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THE FUTURE OF FINANCIAL INCLUSION THROUGH FINTECH: A CONCEPTUAL STUDY IN POST PANDEMIC INDIA

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Abstract
Accessing adequate financial services is considered one of the main difficulties facing communities during periods of uncertainty and crisis. Applying technological innovations in the finance industry, such as digital cash transfers or mobile banking, along with governmental support and regulatory frameworks have the potential to reach out to people currently lacking access to basic financial requirements. Financial Technology or FinTech plays a crucial role in uplifting the state of financial inclusion in India in more ways than one. The current study aims to provide a conceptual understanding on how FinTech helps accelerate financial inclusion in India's post pandemic landscape and throws light upon certain key regulatory initiatives that enable smooth execution of this objective. The paper also presents a brief discussion on the way forward for improvement of Fintech landscape in India. The methodology followed is descriptive in nature, focused on providing a conceptual overview of the topic at hand. The bottom line of the study states that Fintech will help the economy get back to its feet after the harsh realities of the pandemic through improvement and transformation so that it has a positive impact on all users.

Keywords: *Financial inclusion, Fintech, India, Pandemic.*

INTRODUCTION
The successful combination of technology and finance, commonly referred to as Financial Technology (henceforth, FinTech), can be understood as "technology-enabled financial innovation" that may result in new business applications, models, products and/or processes, that create manifold material impact on financial markets and provision of financial services (Schueffel,2016).

FinTech presents a promising prospective of bettering the situation of financial inclusion in developing countries like India by leveraging on technology in an innovative manner. Inclusive growth can be achieved through FinTech by means of broad-based prosperity, reduction in transaction costs and better access to financial services to the underserved (Sahay et al., 2020). In this context, Fintech companies are institutions applying technological innovations to increase efficiency and create enhanced access to the finance industry. There has been tremendous growth of such companies in recent years and it has also captured the interest of investors alike.

MSME and consumer lending segments of an economy like India can greatly benefit from collaborations between FinTech companies and other financial institutions, where payment records and other ancillary data can be used to access their credit worthiness (India FinTech Report, 2019). In the context of credit scoring models that are being used by FinTech lenders, there exists two major differences in comparison with traditional lenders. Firstly, use of technology gives an edge to financial intermediaries in collecting greater amount of data, such as through social media, (Gabor & Brooks, 2017) and secondly, the adoption of machine learning techniques can better mine non-linear information from variables (Huang et al. 2022).

In today's rapidly changing world of technological developments, there is also a growing urgency of serving the under-served sections of the Indian society. FinTech tries to bridge this gap through offering new value propositions such as flexible products and more efficient ways of addressing the financial challenges faced by low-income customers. It is interesting to note that where-as the 2019 global average adoption rate of FinTech was 64%, according to the Ernst & Young's Global FinTech Adoption Index 2019, India along with China lead emerging markets with as high as 87% FinTech adoption rate in the same year. Some of the reasons to be attributed for the same could be easier access to more innovative products and services, enhanced product features and service quality, more attractive rates or fees, etc. (Siddiqui & Siddiqui 2020).

Technological innovation is the need of the hour and it is changing the face of provision of financial services. Thus, it becomes important to understand the implications and effects that such developments would have on economic growth and financial inclusion. India, as one of the leading developing nations, is also leaving no stone unturned in embracing Fintech to boost such aspects while trying to mitigate the possible risks arising from the same.

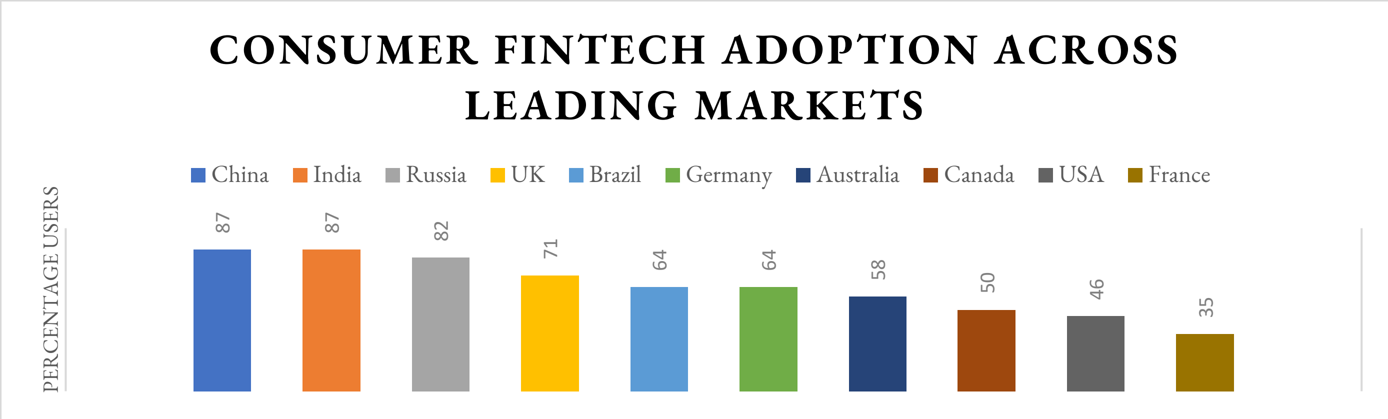

Figure: Consumer FinTech adoption across ten leading markets as a percentage of the digitally active population in each market. (Source: Author's representation of data compiled from EY Global FinTech Adoption Index 2019)

LITERATURE REVIEW

FinTech is a technology based financial industry that thrives by breaking the barriers of conventional financial institutions (Puschmann,2017). The post pandemic scenario across the globe, including in India, has customers wanting banking and allied financial services at their finger clicks, making transactions more convenient, safer and less expensive (Nawayseh, 2020).

Financial Inclusion has been defined by The Reserve Bank of India (RBI) as the "process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low-income groups in particular, at an affordable cost in a fair and transparent manner by regulated, mainstream institutional players". The Government of India has tried to increase the level of digital transactions, and encouraging financial inclusion along with enhancing the GDP of the nation has remained a major focus especially in the post pandemic period. Fintech has been the powering pillar of such initiatives (Mansour, 2021). Various research studies also noted that "compared to upper-middle-income and high-income countries, low and lower-middle income countries are more enthusiastic towards digital means of payments during the periods succeeding the pandemic."

"Financial information flows get deflected away from conventional financial infrastructure and traditional institutions of finance as the growth of digitalization gets accelerated in the economy, which in turn might pose a threat to the stability of former financial players in the market" (Gozman et al. 2018). As greater number of bank branches get replaced with newer and more convenient options such as internet banks or mobile banks, users are getting used to the idea of ease of transaction and bypassing complicated payment infrastructures built by brick-and-mortar financial institutions. FinTech revolutionizes financial delivery mechanisms and a new wave of independence and ease of use are being brought about in traditional financial market constructions (Hedman & Henningsson, 2012). A 2020 PwC report stated that more than 82% of traditional financial institutions have expressed a desire of forging partnerships with FinTech companies in the years post the Covid 19 pandemic in India. As the world is slowly coming out of the clutches of a pandemic past, developing nations like India are embracing technological developments in financial sector and rejecting obsolete technological combinations (Gupta et al. 2021). Social bonding has taken prevalence over physical bonding during the pandemic tenure and FinTech is enabling various crowd funding platforms to perform seamlessly by removing asymmetric information between lenders and borrowers (Robin et al. 2022). Adoption of online banking has gained popularity in the post Covid period due to financial information flows getting re-organized (Nair et al. 2021). Application programming interfaces (APIs) are becoming part of financial discussions as their potential in generating personalized customer-centric experiences is immense. Such experiences are the need of the hour as India recovers itself from the harsh effects of the pandemic (Rahman et al. 2020).

The covid pandemic acted like a catalyst in empowering an effortless shift of banking customers "from physical banking to online platforms such as mobile wallets and mobile banking." The pandemic has been instrumental in preparing the Indian banking infrastructure towards a digital shift (Agarwal et al 2020). With the twin benefits of physical distancing and ease of use, mobile banking has shown tremendous growth during early phases of the lockdown, a growth potential seen to continue even in the post pandemic phase as reported by Statista.

METHODOLOGY AND OBJECTIVES

The current research article is of descriptive nature. The relevant information has been collected from secondary data sources which includes recognized academic journals and proceedings from respected associations and organizations. Evidence has also been extricated from various

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governmental reports on digital transactions, usage of technology in the finance sector in India and financial inclusion through FinTech in post COVID-19 pandemic era.

The primary objective of the research study is to provide a conceptual understanding on the role of FinTech in accelerating financial inclusion in post pandemic India. The secondary objectives throw light upon certain key regulatory initiatives that enable smooth execution of this vision and presents a brief discussion on the way forward for improvement of Fintech landscape in India.

OBSERVATIONS AND FINDINGS

Role of Fintech in aiding financial inclusion in India

The long-standing barriers of financial inclusion in India are being addressed through the positive impacts of FinTech adoption. The geographical barriers to financial inclusion are also being overcome through the same. International Monetary Fund (IMF) paper titled "Fintech: The Experience so Far" has pointed out that FinTech solutions have been transformative in developing financial inclusion in India by addressing various financial bottlenecks. Cost of delivering financial services, especially in remote rural locations, information asymmetries especially among India's unbanked population, complicated documentation procedures and lack of suitable financial products for lower income population are one of the many financial frictions that is being adeptly managed by FinTech in order to promote financial inclusion.

India's FinTech revolution has most significantly impacted the MSME lending landscape. Smaller enterprises are getting their much-deserved access to credit with the help of innovative alternative lending platforms (Mittal et al., 2022). Adoption of FinTech further promotes inclusive business models that may expand the pool of suppliers of financial services. McKinsey Global Institute's study on Fintech recognised the tremendous potential it holds in creating a more inclusive financial system and its efficiency in boosting the GDP of emerging economies like India. RBI has envisioned National Strategy for Financial Inclusion for India 2019-24 to achieve the twin objectives of greater financial inclusion and sustainable socio-economic growth for all in a time bound and co-ordinated manner. FinTech is one of the key supporters of such an initiative in making formal financial services "accessible, affordable and available to all Indian citizens" in a safe and resilient manner.

The conception of financial inclusion post the pandemic, focusses on the prudent usage of cutting edge technology such as machine learning, data analytics and other alternative data sources to help both individuals and institutions showcase their credit worthiness and eligibility for suitable financial services in a streamlined manner. FinTech gives support to concepts such as e-KYC and biometrics to make headway among the unbanked population (Dunaev, 2018). The Aadhaar-enabled Payment System (AePS), has been helping many rural people enter into proper banking activities by making bank deposits, withdrawals and transfers streamlined and convenient. Banks and financial institutions are partnering with FinTech companies to strengthen their banking frameworks and trying to address the gap in MSME financing and consumer lending. Financial inclusion is getting a boost through FinTech as propective banking customers with "limited credit history and lack of documentation but having a good digital footprint and record of regular payment of bills" are being given due consideration for providing credit (Jain, 2019). Given the dynamic nature of FinTech, in recent years it has also expanded into other sectors such as investments and insurance. According to a recent working paper published by the Bank for International Settlements (BIS Working Papers No. 834, December 2019), FinTech firms that use machine learning and "non-traditional" data sources may be able to generate a more accurate picture of the credit risks posed by their customers. This advantage when combined with the physical distribution and reach of the banks could be a win-win combination for the Indian economy.

The pandemic phase saw high rates of growth in internet penetration and mobile density, a phenomenon which is to stay if not get accelerated in the post covid period as well. Using these tendencies, e-commerce and smartphone-based services have had access to huge amounts of data on individuals and small businesses in India. Banks, in association with FinTech players are leveraging on the same in providing financial services across geographical and societal boundaries. As more data is getting digitalized, "cost, time and effort involved in assessing the creditworthiness of individuals and MSMEs is also coming down" (Gabor & Brooks, 2017). Thus, financial inclusion in India is getting uplifted by the adoption of FinTech across different domains.

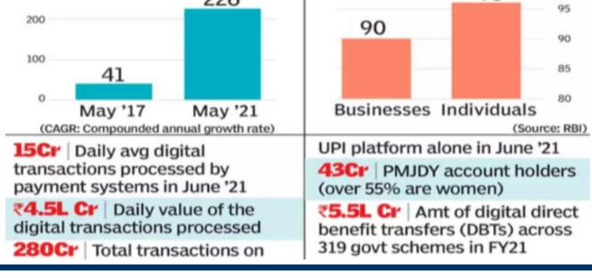

Figure: RBI's report on 24% growth in Financial Inclusion in India across FY17-21
(Source: The Times of India e-paper dated 18.08.2021)

Key regulatory initiatives to encourage FinTech and financial inclusion in India

(i) Formation of Committee on Deepening of Digital Payments

RBI plays a crucial role in promotion of financial inclusion in India (Das et al. ,2019). With a vision towards encouraging financial inclusion through digitization, a specialized committee on Deepening of Digital Payments had been constituted by RBI under the Chairmanship of Shri. Nandan Nilekani, (former Chairman, Unique Identification Authority of India (UIDAI)), in early 2019. Some of the primary objectives with which the committee is formed is "to identify best practices that can be adopted, review the existing status of digitisation of payments and level of digital payments in financial inclusion, recommend measures to strengthen safety and security of digital payments, etc." In one of its reports in the post Covid period, the Committee had put forward a strategy for encouraging a digitally included society in a time bound frame by accelerating the acceptance of FinTech in banking services, encouraging high frequency use cases and focussing on the safety and convenience of users.

(ii) Regulatory Sandbox

"A regulatory sandbox (RS) usually refers to live testing of new products or services in a controlled / test regulatory environment for which regulators may (or may not) permit certain regulatory relaxations for the limited purpose of the testing" (Allen, 2019). RBI is continuously striving to align its regulatory and supervisory framework with the aim of leveraging FinTech so that ease of financial access can be extended to the excluded population (Das et al.,2019). With regard to the same, an "Enabling Framework for Regulatory Sandbox" has also been constituted by RBI in August 2019. In early November, RBI further came up with the announcement of the opening of the first cohort under the Regulatory Sandbox (RS) - 'Retail Payments', as its theme. Choosing such a dynamic and relevant theme is in expectation towards promoting innovation in the digital payments space. In enhancing financial inclusion through FinTech, the idea is to encourage financial offerings to those sections of the society that have been unserved and underserved for the longest time.

(iii) Miscellaneous initiatives

Advancements in digital technology that are creating waves in financial services, either through payments, credit or other allied transactions are supported by the digital infrastructure developed by the government and RBI. Initiatives such as online bank account opening, Aadhaar ID being linked to biometric data, mobile banking, etc. is making the availability of financial services more convenient for users without the need of their physical presence. Further, the introduction and growth of Unified Payments Interface (UPI), which can be easily availed by anybody having a smartphone and a bank account, has transformed payment system for millions of users. Digital delivery of many government benefit schemes is facilitated through Direct Benefit Transfer (DBT) under government schemes to beneficiary accounts that have been duly linked with Aadhaar, giving a big impetus to digital transactions (Misra & Tankha, 2018).

To expand the reach of banking services for the unbanked population in India, RBI has rolled out several measures and also introduced various technology-based initiatives to promote the MSME ecosystem of our country. Although in India, "banks have been the traditional gateway to payment services", in today's changing world, there is a consensus in understanding that the monopoly of this domain should be curtailed for the better interest of all. A "cash-less" society is being encouraged for promotion of this very cause. Focussed efforts are being directed towards developing a strong payments infrastructure such as Immediate Payments Service (IMPS), Unified Payments Interface (UPI), Bharat Interface for Money (BHIM), to name a few. Such endeavours have resulted in a significant jump in the total volume of retail electronic payments- almost a nine-fold increase since the pandemic period (Carvalho et al. 2022).

Certain entities have been given license by the RBI to operate as "peer-to-peer (P2P) lending platforms to improve the access to finance for micro and small enterprises and individuals." The Trade Receivables Discounting System (TReDs) has also been set up to act as an innovative financing arrangement, cashing on the use of technology for discounting bills and invoices. TReDs is helpful for MSMEs which usually suffer from cash flow issues or are having perpetual working capital crunches. In the current scenario in India, three entities are currently operating TReDS exchanges. Such transactions are gaining great amount of traction in the current context. Licenses have also been granted by RBI to seven purely digital loan companies that are to operate solely through mobile applications. Also, after the issuance of differentiated banking licenses, ten Small Finance Banks, embracing state-of-the-art technology to serve the unserved and underserved sections is currently operating in India (Jain,2014).

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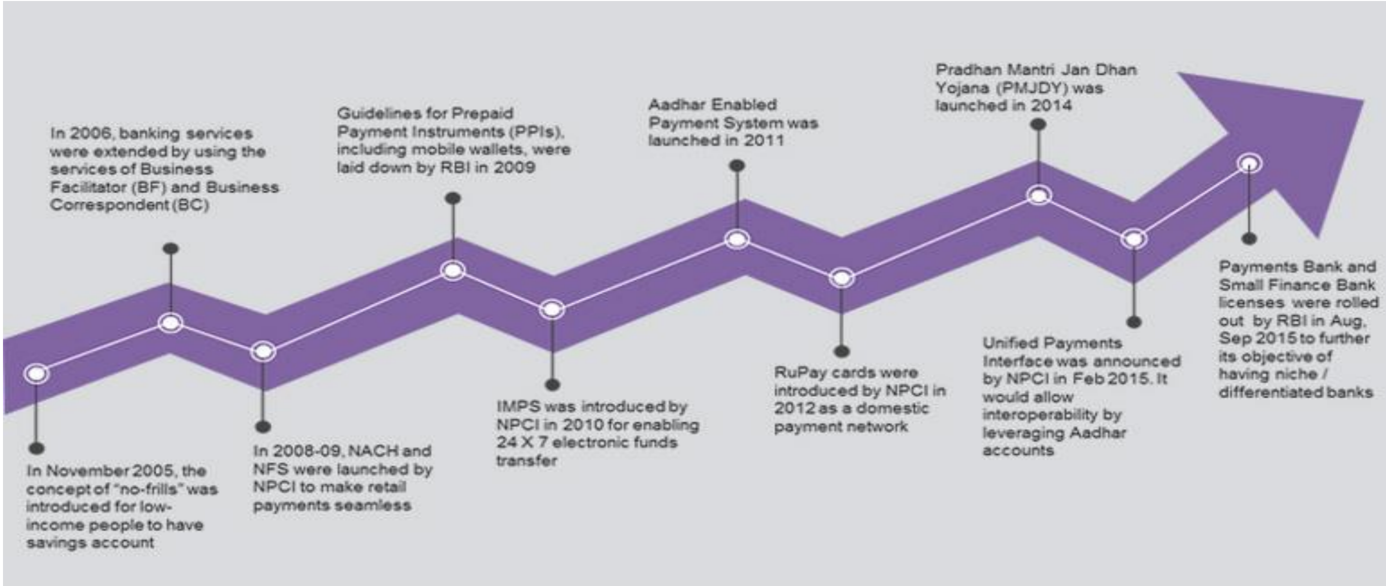

Figure: Timeline of major milestones in Financial Inclusion being driven by FinTech in India
(Source: The Telegraph e-paper dated 15.05.2019)

The way forward for Fintech in India

(i) Digital onboarding and financial inclusion

Financial inclusion can be achieved in a much smoother manner through the process of digital onboarding. A major milestone in this direction is the central KYC registry, where approximately 100 million KYC records have already been uploaded. The focus has now rightly shifted towards 'digital financial inclusion'; using financial services via digital platforms to advance the reality of financial inclusion. Payments, transfers, savings, etc. being delivered through digital channels are included in this idea.

(ii) Designing Appropriate Financial Products

Creating better pathways to access platforms for financial services using FinTech helps strengthen the Fintech space in India. Awareness is being created in developing financial products suitable for reaching out to the marginalised Indian population and catering to their specific needs. These are major thrusts towards achieving the idea of financial inclusion.

(iii) Removing the Gender Gap

Achieving the twin objectives of financial inclusion and women empowerment has far reaching impact on the socio-economic domain in India. As per a report published in The World Bank Global Findex 2017 Report, men are more likely to have a bank account in comparison to the other sex. Committee on Deepening of Digital Payments has recommended such data to be collected so that the reasons for such gap can be analysed and eventually minimized. FinTech acts as the enabler of women empowerment by offering products and services through mobile phones, computers and other devices connected to the internet, thereby creating a roadway to financial products and services for them. Consistent efforts in this direction would help to close the gender gap in financial inclusion in a systematic manner.

(iv) Inclusion of merchants in the digital sphere

Of the nearly seven crore merchants in India, only a limited number are involved in digital transactions. Thus, there remains great scope for increasing merchant acceptance through mobile payments, Smart Point of Sale (PoS) Terminals and Quick Response (QR) Codes (Devi & Lingaraja, 2018). In addition to payments, allied services such as reconciliation, lending and provision of working capital should also be extended to them. Developing the payments acceptance infrastructure and connectivity in remote areas with lack of digital transactions would create great impetus for financial inclusion in India.

CONCLUSION AND POLICY IMPLICATIONS

FinTech is becoming the numero uno factor in driving the growth trajectory of India and as a nation, a tremendous opportunity to enhance financial inclusion through FinTech is available to her. India is steadily developing as a data rich country and bringing together data, technology and consumer insights can surely propel the vision of financial inclusion towards the right direction. India presents a strong potential in developing further financial inclusion initiatives through FinTech, banking on the pillars of digitalization and infrastructure creation (Dunaev, 2021).

Digital payments have seen a tremendous upsurge following governments "cash-less economy" push and the subsequent covid restrictions. This calls for immediate attention to utilize FinTech's momentum not only in traditional financial services but also other areas such as insurance and wealth management.

Harnessing the benefits of financial inclusion through FinTech will only be fruitful if the possible risks are also taken into account. For example, digital literacy of all citizens should be improved to protect them against possible digital frauds when getting themselves involved in technology based financial transactions. Thus, regulatory and supervisory frameworks need to be strengthened to enable technology in ushering "a new financial system which is more inclusive, cost effective and resilient" (Barik & Sharma, 2019).

There is no doubt in the fact that random efforts towards achieving the goal of universal financial inclusion in India will not be generative unless synergistic endeavours between mainstream financial entities and other FinTech institutions are ensured. Systematic collaboration acts as a catalyst in creating inclusion through innovation.

Deloitte published a report in 2017, titled, 'FinTech in India - Ready for Breakout', stating in very lucid terms that in the coming years, FinTech firms would most definitely reshape the financial services landscape in India and help develop avenues towards unique and innovative models of assessing risks. This prediction came much true, especially in the years immediately after the corona pandemic wreaked havoc around the world, including India. India has already jumped at the opportunity present and is already leveraging machine learning and big data to improve penetration of financial services. To accelerate financial inclusion in the country, access opportunities towards the same should also be looked into. As one of the leading nations looking forward towards achieving "universal financial inclusion" through FinTech, at costs which are affordable for the masses, the post covid panorama stands a defining moment, and India should seize the opportunity at the earliest.

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