“E-COMMERCE- SUGGESTIONS FOR BRINGING ONLINE FINANCIAL TECHNOLOGIES TO PAKISTAN”

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GLOSSARY OF TERMS

FinTech	Financial Technologies
MFIs	Microfinance Institutions
B2B	Business to Business E-commerce
B2C	Business to Consumer E-commerce
C2C	Consumer to Consumer E-commerce
SBP	State Bank of Pakistan

ABSTRACT

Pakistan is one of the emerging markets for financial technologies and e-commerce owing to widespread smartphone and internet penetration, favorable consumer preferences towards digi-technologies and increased adoption of digital payments system. The State Bank of Pakistan (SBP), the Fintech regulatory body, is also coming forth with sound regulations to aid the penetration of Fintech. This paper aims to provide a detailed qualitative assessment of demographic, social and technological factors being favorable for growth of Fintech in Pakistan. The second objective of this paper is to analyze inherent hurdles and suggest practical measures for eliminating these in order to aid the penetration of online financial technologies into Pakistan

SECTION-I

Introduction

E-commerce and Fintech has gained currency with the advent of industrialization 4.0. This disruptive technology as revolutionized the payment systems across the world. The Fintech consists of technology oriented companies offering innovative products and services which traditionally were provided by financial services industry. The range of products offered by online Fintech include stock trading, cryptocurrencies, e- transfer and payments, peer-to-peer lending and crowd funding, among others. The global wave of Fintech innovation has sparked revolution in financial systems, resulting in new processes, business models, products, services and applications, which altogether changed the outlook of global payments and financial institutions. The fintech market is rapidly expanding and evolving with diverse sources of funds, geographical spread and scope of business. The innovations are very intense and have potential to restructure the financial markets altogether. The Fintech provide financial services with additional associated services of e-commerce, big data, analytics and sharing platforms. Additionally, the Fintechs also offer very customized services to clients on their mobile devices. Among the most commonly used such services of online payments include *Paypal* supporting payments made through *eBay*, *Alipay* working with *Taobao*. Apart from this, Venmo, Google Wallet, Snapchat, Facebook Messenger and WeChat have built person to person (P2P) solutions basing on internet that are enabling people send money to each other through their mobile devices. This payment mechanism seems more convenient as compared to the one where people went to banks physically in order to get money transferred. Pakistan being world’s sixth most populated country, where 85% of populace is bearing the brunt of being financially excluded, is a very attractive market for financial technologies to tape in. The high infrastructure cost of brick and mortar model was one of the major barriers to smooth penetration of financial services firms, but the online financial technology model is changing the financial landscape of Pakistan altogether. Though data security threat is obstructing Fintech attract a sizable customer base, but it has the potential to be a healthy market for fintech owing to disruptive internet and smartphone penetration and growth in e-commerce. This paper primarily underscores gaps blocking the penetration of online financial technologies into Pakistan along with pragmatic measures to plugin those gaps.

Problem Statement

The aim of this research paper is to delve deeper into gaps and suggestions for bringing online financial technologies to Pakistan. It unearths the most common financial technologies being used by Pakistani populace along with shedding light on challenges and potential of FinTech industry in Pakistan followed by recommendations for ensuring smooth penetration of FinTech into Pakistani marketplace.

Significance & Scope

Financial industry throughout the world are achieving cost and service efficiencies through adoption of financial technologies. Pakistan being one of the lucrative markets for this technology facing issues in implementing this tech development owing to numerous inherent obstacles in its governance structure. This paper attempts to come forth with practical measures to overcome these obstacles for better and prosper Pakistan.

Literature Review

Seyal and his coworkers investigated the pace of adoption of e-commerce among 54 SMEs in Pakistan. It is reported that 84% of the organizations have Internet accounts; while 46% have slightly low adoption of EC. It is revealed that government support and management is very significant for its adoption. Moreover, policy makers and planning authorities are playing very imminent role to boost fintechs in Pakistan (Seyal, 2004). Rizvi and his fellows analyzed that Pakistan is an emerging e commerce market for consumers. In addition to this, SBP is regulating to add in growth of fintech. They have analyzed all the factors responsible for its penetration. Another feature is the role of regulating sectors in the financial services industry (Rizvi, 2018). Lukanga studied different barriers to growth persist, including limited access to finance, unfavorable business environment, talent gaps, and weak internal managerial capacities. Due to these barriers the employment generation capacity isvery low. Implementation of policies and strategies is very important for the growth of fintech. More reforms are needed to Digital technologies, productivity and growth. A comprehensive strategy is needed to grow SEMs in Pakistan (Lukonga, 2021). Zafar and his co-authors reported about customer satisfaction with fintech tools. The focus is on ATM or E- transactions. It will enhance productivity according to customers' demand (Zafar, 2022).

Research Methodology

The research methodology employed in this research is mostly secondary in nature. Where data was collected from various sources available; Pakistan Single Window, was one of the major sources in this regard. The research is qualitative in nature. It analysis available data and comes forth with few practical measures to address the issue at hand in a deft manner.

Organization of the Paper

This paper is divided into four sections, each reflecting a different dimension of the title. First section comprises of abstract, introduction, problem statement, research methodology and literature review. The second section illustrates e-commerce and online financial technologies in a detailed manner. Third section, sheds light on current state of Fintech in Pakistan along with discussing the types of Fintechs prevalent in Pakistan besides delving deeper into challenges and potential of Fintechs. The last section concludes the paper via putting forth few significant measures for brining financial technologies to Pakistan.

SECTION-II

E-commerce

Electronic commerce is defined as buying and selling of good and services, transfer of data and funds over an electronic network known as internet. The history of e-commerce can be traced back to Berlin Blockade and airlift in 1948-49 where it served to be the standard for exchange of business document including invoices and orders between suppliers and their consumers. (Britannica, n.d.) Moreover, with the advent of World Wide Web in 1991, most of the commerce related affairs got shifted to the internet. It has sparked revolution in e-commerce. More recently, the worldwide spread of smartphone technology has shifted the whole commerce to mobile devices, where consumers can perform hundreds of transactions in a matter of few hours with parties anywhere in the world. There are four types of e-commerce. First, Business to Business (B2B) where companies do business with each other with no end consumer being involved. It mainly remains concentrated in transactions among manufacturer, wholesaler and retailer. Second is Business to Consumer (B2C), in which companies directly sell their produces to the end consumers, while the third type is where the consumers directly come into contact and generate business activity know as Consumer to Consumer (C2C). The fourth and last type is Consumer to Business e-commerce. In this model consumers provide goods or services to the business entities, the prime example of this model are the IT Freelancers, who sell their software or skills to the business firms. The following figure presents few eye-opening figures of e-commerce trends in Pakistan:

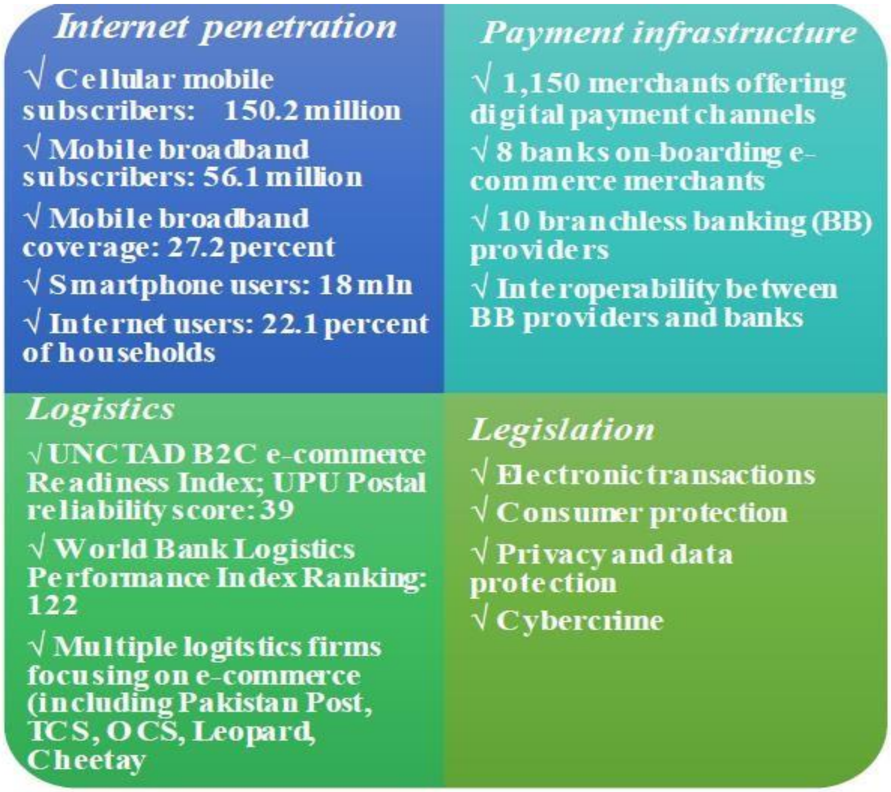


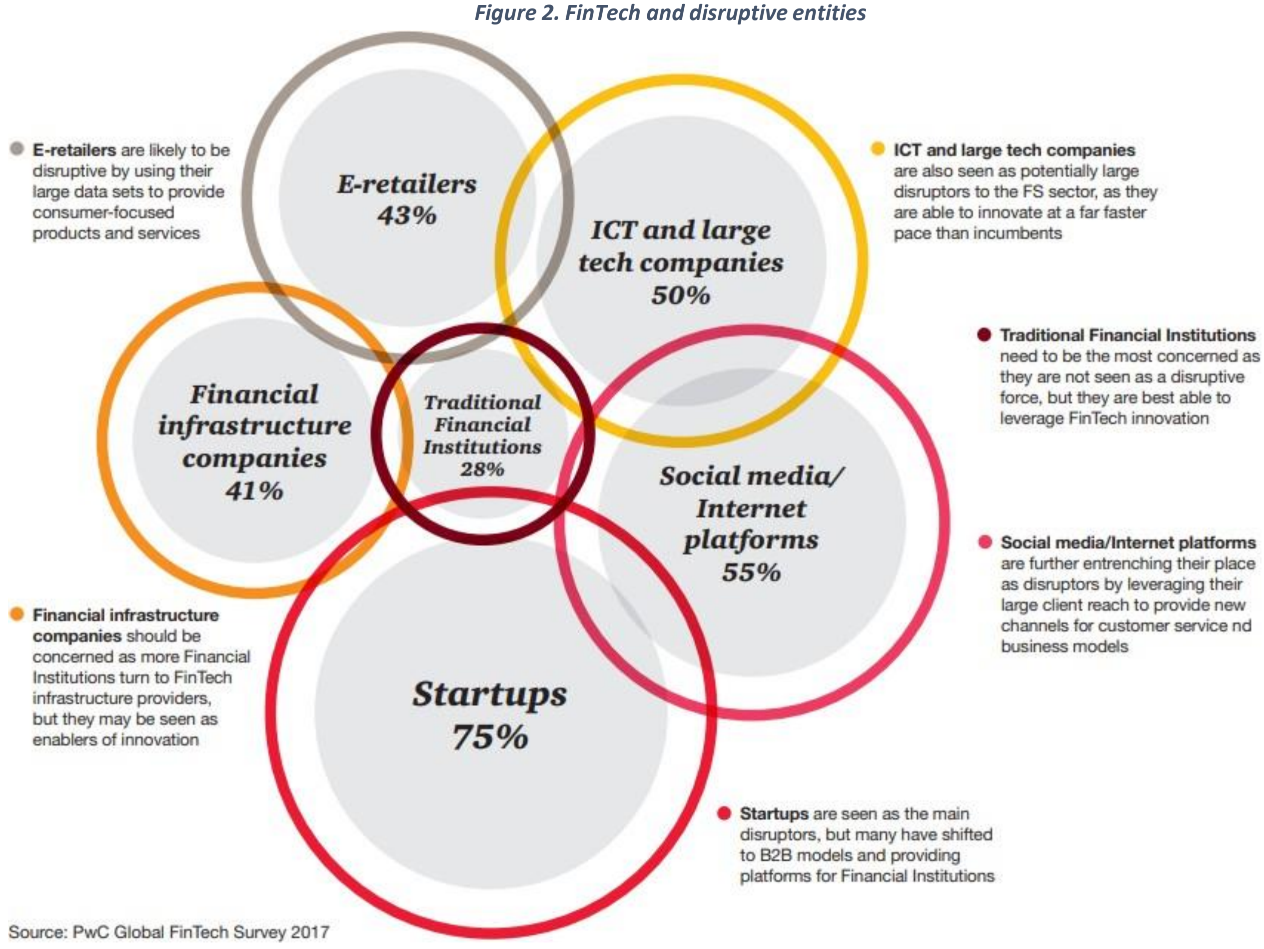
Figure 1. Source SBP Data Centre

Online Financial Technologies

The online financial technologies have revolutionized the financial services world. They have simplified financial transactions for businesses and consumers along with making them more accessible and affordable. The term financial technologies; dubbed as FinTech, refers to use of technology to modify, automate and enhance financial services. It is used to aid companies and business owners better manage their processes, financial operations and lives by bringing into play specialized software and algorithms. Initially it was employed by financial institutions for their back-end services, but now the consumer oriented financial technologies are gaining currency. This technology in current age is increasingly penetrating into education, retail banking, nonprofit, fundraising and investment management sectors. Above all, the recent cryptocurrency and block chain technology has sparked a new life to financial technologies. It is effectively disrupting the conventional brick-and-mortar model of financial institutions. The top five FinTech adopting countries are; China (92%), the US (52%), Mexico (49%), South Africa (47%) and the UK (47%). Following are few major types of FinTech prevalent in current epoch;

- **Payment Gateway-** It is allowing people send money without involving banks with very minimal fees.
- **Robo-Advising & Stock Trading apps-** These provide automated, algorithmic investment services with minimum human supervision, use optimize passive indexing strategies on modern portfolio theory.
- **Block Chain and Cryptocurrency-** distributed public ledger where record of all transaction can be updated and held by the holders.
- **Crowd funding-** Aligning investors with startups, encompasses virtual fund raising for new ventures where funds get pooled from various convenient sources.
- **Consumer Banking/ Digital Banking-** Consumers managing their money, have access to credit and deposit their money in a secure manner.
- **InsurTech-** Quick and an effortless way of contacting the insurance companies, leading insurance companies provide more flexible and consumer centric insurance packages.

Figure 2. FinTech and disruptive entities



Source: PwC Global FinTech Survey 2017

SECTION-III

Current state of E-Commerce and Fintech in Pakistan

Pakistan is the sixth most populated country of the world. It is a cash based economy. Ninety three percent of adult population of Pakistan remains unbanked (Kumail, 2018). It has a low financial inclusion index when compared with regional and global standards. The prime factors making financial services dormant include high intermediation cost, high interest rate, prohibitive lending rate, low financial literacy and non-conducive business environment. The ever increasing operating costs and vulnerable business landscape are dampening the future investments. The general perception of Pakistani consumers about the about difficult baking procedures, unsuitable products, high transaction cost and low outreach provide an opportunity to FinTech ventures to design customized offerings (Bank, 2017)[1]. There is need of more strides towards branchless baking and physical access to finance in order to bring Pakistan at par to the regional countries, which can be done through partnerships between commercial banks and informal providers to make services more accessible geographically and less intricate. Additionally, Microfinance Institutions (MFIs) have a great potential to extend the outreach, but they are in dire need of funds to grow and get integrated with financial markets. The abovementioned weaknesses can be blessings in disguise by allowing Pakistan embrace these tech developments wholeheartedly and prosper in the field of digitally enabled efficiency.

Types of Fintechs in Pakistan

Pakistan is a very lucrative market for financial technologies. The commonly used products in Pakistan include Automatic Teller Machines (ATMs), debit cards and credit cards regulated by commercial banks. The rapid technological developments along with globalization of world were major drivers behind these technological advancements. The current wave of mobile applications has revolutionized the payments, improved financial inclusion and multiplied the overall productivity of economies throughout the globe. They have reduced transaction costs significantly and enabled fintechs penetrate in a rapid pace along with creating a competitive environment for existing players. The commercial banks are left with no option other than collaborating with

[1] *Pakistan development update growth: A shared responsibility*, report World Bank, 2017.

fintech firms which in long run will prove beneficial for both by banks bringing their customer base along with data center and fintechs their entrepreneurial approach to financial solutions. The glaring instance of this the FINCA Microfinance Bank-Finja partnership, where Finja being a fintech startup will develop a wallet application, while FINCA provides a regulatory cover by having the branchless banking license (Kumail, 2018). The table below outlines the fintechs currently operating in Pakistan by classifying the same into traditional and emergent financial technologies. For clarity, traditional fintechs work together with existing financial service provide through providing them technology within their traditional pricing models. On the other hand, emergent fintechs tend to collaborate with the commercial banks through their new and innovative models by providing altogether new solutions to satisfy existing needs.

Table 1: Currently Present FinTechs in Pakistan[2]

Traditional	Service Offerings	Emergent	Service Offerings
ABACUS	Management, technology and outsourcing services, consulting	**BATWA**	Mobile wallet
AUTOSOFT	Banking products, Consulting services	**FINJA**	Cloud based payroll solutions and zero cost payment systems
INNOV8	Technology and Consulting Solutions	**ONELOAD**	Online mobile top up
KARLOCOMPARE	Web Applications for personal finance	**PAYLOAD**	Payment solutions
MONET	E- payment processing	**RED BUFFER**	Customized cloud and mobile solutions
TPS	Payment solutions	**STOCKSFM**	Social investment network

- **ABACUS Consulting-** One of the leading business solutions provider in Pakistan, mainly finance related business solutions for firms.

[2] Adopted from *Seeding Innovation: A framework for rooting FinTechs in Pakistan*, Shahid (2016)

- **AUTOSOFT-** Engaged in development of financial applications primarily for banks, basically a software development company.
- **INOV8-** Mainly a digital payment company; collaboration with Easypaisa.
- **KARLOCOMPARE-** A mobile app for comparing a range of financial products and making an informed purchase decision.
- **MONET-** An electronic payment provider, branchless and alternate banking channels services.
- **TPS-** Providing assistance in prepaid cards and management along with cards and payment solutions provider.
- **BATWA-** Mobile wallet facility provider.
- **FINJA-** Unified loan and zero cost payment platform and e-commerce marketplace. Pioneer of SiSim app solution being the first payment solution provider in Pakistan with free and frictionless payment system.
- **ONELOAD-** Providing top up credits for mobile users through an app and web portal.
- **PAYLOAD-** providing technology for businesses to receive bitcoin payments while dealing with payments in Pakistani rupees
- **RED BUFFER-** developing cloud and mobile applications.
- **STOCKSFM-** investment management platform.

Fintech Growth in Pakistan: Challenges Vs Potential

There has been a healthy debate over the potential of growth Fitech has in Pakistani marketplace. There is no denying the fact that the huge adult base of Pakistani population, with positive perception about technology, can change the fate of Pakistan if brought to financial technologies. But in parallel to this, Fintech industry is facing different obstacles especially in banking system of Pakistan. Literacy rate is a primary hurdle because people do not know how to operate technologies. Majority are not willing to accept the change. There are also several allied issues like age factor, inflation, economic condition, trust deficit environment, security concerns; minimum access to banks etc. The Fintech is not very familiar technique among Pakistani populace. People are cost conscious and are well familiar with traditional banking system and do not rely on emerging IT developments. To avoid scams and privacy issues people always prefer to go through banking transactions rather than using financial technology is also a major issue.

Despite all these challenges, - It is stated in the Innovation Challenge Facility guidelines paper estimation depicts that GDP will uplift by 7 percent and will create 4 million jobs because the market potential of Digital Finance services in Pakistan will cross $36 billion by 2025. Digitization with fintech sector occurred at a very rapid pace during the Covid-19 pandemic. Invest2Innovate a Pakistani firm reported that in 2021 alone fintech has raised $486m of global capital. It includes (3G/4G) service accounts for 43%, and mobile penetration increases accounts for 77%. Moreover, the numbers get doubled by 2024 as per PTA estimation. The number of internet users has increased unprecedentedly. Only Easy paisa accounts for PKR 1.7 trillion in the first half of 2022. Money transactions have been done tremendously thorough fintech. Increase in sales of telco industry through apps is also very prominent event.

Additionally, the worthy feature of Fintechs is the seamless access to credit. Financial ecosystem is a tool to regulate fintechs by promoting innovation and advancements under SBP. The important initiative of SBP is Customers' Digital Onboarding Framework which includes parameters of operating banking system. The registration of 90 million Jazzcash users is also very positive sign. Transactions through mobiles and balance in mobile accounts have been increased by over 100 percent. The contribution of Upaisa is also increasing day by day. Moreover, NayaPay app has raised $13 million in a seed round led by Zayn Capital, MSA Novo and Silicon Valley early-stage investor Graph Ventures. It has received license from SBP in August 2021. For the same the struggle of collaboration and advancement in fintech sector is evident. State Bank of Pakistan (SBP) and the Securities and Exchange Commission of Pakistan (SECP) have increased regulation over fintech sector in the recent years. Customers are the driving force for this digitization in Pakistan. Only Consumers' demand is prompting banks and financial institutions upto the mark. Fintech is not only facilitating in finance management but also playing role in social and cultural transformation. All in all, Pakistan can seek more benefits from fintech innovations by focusing on execution of all fintech related policies. Undoubtedly, it will empower Pakistan digitally and entice a new generation of consumers, investors and businesses, who in turn, can serve as the agents of change and innovation for the whole populace. Following are few demographic trends in Pakistan;

Figure 3; Source- Pakistan Telecommunication Authority.

SECTION-IV

Conclusion

The growth of financial technologies and e-commerce has been phenomenal throughout the globe. Changing consumer behavior and preferences and technological innovations serve to be the major drivers helping this disruption happen. The Fintechs through their customized services are allowing customers conduct all their financial affairs on their mobile phones, which in conventional model used to be physically performed in corridors commercial banks and other financial institutions. On a broader level, online Fintechs are going to promote financial inclusion by making their offerings accessible to people who previously were deprived the access in traditional business model. Pakistan being a developing countries has a sizable portion of its population unbanked. However, the advent of online financial services via Fintech along with favorable customer taste towards digitization have effectively multiplied the opportunities for penetration of Financial Technologies into Pakistan. The regulatory framework by SBP also very conducive for promotion of Fintech in Pakistan. Despite all these positives factors Pakistan has a long way to go in order to reap maximum fruits from this recent tech development. There are numerous inherent obstacles which need immediate intervention for smooth penetration of Fintech in Pakistani marketplace.

Suggestions for Bringing FinTech to Pakistan

Pakistan being one of the major markets for FinTech is unable to embrace it owing to numerous hurdles, following are few major suggestions for overcoming the hurdles and gaining maximum fruits from financial technologies;

First and the foremost suggestion is overcoming the uncertainty in regulatory framework. The unfriendly regulatory framework not only discouraging the tech firms to cater to this segment but is also begetting trust deficit among the fintech users. The functioning of fintech under such high risk environment is leading to lags in implementation of this financial technologies. The State Bank of Pakistan take lead in this regard. This will not only help commercial banks but will surely benefit the non-financial sector also.

Similarly, adopting effective growth strategies can help Pakistan encourage the penetration of FinTechs into Pakistan. There is need of formulating regional developmental plans, where core emphasis should be on identifying regions on the basis of their current infrastructure and capabilities as potential hubs for growth of Fintech and incentivizing the tech firms through funding to boost their operations and cater to the Fintech needs of the area with secure financial solutions.

Additionally, digital literacy is one the major concerns when it comes to addressing the penetration of Fintech into Pakistan. There usually exists a resistance to changing the traditional financial model into digital one. There is need of more boot camps, workshops and digital literacy drives to make people digitally equipped, its only then that they would adopt these tech solutions in executing their routine financial affairs.

Moreover, data privacy and security concerns have led people show reluctance to fintechs. The regulatory authorities are in need of enforcing the data security protocols in letter and spirit to gain the trust of common populace. The regulatory authorities should put in place strict regulations for fintech before they enter into a market in Pakistan, this will ensure that no data security breaches take place and people can have secure financial transactions.

Apart from this, the current licensing protocols for financial tech firms are cumbersome. There is need of easing and digitalizing the licensing procedure so as to create a welcoming environment for financial tech firms.

Lastly, digital infrastructure is immature in Pakistan. There is need of investing and upgrading the infrastructure in order to bring it at par to international standards. Maximum fruits from FinTech revolution can only be realized when infrastructure is up to date as per the need of the era.

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