

Are We Nodding for a Fintech Revolution? – A Study on the Indian Scenario.

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ABSTRACT

The term Fintech might be a new terminology for most of the common people. Until, 2015 it was a buzz word even in the business world too. To be simple, Fintech is the mixture of Finance and technology in the most modern way serving its stakeholders in many ways. The whole financial sector gets reinvented with the help of technology is what a Fintech means. The rise in the Fintech technology across the globe is significantly evident. The driving force of development of the Fintech technology was because of the conversion from the closed traditional banking system to the open banking regulations across the globe and the development of the non – financial sectors has led the path towards the development of Fintech technology in India.

The Digital India campaign in the year 2016 has also supported the development of the Fintech technology either directly or indirectly. India positions the 2nd rank globally in the number of fintech's started per year. The Fintech start-ups doesn't concentrate only on the financial aspects. More or less there are nearly 9 categories of business in which Fintech focuses. As the technology develops the Fintech also gets updated to its newer versions. The introduction of AI and Blockchain technology have immensely contributed to the development of Fintech apps.

This paper studies about the Fintech revolution which is on-going at present in India; a descriptive one. The factors contributing for the development, the technical aspects behind its functioning etc... are analysed in this paper.

Keywords: Fintech start-ups, Open Banking, Artificial Intelligence(AI), Blockchain.

1. INTRODUCTION

Fintech is a fast-growing global phenomenon leading in front by the innovators, closely watched by the researchers and regulators. It refers to either non or not regulated ventures whose primary goal is to develop the technology in such a way to make a revolution in the current financial practices. Fintech is a term which covers the financial services and its accompanying services under one roof. With the influence of rapid changing technologies and the consumer expectations the changes in the Financial and its accompanying services was an unavoidable matter which in turn gave rise for the Fintech based revolution. Redefining the financial sector with the help of innovation has really changed the world a lot not concentrating on one region alone but the change was evident across the globe. The Fintech's doesn't concentrate only on the financial services, it does have some subsidiary services. Basically, the services provided by a Fintech can be categorized into nine different types of start – ups:

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|-----------------------------|-------------------------------------|
| a) Financing. | f) Risk Management |
| b) Payment | g) Exchanges |
| c) Asset Management | h) Regulatory technology (Reg tech) |
| d) Insurance (Insure-techs) | i) Other Business Activities. |
| e) Loyalty Programs | |

The major reasons behind the revolution of Fintech is; Adoption of Open Banking Regulations across the globe and Adoption of the most recent technologies in the Fintech Business Models. In the near future we can witness the increasing participation from the non – financial service sectors too. The increasing number of Fintech start-ups is just because the number of self-employment entrepreneurs are increasing day by day. And not only that the large number of investment bankers who had lost their jobs during the financial crisis has also supported the development of Fintech's. When there is a well-developed economy and a sound financial structure the possibility of starting up Fintech is higher and vice versa (Haddad & Honruff, 2018).

When looking into the stats released by Crunch Base; USA bags the top position in having the highest number of Fintech start-ups. Nearly 3904 start-ups have been started only in the

USA by the year 2015. When looking into India it has nearly 262 start-ups in this field (Crunch Base). From the above data it is evident that the rapid growth of Fintech is happening all around the world. But, the impact of these Fintech's is primarily felt in the developing countries rather than the developed countries. These new developments will give rise to the new culture and transformation among the public and its stakeholders. The investments made into this sector comprises of 50 billion Dollars from 2010 – 2015. Since the investments and the readily available technologies are more in this field the competition also peeks into it.

The initiatives taken by the government and regulators for Digital India has aided the development of Fintech's in one way or another. The Smartphone penetration and the increasing usage of the internet supported the Fintech's development in India. The Open banking system adopted globally have literally redefined the banking services and perhaps it paved the way for Fintech's. When the traditional finance industry revolved around the policy 'one size fits all' the most modern Fintech revolves around the Personalized approach for the customer. The customization in the finance and other related industries will attract the customers and the investors and in turn it helps in the development of the Fintech start-ups. This paper analyses the fintech revolution in India; it's a conceptual paper. Hence it's a growing phenomenon the literatures available in this field is very limited; taking these things into a consideration and considering it as a research gap, this paper is been developed.

1.1 OBJECTIVES OF THE STUDY

- a) To study about the Fintech Revolution in India.
- b) To understand the evolution of Fintech start-ups.
- c) To examine the driving forces behind the development of Fintech.
- d) To analyse the technologies used in the Fintech's.
- e) To foresee the future of Fintech start-ups.

2. EVOLUTION OF FINTECH

Fintech the revolution creator's evolution is still a mystery. The evolution of Fintech comprising of the most modern technologies can be traced back to the 2010's; but as (Varga, 2017) suggests the evolution of Fintech can be traced back to the 1860's.

In (Arner, Barberis, & Buckley, 2015) there paper he has divided the evolution of Fintech into three distinct phases:

Fintech 1.0 – The first stage of the evolution started from 1866 and it lasted till 1987. During these years so many physical foundations were laid across the globe for the telecommunication services which still acts as an interconnectivity between the banks across the globe. Without the investment into this infrastructure the most modern innovations might not have been evolved. So, this stage is considered as the first stage in the evolution of Fintech.

Fintech 2.0 –The second stage of revolution started in the year 1987 and it went on till the beginning of the financial crisis of 2008. During this era, the whole of banking system was digitized from the traditional banking methods. The IT infrastructure and the ATM's can be considered as one of the important milestones in this era. The number of branches flourished in terms of number and size under each bank. The rise of stock exchanges and central clearing houses was witnessed during these years. The shift over from the traditional book keeping systems in the bank towards the computerized systems was one of the major developments in this period. The old systems became obsolete. The first online payment platform Paypal was introduced in the year 1998 could be considered as a major breakthrough in the Fintech 2.0.

Fintech 3.0 – The current stage is currently an on – going scenario beginning after the financial crisis and it goes on where in it includes the new technology enabled financial service companies and the traditional banking institutions. The introduction of the first Cryptocurrency, Bitcoin happened in the year 2009, immediately after the financial crisis. By the year 2011 the first e wallet was launched by Google. And from there on the current fintech revolutionary era has begun. The investments into these Fintech's is increasing rapidly. When compared with the banking industry's development in the earlier stages Fintech's development is far way better. The revolution of Fintech doesn't come to an end with the above three stages it has a very long way to go ahead.

While checking into the evolution of Fintech in India, it can be seen that India primarily being a cash – driven economy is adapting the fintech revolution and its services. With the huge number of transactions occurring through fintech apps even India is adopting the technology. The way people carrying out the daily transactions and handling their money had a drastic change after introducing the Fintech apps into the society. Not only the global giants

even the Indian start – up companies viz Paytm, Phonepe, Mobikwik etc... do receive a large amount of money as investment. The way people transact their money have drastically changed. Earlier days people used to carry money with them in their wallets, but now everything is inside the phone. The fear of theft can be majorly avoided with the introduction of the fintech apps. The primary step in the evolution of Fintech in India can be traced back to 1990s with the introduction of EFT (Electronic Fund Transfers) in the banks.

3. FACTORS INFLUENCING FINTECH START – UPS

a) Adoption of Open Banking System

In the olden days the banking system was a closed one where in the customers and third parties had a limited access to it. Each bank had their unique services. But when the banking system adopted openness globally now it creates an ecosystem which provides a user with a network of financial institutions data through the use of Application Programming Interfaces (API). After the introduction of open banking system, its increased transparency in the whole banking sector. Moreover, the third parties started to get an access to the banks information and they can provide real time information to the customers. This led to the development of fintech start-ups creating a more personalized services for the customer (Kredx, 2019).

b) The Digital Pace

The Indian population is becoming more digital day by day. Most of them are trying to achieve digital literacy as days passes. The number of people who uses the Internet have crossed 500 million users in the mid of June 2018 when compared with that of 481 million users in the month of December 2017; which clearly states an increase in the users.

c) The Smartphones

Over the past decades when telephone was there the people used to interact at a very lower pace. When the telephone became handy everything was included into it from the phone books to the cameras and now even the finance or the cash which the consumer have in the bank accounts can be seen through the Smartphone and it can be easily transferred to other accounts. All these things are possible only because of the Smartphones. There was a steady increase in the Smartphone users from 199 million in 2015 to 378 million in the year 2018; these figures have been achieved only because of the introduction of the cheap and affordable Smartphones into the society.

d) The Government

The 'Digital India' campaign lead by the Government of India has given the way for the development of the Fintech start – ups. The government is promoting the digital campaign so hardly that so many start-ups and the self-employed people got engaged due to this. The subsidies and the support provided by the government attracts the start- up companies to start their own businesses.

e) The Regulations

The RBI came up with a new regulation when the user is having a minimum of monthly transaction above Rs. 20,000 through the app then he or she must file the KYC (Know Your Customer) with that app developer. The customers can download the wallets and they can use it for various other purposes. Not only that nowadays the app helps a customer to avail the loans through the apps. The loans will be approved within a period of less than 10 minutes. While approaching a bank it at least takes a day to avail a loan.

4. TECHNOLOGY DRIVEN FINTECH

The fintech start-ups are basically driven by the most modern technology available in the world(KPMG, NASSCOM, 2018). Earlier days we had human involvement in tackling the most crucial situations, but nowadays it is all tackled by the technologies such as Artificial Intelligence (AI) and Block Chain. These two technologies are used in the Fintech widely.

a) Artificial Intelligence (AI)

AI is used in almost all the sectors across the world to tackle the crucial problems. When looking into the Indian financial sector we can see that the increase in the Non – Performing Assets (NPA's) and the deduction in the margins is considered as one of the crucial problems in India. To overcome this situation introduction of AI into the finance sector was an unavoidable thing. Artificial Intelligence (AI) refers to the ability of the machines to perform the complex tasks such as thinking, perceiving, decision making and problem solving without any human interferences. When AI is adopted in the Indian finance sector it actually bridges the gap between the services provided to the Rural Sector and the Urban sector. The increase in the micro finance and micro insurance schemes will witness a rapid change in the rural sector. But the regulation on these things must be strictly monitored by the RBI or else safeguarding of data and information must be gone beyond the interests of the business. The

technical elements used in the Fintech start-ups differ based upon the requirements and Return on Investment (ROI) analysis. The technical elements include:

- Machine Learning – It is the ability of the machine to learn on their own with regarding to the customers behaviours, the sentimental approach, the trading indicators, identification of fraud etc... in the back and front office processes. The machines can either learn on their own with the help of a programmed data or a non-programmed one.
- Computer Vision – Analysing or capturing the face scans, tagged images, visual recognition etc... can be captured through the computer visions. This helps the fintech start – ups to identify the sentimental analysis of the customers using the financial application over the computer or a smartphone.
- Natural Language Processing –It helps to understand the human language and it can analyse it further by having a sense of written and spoken human language. This helps to organize the information received in clusters, which in turn helps the fintech start-ups to have a chat bot with the consumer.

The AI eco system consists of; Regulators, Government, Financial Institutions, Technology Vendors, Investors and Research Institutions which works together in order to bring innovative schemes in the financial sector. And, moreover trying to give personalized services to the customers or in a simple term it can be considered as customization of financial services.

b) Blockchain Technology

This technology has created waves in the financial sector in the beginning of 2009 with the introduction of cryptocurrencies named 'bitcoin'. Bitcoin created a big storm across the world, that was the first concept of having a e money. All the P2P transactions (Peer to Peer) are stored in blocks in this technology. It keeps the old blocks and simultaneously creates a new block making it an impossible task to identify the exact location of the P2P transactions. Block chain technology is considered as one of the most secure, transparent and decentralized databases that improves efficiency and brings a uniformity in the data records of an organization. In India, the blockchain gained its popularity from the year 2016 since then there have been lots of investments made into this technology. The major services which can be done by the Blockchain technology in the finance sector is; Know Your Customer (KYC), Anti – Money Laundering (AML), Trade Surveillance, Settlement and

Clearing houses, Smart Assets and Collateral Management. The blockchain technology is not limited to the financial sector alone it can also be used among the Regulators, Government and Technology developers. Most of the countries across the globe have adopted Blockchain technology, in the near future even the Government of India will adopt this technology for safeguarding the databases. As an initiative Telangana government has started a collaboration with the New York based Blockchain technology company to safe guard their land records and streamlining vehicle registrations.

5. THE FUTURE OF FINTECH

The road to the financial inclusion is ready as the technology enabled services are increasing day by day. Blockchain technology have already gain popularity among the public and it will see a promising future(Mention, 2019). The Artificial Intelligence (AI) is also gaining popularity but at a slower pace when compared to that of Blockchain. A report released by NASSCOM states that the Fintech industry is expected to grow by 1.7 times and will be approximately valued at USD 8 Billion by the year 2020. The scope for the development of Fintech in India is comparatively huge because of the large population, inclusive economy, the degree of developments and the broad consumer expectations. But, in order to have a fruitful future for the Fintech revolution one biggest challenge must be over ruled that is the data security. If data security is maintained and the customers gains confidentiality then it is easier for the Fintech start – ups to revolutionize the world.

6. CONCLUSION

The Fintech revolution is needed in this fast-moving digital era. In a fast- moving environment, no one have time to spend for their financial needs and wasting a day to go to their bank branches and updating their accounts. In the near future the working of banks becomes less after having a great impact from the Fintech revolution. The human interference is totally or partially avoided in these Fintech based revolution, so that the machines or the programmed language is the only person who learns the emotions and feelings of the consumers, they are even capable of predicting the futures in the financial market. The Fintech revolution will bridge the gap between the rural economy and the urban economy with the introduction of micro finance and micro insurances. The fintech will have a brighter

future in the upcoming years as it receives a lot of investments and popularity among the public.

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