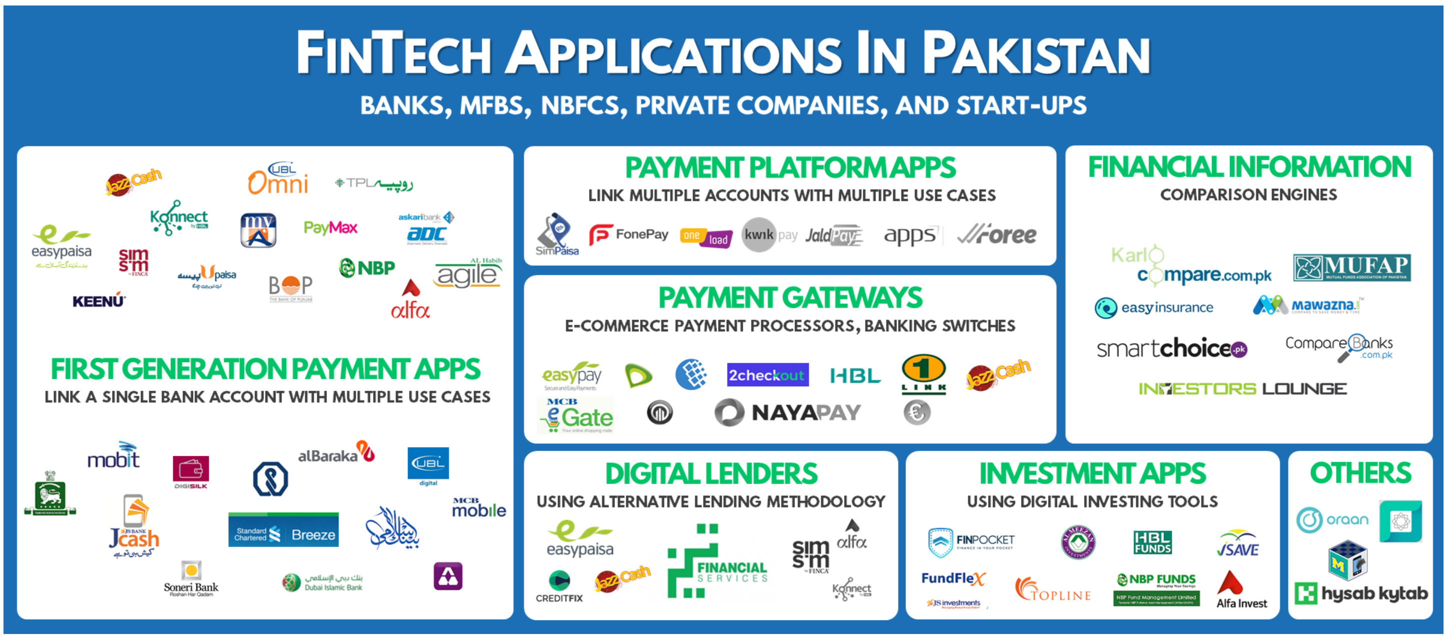
Table 1: The Evolution Of Fintech Industry

1860	The Pantelegraph was Invented
1880	Using Charge Plates and Charge Coins For Credit
1918 -1970	The Invention of Fedwire
1919	An Important Book Was Published Linking Finance and Technology
1950	Diner'S Club Introduced a Credit Card
1958	American Express Introduced Their Credit Card
1960	Quotron Allowed Stock Market Quotes to be Shown on a Screen
1966	Telegraph Replaced by the Telex Network
1967	First ATM Installed By Barclays Bank
1971	NASDAQ Established
1982 -1983	Evolution of E – Trade and Online Banking
2009	Release of Bitcoin
2011	Google Pay Send Developed (Google Wallet)
2017	"Smile To Pay" Services Introduced by Alibaba

Source: www.getsmarter.com

Now when we consider Pakistan; being the world's sixth most populated country, is still a cash-based economy with 85 percent of its population being financially excluded. Along with that, high banking infrastructure costs act as a barrier to the diffusion of financial services beyond a small fraction of the population. At present, only a few FinTechs operate in the country, and those are primarily in the developed cities of Lahore, Karachi, and Islamabad. However, Pakistan possesses the potential to be an attractive market for FinTechs growth, owing to the increasing youth population, disruptive internet and smartphone penetration, consumer preference for mobile phones and social media, a booming e-commerce market facilitating digital payments and an overall financial system having the absorption capacity for innovation.

According to Pakistan Telecommunication Authority, a whopping 101 million people use internet in Pakistan, 46% has access to broadband services and 85% of Pakistan's population has mobile connections that account to 183 million mobile subscriptions, a high penetration in the population. The Economist's Global Microscope 2018 report ranked Pakistan at 21st place out of 55 countries surveyed for an enabling regulatory environment for financial inclusion and rapid growth of mobile financial transactions.



Source: https://www.tezfinancialservices.pk/tfs/FinTech.php

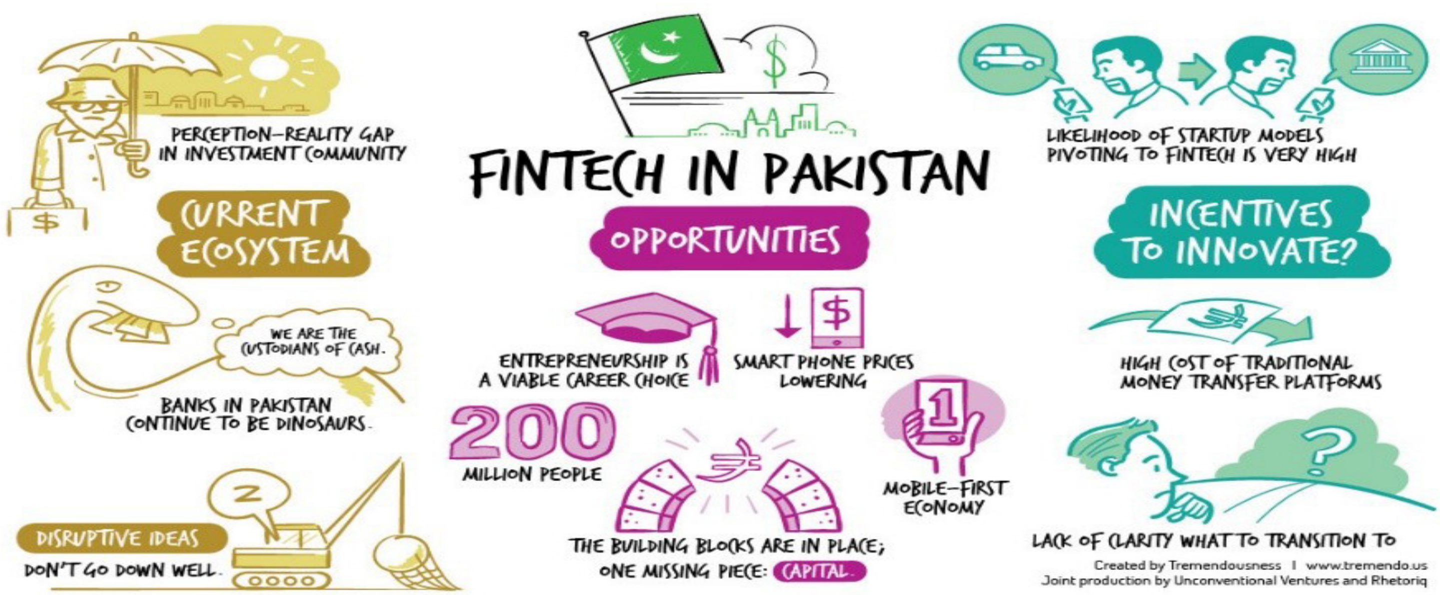
FinTech industry in Pakistan faces several hurdles including a lack of larger organization's support, unfavorable regulatory environment, etc. The major challenges are the unwelcoming attitudes of big players, complex regulations, lack of funding from venture capital firms, no data security mechanisms, difficult to get registration of your businesses, no protection of intellectual property, and lack of funding opportunities for follow up capital and lack of retentions of talent staff.

From the prudential regulations perspective, financial services are among the most heavily regulated sectors in the world. Not surprisingly, regulation has emerged as the number one concern among governments as FinTechs companies take off. On the positive side regulatory framework for financial services is fairly strong in Pakistan, with laws such as Payment System Operators (PSOs), Payment Service Providers (PSPs) and Branchless Banking regulations issued by the State Bank of Pakistan (SBP). There are a number of regulators who are most proximate to FinTechs operating in Pakistan as well as enabling uses of FinTech and related technologies:

- State Bank of Pakistan
- Securities Exchange Commission of Pakistan
- Pakistan Telecommunications Authority
- National Database and Registration Authority
- Ministry of Information Technology and Telecommunications
- Competition Commission of Pakistan (CCP)

All of these could act as platforms for carefully controlled and regulated FinTech-led growth. Nonetheless, stringent regulations should not be viewed only as a support, as it might also become a threat for the emerging FinTechs industry (Sludge), which is still in its infancy stage. As technology is integrated into financial services processes, regulatory problems for such companies have multiplied. In some instances, the problems are a function of technology itself. In others, they are a reflection of the tech industry's impatience to disrupt finance. For example, automation of processes and digitization of data makes FinTech systems vulnerable to attacks from hackers. The most important questions for consumers in such cases will pertain to the responsibility for such attacks as well as misuse of personal information and important financial data.

On the positive side poor financial inclusion, along with accelerating mobile phone and internet penetration, evolving consumer needs in favor of digitization and online commerce, biometric verification of mobile SIMs and a supportive regulatory environment all serve as opportunities for FinTechs to step in and provide financial products at low costs. The rapid growth in the mobile phone users in Pakistan is considered a big opportunity to technology based businesses. The use of smart phones for banking transactions are growing with each passing day. In the context of FinTech Pakistan has a huge potential of growth. However, there is a need to provide internet access to everyone in Pakistan, which will reduce the cost of branch less banking for banking transactions. PIDE growth commission report suggested that "Currently, most E-commerce is relying on Cash on Delivery. The real breakthrough will come when online payment becomes easier"[8]. Digital payment infrastructure and no cash distribution infrastructure will lead the transition to the new age of financial products and services. It is the need of the hour to not only invest and support the local upcoming FinTechs in the country but to create an environment conducive to the growth of FinTechs in Pakistan.



[5] Special thanks to Dr. Mahmood Khalid for suggestions and improvements

[6] Leong, K., & Sung, A. (2018). FinTech (Financial Technology): what is it and how to use technologies to create business value in fintech way?. *International Journal of Innovation, Management and Technology, 9*(2), 74-78.

[7] Frame, W. S., L. Wall, and L. J. White. 2019. "Technological Change and Financial Innovation in Banking: Some Implications for FinTech." *In Oxford Handbook of Banking*, 3rd ed., edited by A. Berger, P. Molyneux, and J. O. S. Wilson. 262–284. Oxford: Oxford University Press.