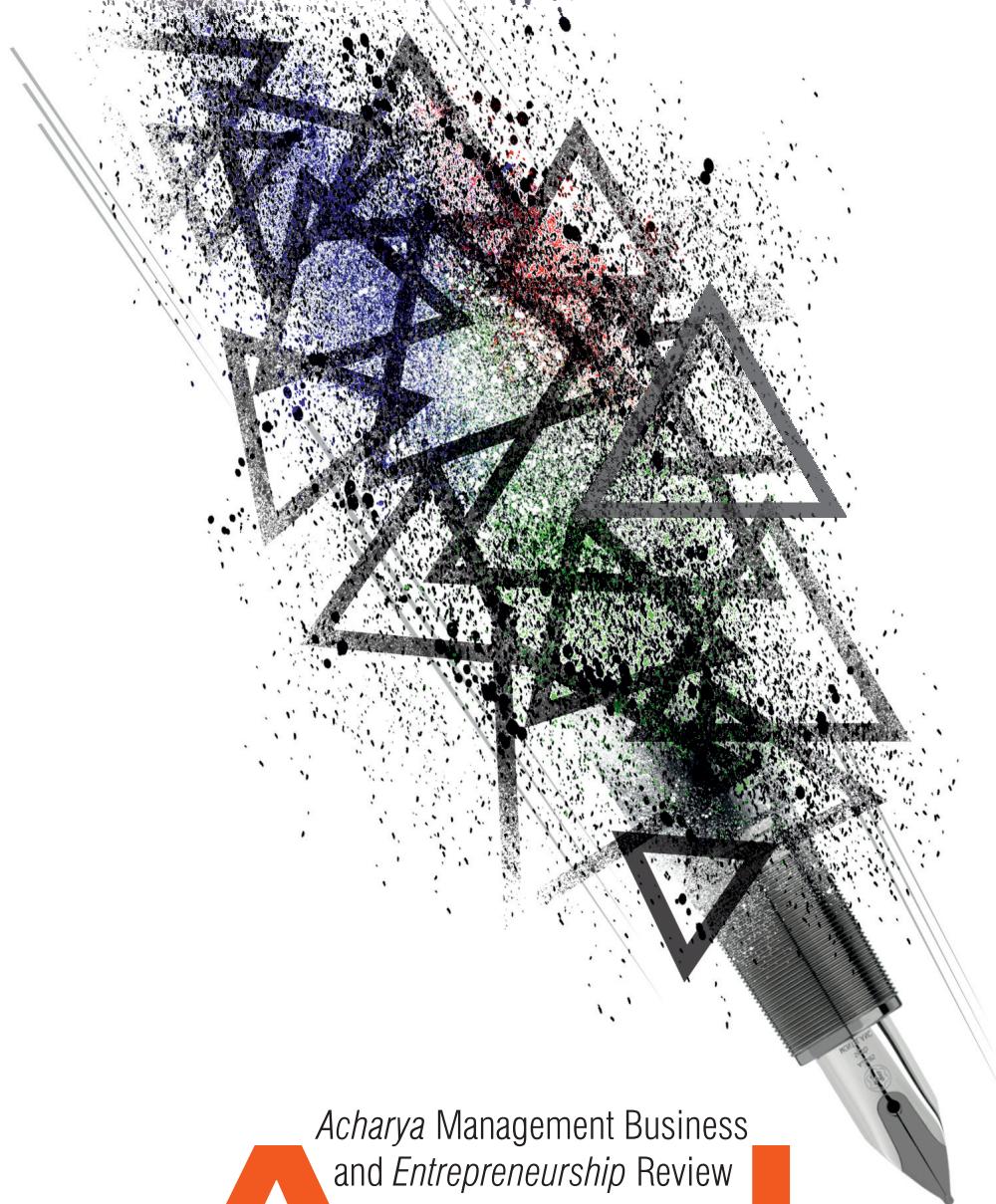




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**Acharya
Management
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and
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Review**

Acharya Bangalore B School (ABBS)

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Editorial

Dear readers,

I am delighted that "AMBER" is entering its 'teen' age. We are happy to place Volume Thirteen and Issue One of AMBER in your hands. The theme of this issue is "**An insight into Fintech Revolution-New Opportunities**".

Today technology is all pervasive. It has influenced every facet of our life. Every segment of Business & Industry is also influenced by Web 3.0 and Industry 4.0 revolutions. It is more so with financial sector. Changes in Fintech is taking shape of a revolution. Hence, theme of this issue is '**Fintech revolution**'.

Fintech has thrown open new opportunities and challenges. Democratization of financial products, financial inclusion, ease of doing transactions, new value-added features and reduction in cost per transaction are great opportunities of Fintech revolution. The flip side of fintech revolution are the challenges like security of transactions, privacy of customer data and digital divide among haves and have nots.

The articles in this issue cover wide spectrum of topics in fintech revolution. We at ABBS are sure, this is just the beginning of fintech revolution. Pathbreaking revolutions in this space can be visualised in the new horizon.

Top management who has supported the department in publishing AMBER continuously for the last twelve years deserves special thanks from my end. I fail in my duty if I do not thank my colleague, Dr. Shalini who is the editor of this issue. She is passionate. Any work that comes on her way she does it with commitment and dedication. I also thank authors who have contributed research papers for this issue. I solicit research articles for the forthcoming issue of AMBER, volume 13 issue 2. The theme of the forthcoming issue is "**Redefining Business Strategies: New Age Business Models**".

Dr. H R Venkatesha,
Professor, Director & AMBER-Chief Editor
Acharya Bangalore B-School, Bengaluru.

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The Fintech Inclusion: Prospect for The Ethiopia Economic Vicinity

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Abstract: Economic sub-structure through technology provides optional ways and business models that could cause conventional financing methods outdated. This research assesses the prospect that could be taken to Ethiopia by using Economic sub-structure through Fintech economic structure. It explains the present Ethiopia economic area, the way of e-commerce resolution, and finally, the economic trade regions of Economic sub-structure through technology. Economic area creates a massive amount of information exploiting by Economic sub-structure through technology organizations that are using to area customer populations, identify prospects for novel offerings and sub-structure and balance pricing. In this area, offerings may use information and analytics to computerize the judgment-making methods. Inventive ventures, merchants', established economic organizations, certified organizations and other imbursement sub-structure facilitators are the Imbursement structures that strengthen the sub-structure that facilitates resources to be remitted between consumer and organizations. For the economic structure, Economic sub-structure through technology offers reliable and practical prospects by enhancing the benefit scheme and fostering exchanges, decreasing working expenses, making simple approach to credits, and lowering interest rates. After showing the advantages of using Economic sub-structure through technology sub-structure, the findings are that Economic sub-structure through technology could enhance both economic sub-structure and approach to sub-structure in the Ethiopia economy.

Keywords: Funding, Economic sub-structure through technology Inclusion, Economic Sub-structure.

1. Introduction: The 2019 economic catastrophe has generated a confidence loss among economic organizations (economic organizations), ventures, and customers. This corrosion of trust is getting poorer over time because of the economic sub-structure offered by their economic organizations that have been deemed to be obsolete by the consumers. In our century, the demonstration of technology, web assimilation, and e-commerce assimilation toward economic organizations are predictable. This economic recession leads economic organizations to turn to technology in order to enhance their sub-structure through the consumers, and restrict the sprawl of this trust catastrophe. In many economic service organizations, technology has moved from the back offices to the front. The industry has become the globe's most digitized one according to Competitive advantage & examination; they say that most of all wholesale financing exchanges now are done digital. In Asia, more than 57 percent of ultra-high-net-worth individuals use Twitter and more than 51 percent of high-net-worth individuals under the age of 55 view social media as a significant media for communicating with their financial institutions, according to latest research by Assetinum. Likewise, a latest financial institutions research investigated that more than 55 percent of all novel financing business with customers between the ages of 17 and 49 is conducted fully on the network. Among these younger consumers, digital Media (including social media) have

become one of the most significant information sources for venture choice.

Before 2005, the Ethiopia economic structure was immature and the financing structure was intense on limited marketable economic organizations in the preponderance of the EEMU. Financing venture operations and lodging remain a challenge. Currently the economic structure in Ethiopia is evolving rapidly with the emergence of novel exchange financing organizations and small ventures. This progression in the financing structure is still not sufficient to be named in the middle of the top economic regions in the globe. A working research is stating that the actual interest rates charged are ranged between 41% and 47%. The report explains that interest rates charged by economic organizations for credits are the result of tirelessly high financial institutions working expenses and a risky lending environment. Additional work is needed to lower working expenses and technology may have a significant role to play in helping all economic organizations in Ethiopia become more efficient. Many authors have discussed bout Economic sub-structure from side-to-side technology and its innovation in financing and economic sub-structure.

2. Literature review: Economic sub-structure through technology is the term coined to describe the intersection between venture and technology. It may refer to technical innovation being applied in a conventional economic service context, or it may refer to inventive economic service offerings which disrupt the existing economic sub-structure trade. It is one of the most exciting and dynamic areas of the economic sub-structure trade. The IT authors argued that Economic sub-structure through technology is conceptually defined as a novel type of economic service based on IT organization's broad types of users, which is combined with ICT and other economic sub-structure like remittance, asset management, reimbursement and so on. His growth such as electronic, e-commerce and Economic sub-structure through technology service has an increasing advancement in service productivity, which addresses the expectations of the consumers. Moreover, it's challenging to the

attitudes of consumers who are accepting novel technology offerings to adopt trade prospects.

Economic sub-structure through technology refers to novel ways which manifest an incremental or radical disruptive innovation growth of applications, methods, offerings or commerce models in the economic sub-structure industry. According to the managing associate and creator of a venture, Economic sub-structure through technology innovation is a significant component of economic growth, especially for emerging economies. Looking at the growth of Economic sub-structure through technology in the globe and its effect of Economic sub-structure through technology ways in Ethiopia, it is significant to observe that in more than fifteen Ethiopian trades, there are now more mobile money accounts than financial institutions accounts. Therefore, Economic sub-structure through technology in developing countries is not only about making existing sub-structure more convenient, it is creating novel infrastructure and providing for greater inclusion of millions of consumers in the real economy. The distribution related economies that were alluded to, may actually lead to such disaggregation of the benefit chain. Economic sub-structure through technology innovations is still catching up with economic regulators. Therefore, there is a higher risk of loss for lenders if strict due diligence procedures are not consistently followed as with regulated economic organizations.

3. Economic Area in Ethiopia: Historically, Ethiopia has experienced major migratory trends. Dating back to before the Empirical Period, the region has long been considered as a trading center for goods and sub-structure. One resilient manifestation has been marketable migration in which traders migrate across borders to participate in marketable operations. This phenomenon is informed by an understanding of Ethiopia as an economic unit. Moreover, while migration in pre-empirical and empirical times was defined by trade routes, modern intraregional migration is determined and shaped by: post-empirical national boundaries the forces of the global economy (cross border migrant trade, structural adjustment,

human trafficking, civil strife, and territorial definitions of sovereignty, regional integration and an ongoing view of Ethiopia as a single economic unit). From a geographic standpoint, it is difficult to clearly define which migratory routes consumer has followed. There is no rule of thumb saying, for example, that French-speaking societies are more integrated amongst themselves in migratory terms. Looking at places of origin and destination may help only partially.

4.1 Financing Area: The EEMU economic area has grown in the last decade. Since the beginning of the 2000's, financial institutions credit has increased substantially in most countries. This trend continued in 2011 taking the ratio to GDP to about 10 percent, from 15 percent in 2010 (with an average credit growth rate of 7 percent annually). The number of financial institutions branches and financial institutions accounts also increased significantly in latest years. Credit is largely short-term and goes mostly to manufacturing and the service area (particularly trade, hotels, and restaurants). Consumers vary substantially across economic organizations, with some dealing mostly with bigger firms (including subsidiaries of multinationals in the case of foreign-owned economic organizations) and others are more focused on domestic wholesale consumers. In some countries, increased competition from small ventures and novel business strategies from entrants have led to diversification of the conventional customer base of the financial institutions and higher competition [10]. Most economic organizations are significantly exposed to government securities and more generally to the public areas. A significant latest enlargement has been the emergence in the EEMU of cross-border financing organizations. This has often occurred through the purchase of domestic economic organizations, in particular by Moroccan and Nigerian organizations seeking to expand out of their home trades. More than twenty big organizations, accounting for most of the financing structure, are involved in cross-border operations.

On average, the financing structure is liquid and well capitalized, although the situation varies substantially

across economic organizations and countries. As mentioned earlier, economic organizations are very heterogeneous with regard to business models, size, geographical coverage, profitability, and vulnerabilities. Aggregate information hides this diversity and therefore needs to be complemented by a more granular approach. Both lending concentrations, which are high in all countries of the union and quality of assets as reflected in high gross nonperforming credits, represent the main risks. Lack of information regrettably did not allow assessing risks related to the exposure of economic organizations to EEMU sovereigns, but this exposure is clearly increasing, raising novel (possibly structure) risks. The broader exposure of economic organizations to the public areas (e.g., through public enterprises) is even more substantial. The emergence of cross- border financing organizations also brings novel risks; for instance, cross-border economic organizations may propagate foreign stock into the domestic economy. Another potential risk arises when large financing organizations have similar portfolios making them susceptible to similar stock in this case, although the diversification of the financing portfolio reduces the probability of an idiosyncratic failure, it increases the probability of a structure catastrophe. Some of these financing organizations are large enough to be considered domestic significant economic organizations.

Compliance with prudential norms remains low for a number of ratios. As shown, compliance varies across countries and across ratios. Also, there are economic organizations in all countries breaching the capital adequacy ratio (lack of granular information did not permit scaling the compliance of prudential ratio by financial institutions' assets). Compliance enhanced in late 2011, but these reflected changes made to two ratios (the transformation ratio, which was lowered from 75 to 50 percent, and the ratio on portfolio structure, which was abolished).

Table 1.1: Main financing organizations in the EEMU

Group	Presence in countries	Trade share %	No. of agencies	No. of accounts
Eco-financial institutions (ETI)	9	15.4	115	1,141,449
Société Général	5	11.1	119	515,595
Financial institutions of Ethiopia Group	7	10.1	155	574,917
Ajariwafa Financial institutions	5	9.7	110	571,079
BNP Paribas	7	7	177	471,759
ABI (Ex-AFG)	5	7.1	91	551,155
United Financial institutions for Ethiopia	5	4.4	59	111,951
BSIC	7	1.5	74	79,759
Total		74.9	1099	4,997,110

Source: From Financing Commission of EEMU

Table 1.2: Key Financial Ratios of Main financing organizations in the EEMU

	2014	2015	2016	2017	2018	2019	2020	2021
Solvency ratios								
Regulatory capital to risk weighted assets	9.17	9.47	7.75	9.79	10.17	11.1	10.7	10.7
Tier I capital to risk-weighted assets	9.79	7.99	7.01	9.47	9.9	10.7	10.1	9.9
Provisions to risk-weighted assets	15.99	15.17	11.75	11.15	10.97	11.1	10.5	10.5

Capital to total assets	5.91	5.55	5.19	7.07	7.1	7.5	7.5	7.4
Composition and quality of assets								
Total credits to total assets	74.55	71.91	59.09	59.51	57.57	55.4	55.1	55
Gross NPLs to total credits	19.9	10.5	19.9	19.1	17.1	17.7	15.9	17
Provisioning rate	77.99	77.17	75.75	79.05	71.55	74.7	75.1	74.5
Net NPLs to total credits	7.7	9	7.5	7.1	7.5	7.1	7.4	7.5
Net NPLs to capital	91.75	91.17	90.95	79	79.55	71	55.1	57.5
Earnings and profitability								
Average cost of borrowed resources	1.1	1.1	1.5	1.7	1.5	1.9	1.5	1.5
Average interest rate on credits	9.7	9.9	9.9	10.7	10.1	10.9	9.7	9.9
Average interest margin	7.7	7.7	7.5	9	7.7	9	7.4	7.4
After-tax return on average assets (ROA)							1.1	1.1
								0.9

Source: Financing commission of EEMU

Progress over the last few years has been limited, which suggests a degree of regulatory forbearance. In addition, some of these norms are not in line with international standards. Low compliance is particularly

problematic for ratios that are less demanding than international standards, such as the one on risk division (see ahead). As discussed in the last section, there are other significant issues to address with regard to the supervision of regional organizations and the catastrophe restriction and resolution frameworks.

E-commerce Resolution and the Economic sub-structure through technology Trade Areas of settle e-commerce in the economic sub-structure of a region, country or area, the management team or the decision makers should begin with the following instructions: Firstly, determine the expectations about e-commerce held by internal stakeholders in the different organizations per country, such as the board of directors. However, if the organization is publicly traded, then the expectations of the shareholders have to be determined. Secondly, assess the e-commerce expectations of present and potential future consumers. Lastly, assess the threat of disruption to their present business from more e-commercially proficient competitors, including those outside the conventional economic-sub-structure industry.

It is also significant to understand how evolving technology will continue to drive e-commerce in the industry then decide whether to focus on the external front-office (client-facing) or middle and back-office (internal) implications of e-commerce or both. After considering these issues, decision makers or senior executives can begin to define their organizational approach to e-commerce. The trade areas where Economic sub-structure through technology is most active.

5.1. Information and Analytics: Economic area creates a massive amount of information exploited by Economic sub-structure through technology organizations. They use this information to area customer populations, identify prospects for novel offerings and sub-structure and balance pricing. Also, the information can be used to manage the risks (fraud, cyber security breach, etc.). Confidentiality of sensitive personal information being the top priority of regulators and customers, Economic sub-structure

through technology works with this personal information with a particular consideration. In this area, offerings may use information and analytics to computerize the decision-making methods. Technology that may be typically valuable when the speed of the information and/or volume of the information mean that real-time human analysis is unattainable. For example, Amazon uses artificial intelligence working in recommendation engines (buying purchase recommendations). Inventive ventures, merchants', established economic organizations, certified organizations and other imbursement sub-structure facilitators are the Imbursement structures that underpin the sub-structure that facilitates resources to be remitted between consumer and organizations. They seek to offer novel imbursement ways to meet consumer demand for imbursement instruments that are more secure, efficient and convenient.

Different to conventional currencies, e-commerce or crypto currencies are generated across peer to peer (P2P) computer networks. They are also used to monitor and verify the transfer of currency. Crowd financing is the practice of raising many small amounts of money (funding) from a large number of consumer (crowd), typically via the web or social media. Economic sub-structure through technology is still working in this trade area to preserve stability and consumer protection.

6. Prospect for the Ethiopia Economic Area

6.1. Enhancing the Benefit Scheme and Fostering Exchanges: Economic sub-structure through technology firms are recognizing that many of their consumers are digital, spending a lot of time in social communities and networks. Embracing the industry axiom, "Be where your consumers are", economic organizations have to develop mobile applications and leverage novel technologies more inventively to establish closer ties to consumers, especially the e-commerce natives. Designed correctly, such apps will help them identify client needs earlier and with greater precision. They will also provide digital Medias for

exchanges, advice, and information exchange, as well as client-to-client networking. As a result, firms will be better able to develop novel offerings for their present customers' base and attract novel consumers. Studies show that customers frequently request inventive and interactive customer economic education tools, and better-educated consumers show significantly higher levels of venture activity. Present industry examples show that a good balance between pull-information and push-communication and exchanges effectiveness is critical in these efforts. For example, providing consumers with customized, relevant information and research about growths in the trades can be a prospect to open a dialogue and assess their present needs. Several U.S. Economic sub-structures through technology firms have designed inventive apps that have become hugely popular in a very short time. Besides providing novels and the latest research reports, these apps allow consumers to view their account balances and venture positions in a convenient and hassle-free way and handle basic exchanges on their own.

For example, economic organizations can use their platforms to connect consumers through interactive communities based on shared interests via social media such as Twitter or Telegram.

6.2. Decreasing Working Expenses: Economic sub-structure through technology firms should leverage technology to drive standardization, efficiency, and automation. Economic organizations can use e-commerce internally to streamline methods, such as more efficiently rolling out novel programs and venture ideas to their relationship managers.

E-commerce can also allow economic organizations to make account information available for consumers to approach themselves, at their own convenience, rather than calling and asking a relationship manager to fax something to them.

Another element of cost reduction is the better use of relationship managers and specialist's time. For example, they can use digital chats and videoconferences to provide more content in client

interactions, thereby drastically decreasing unproductive time.

6.3. Easier Approach to Credits: For many consumers, such as millennial and small business owners still getting established, Economic sub-structure through technology can provide approach to resources previously unobtainable to them. Due to the fact that non-conventional forms of determining creditworthiness are used, often in conjunction with credit reports, lenders can get a comprehensive economic footprint of a borrower that goes beyond credit history. As a result, Economic sub-structure through technology is seen by many as being more balanced and fairer in terms of making credit choice.

6.4. Lower Interest Rates: Because lenders through Economic sub-structure through technology organizations typically have approach to a more comprehensive profile of borrowers, they can offer lower interest rates for credits compared to conventional economic organizations. Having more comprehensive information about the applicant helps manage risk as lenders can more accurately determine the probability that someone will repay their credit.

7. Conclusion: Economic sub-structure through technology represents a significant change for the economic area industry. Its trade area such as information analytics, artificial intelligence, imbursements, e-commerce currencies, crowd funding, will enhance economic structure in its relationship with the customers. Ethiopia is a Greenfield prospect for Economic sub-structure through technology. Mobile imbursements have inclusion zed the economic industry in Ethiopia (orange money in Cote d'Ivoire), where more than two thirds of consumer have a mobile, but only around one-third have financial institutions accounts. In Sub Saharan Ethiopia, some countries like South Ethiopia are among the fastest growing Economic sub-structure through technology trades in the globe.

In Ethiopia, over 50% of the population is living in areas without roads, electricity, security, and infrastructure and not reachable by branch funding, but most of the

consumers own a mobile phone. The Economic sub-structure through technology inclusion can reach this consumer and change the present status quo of the economic sub-structure industry in West Ethiopia.

This research is limited by the approach of the original documentation made by the Economic Community of Ethiopia States due to the political instability. Indeed, the political instability between 2011 and 2014 in Ethiopia has slowed the growth of the economic sub-structure industry and makes the acquisition of the information dependent upon the Globe Financial institutions and other organizations complicated.

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An Empirical Study on The Adoption Intention of Financial Technology (Fintech) Services Among Bank Users

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Abstract: Fintech is a buzzword in the techno-savvy world. Most of the bank users today are comfortable in using digital payment methods, and seen least usage of wallet to carry cash especially in urban and semi urban areas. Thanks to the Financial Technology (Fintech), it has made the life more convenient since it provides wide range of services than the traditional banking services from mobile wallets to peer-to-peer lending to insurance, Fintech services have redefined the way in which consumers and businesses carry out their routine transactions. However, the data shows that the usage of cash still continues in India. This study aims to examine the perception and trust of bank users in the overall payment methods. And also, to examine the influence of demographic factors namely, gender, age, level of education and income which determine the choice of using Fintech. The results shows that the adoption intention of bank users in Fintech are positively correlated, it indicates that respondents have positive intention towards the adoption of Fintech services. It is also found that irrespective of the gender the usage of Fintech services is more in the current scenario.

Key words: Fintech, digital payments; adoption intention; trust in digital payment, government support

1. Background of the study: India is becoming tech-savvy in the 21st century, and so the citizen. Two prime reasons which build strong foundation for the Fintech services are 24/7 service and rise in population, pandemic and integration of IT with finance. In the digital world, Fintech offers transparent, quick, enhanced and better choice for the customers. The real time data transfer is more accurate and fast which pave way for a borderless financial service. Technology is inevitable. The technological ecosystem supports the evolution of Fintech services in a fastest space. It is essential for any consumer in today's world in one way or the other involve in business transaction and payment need to be made digitally in many occasions. Therefore, it is the need of the hour to understand the intention of the customers to adapt Fintech services in the 21st century to follow the tech-savvy crowd as a coping strategy.

2. Introduction: Financial Technology or 'Fintech' refers to the provision of financial services on digital platforms. A number of start-ups have emerged in the Fintech space, which provides services in the traditional areas of banking, such as payments, lending and personal finance. The evolution of money has seen different stages, consensus around the origin and the forms of money has kept changing over the course of time. But what money does is still static over the years. Modern business warrants innovative payment methods which reduce the transaction cost, therefore digital payment method is catching the momentum globally. However, cash plays a pivotal role in trade even today, it has not vanished altogether. Cash might seem convenient as we are accustomed to and it is

ingrained in our habits for its ready acceptability in many places. Despite of it there are issues with cash use. It provides a suitable alternative to aid the informal or parallel economy (Cagan P., 1958); Tanzi V., 1983) digital payment offers itself as a desirable tool for institutions to fix this problem of traceability. The issue of black money is not only the concern in India but also prevailing in other countries and it warrants the concerned governments to take stringent regulatory measures by incurring huge cost to curb the same. Behavioural science research findings shows that people experience difficulties in paying cash compared to digital payments, and this contributes to deferred payments (Prelec D, Loewenstein G 1998; Rick SI 2018; Rogoff K 2015). Though cash may not directly impose any transactional cost like digital money, it is still costly for the stakeholders including governments and end-users. The best alternative method is digital payment which is considered to be an effective method of payment. It is minimizing cost, saving time, reducing the problem of settlement of payments with exact denomination and even risk of carrying cash while travelling. Considering the convenience of using digital payments, it has been witnessed that there is increased demand for digital payment methods and considerable number of people are adopting digital and financial instruments. This is possible due to technological innovation, policy interventions, expansion and strength of existing infrastructure which is capable of meeting the present and future demands. The government of India and RBI are working closely and taking initiatives to reform policy to make the digital payment system secure and user friendly.

A recent survey conducted by Capgemini, reports that Indian and Chinese customers are most open to Fintech (above 75%), followed by the UAE, Hong Kong and Spain. The lowest adoption rates were in France (36.2%), Belgium (30.4%) and the Netherlands (29.8%). Also, young, tech-savvy and affluent customers are major drivers of Fintech products and services. Generation Y uses Fintech services twice as much as others (67.3% versus 33.6%). Among all modes of banking channels, Generation Y and tech-

savvy customers prefer mobile phones. But mobile is yet to overtake PC as the most preferred banking channel. Though computer-based banking has matured, a significant number of customers (excluding Generation Y and tech-savvy) are not yet fully utilizing the potential of mobile application in day-to-day banking—globally, only 40.1% of customers prefer mobile banking as compared to 43.4% for branches, 45.4% for phone, and 56.8% for PC.

A report by Boston Consulting Group and FICCI, India is well-positioned to achieve a Fintech sector valuation of USD 150-160 billion by 2025, implying a USD 100 billion in incremental value creation potential. To achieve this goal, India's Fintech sector will need investments of \$20-25 billion over the next few years, according to this report titled ' India Fintech: A USD 100 Billion Opportunity.' Digital payments have become a way of life in India and we have seen 10-15 million new customers coming on to the digital bandwagon over the last 12 months. Two factors that led to this change were demonetization and Covid-19 pandemic.

According to KPMG, Sydney's financial services sector in 2017 creates 9 per cent of national GDP and is bigger than the financial services sector in either Hong Kong or Singapore. A financial technology innovation lab was launched in Hong Kong in 2015. In 2015, the Monetary Authority of Singapore launched an initiative named Fintech and Information Group to draw in start-ups from around the world. It pledged to spend \$225 million in the Fintech sector over the next five years (Kauflin, Jeff., 2019).

While Singapore has been one of the central Fintech hubs in Asia, start-ups in the sector from Vietnam and Indonesia have been attracting more venture capital investments in recent years. Since 2014, Southeast Asian Fintech companies have increased VC funding from \$35 million to \$679 million in 2018 and \$1.14 billion in 2019 (Schueffel, Patrick., 2017).

Ample number of studies covering the behavioural aspects at individual level that have an impact on choice of payment behaviour in the Indian economy.

However, in the heterogeneity nature of Indian population, different samples might produce disparate results. RBI, banks and governments in particular encourage digital payments system, under this juncture it is imperative to understand the safety and security part of using Fintech services especially for the people with poor knowledge in using digital payment methods. This paper tries to highlight the important factors at the individual level, which influence bank users to use cash or digital payment. While it is critical to push for technological innovations and policy reforms, it is also imperative to understand the aspects that motivate or hinder the adoption of these technologies by the end-user (Sudiksha Shree et al., 2021).

3. Review of Literature: The initiative taken by RBI in introducing Ombudsman Scheme for Digital Transactions (2019) defines digital transactions as "a payment transaction in a seamless system effected without the need for cash at least in one of the two legs, if not in both. This includes transactions made through digital/electronic modes wherein both the originator and the beneficiary use digital/electronic medium to send or receive money". Many countries have been taking constant efforts in promoting cashless payment methods to eradicate black money in their economies. Even in India efforts have been taken to encourage digital payment modes to solve the problem of black money, especially with higher denomination notes (Rogoff K, 2015). The cost of printing, destroying and other cash related operational expenses in India are estimated at 1.7% of GDP (VISA., 2016). Cash, however, remains a significant part of all the transactions in most countries European Central Bank (2018).

Several research has been carried out at both macro and micro levels to understand the people's overall preferences and how certain factors influence decisions or choices of payment mode. Considering this line of thought, several research has been examined and analysed the preferences of consumers. The findings reveal that host of technological factors, consumer specific factors due play a crucial role in

choosing the payment modes. Transaction size has a significant impact on what mode of payment people choose. A cross- country comparison of payment diary survey data of seven countries showed that cash was the preferred mode of payment for smallest 50% and largest 25% of transactions (Bagnall J, Bounie D, et.al. 2014). In another study, social marginal costs were computed for various instruments for small and large transaction sizes and it was found that for larger transaction sizes, there were significant differences in cost for electronic vs non-electronic payments (Garcia-Swartz DD, 2006). It is interesting to note that demographic characteristics also play a significant role in how people choose to pay. It was found that better education and higher income lead to lower cash use compared to non-cash modes. Certain categories of age show a stronger preference for digital payments (Bagnall J, Bounie D, et.al., 2014).

The adoption of payment systems by consumers is significantly affected based on safety/risk, convenience/ease of use, anonymity and costs. Png and Tan., 2019, study reveal that concerns about privacy emerged as one of the main psychological factors causing a bias towards cash for retail transactions. Kahn et al, McAndrewset et al., 2005 show that business in the unorganized economy was attributed to transactions that could be made in cash and did not reveal the agent's identity. Bagnall et al. (Bagnall J, Bounie D, et.al. 2014) paper based on cross-country consumer diary surveys shows that consumers who rated cash high on 'ease of use' ended up using it more. In a study assessing payment perception of Dutch consumers, non-price parameters such as 'acceptance', 'convenience', 'transaction speed' and 'safety' were used to gauge the perception of payment instruments used at PoS terminals (Jonker N (2007). Numerous studies have used the Technology Acceptance Model (TAM) to show 'perceived usefulness' and 'perceived ease of use' have a significant impact on behavioral intention and thus, actual use of electronic payment systems (Lai PC (2017, Ozturk AB (2016).

According to Maqableh M. (2015) research paper, perceived trust in the payment system is shown to have a positive effect on the usage of digital modes of payment. Apart from the central bank and commercial banks non-banks have also emerged as new players in the framework. A recent empirical study conducted by the Monetary Authority of Singapore found that trust in banks impacts the nature of the transaction (Png and Tan 2019). A cross- country analysis shows that residents in countries that reported lower trust in banks preferred cash for making transactions. In some cases, while an increase in trust can lead to the opening of accounts, it might not translate to actual usage of those accounts (Galiani S, Gertler, 2020). Central banks also play a pivotal role in ensuring safety, integrity and stability of the payments system. Experience of online fraud can shape beliefs of perception and trust and can have a direct impact on payment behaviour. Media coverage of these incidents is shown to affect card payment (Kosse A., 2013). The direction, strength and frequency of media coverage affected debit card use. Few studies show that people simply use digital modes of payment because they have exhausted their stock of cash in hand. It is called 'cash first' or 'cash-burning' and is perceived to be an optimal policy by the consumer (Arango CA et al., 2018). Studies also point that people still pay in cash simply because it is difficult to give up the habits (Jonker N., 2007).

Sudiksha Shree et al., 2021, paper shows inconsistent behavior when studying the impact of experience of digital payment fraud on choice of payment tool. The impact that experiencing such a fraud has on the choice to pay digitally differs according to the purpose of the transaction. Mansour Saleh et al. (2021) research finding shows that Fintech efforts have not yet contributed to a radical transformation of the Saudi financial market. This study suggests that the regulators and policymakers need to act efficiently to support the ecosystem. Further the study suggests future Fintech startups should focus on the areas of credit scoring for personal banking and corporate credit rating. The findings of the Witold Chmielarz et

al. (2021) paper indicate the undoubted fact of increased interest in the use of m-payment in e-commerce and e-banking, and even more importantly, differences concerning 40% of the attributes applied to assess the use of m-payment in Poland and Turkey. Jonna Blach et al. (2021) paper presents that the market behavior of BLIK (BLIK is a payment system in Poland that allows users to make instant payments and withdraw cash using only the user's standard mobile banking app.) as an open business model and the key success factors of BLIK adoption and diffusion and the determinants for further open payment innovations' development. Michal Grabowski (2021) study reveals that the principles of two primary models of white-label banking were established. The first model is based on a bank acting only as an outsourcing service provider. In the second model, bank also operates on the basis of a license it was granted. Both models have a common legal origin in European Union law, but local variations exist depending on the legal system of a given member state. The research paper of Anne Laure (2021) draws on the future-oriented challenges and opportunities related to Fintech growth and stability across borders. The present study presents methodology, sample summary statistics, results and analysis, discussion, limitations, future implications and in fine conclusion on the adoption intention of Fintech services of bank users accordingly. Under this background, following research objectives have been considered for this study.

4. Objectives of the study: The specific research objectives in this study are drawn, in part, from the investigations discussed earlier.

- To study the influence of demographic factors on the adoption intention of Fintech services among bank users.
- To find the relationship between Fintech service adoption intention and gender.
- To examine the association between various constructs which induce the adoption intention of Fintech services among bank users.

5. Hypothesis statement:

H_{0a} : There is no significant difference between gender and Fintech service usage.

H_{1a} : There is a significant difference between gender and Fintech service usage.

H_{0b} : Brand Image (BI) and Perceived Ease of Use (PEU) are not positively correlated

H_{1b} : Brand Image (BI) and Perceived Ease of Use (PEU) are positively correlated

6. Research Methodology: For this study a structured questionnaire developed by Sudiksha Shree, Bhanu, et al., 2021, has been used after modification. Primary data was collected by using Google Forms. The questionnaire link was shared on WhatsApp and emails for better reach. It consists of 15 main questions that are divided into ten sections viz. demographics, perceived usefulness, perceived ease of use, trust, brand image, perceived risk, government support, user innovativeness, attitude and intention.

This study broadly aims to understand the impact of user perception, trust in digital payment systems, and government support in particular and other (mentioned above) six constructs in general on the choice of mode of payment and the influence of demographic factors (gender, age, level of education, occupation and income) while choosing payment modes. It is an exploratory study. Sample units are bank users comprising of different age group with different education, employment background and income levels. The sample size is 109 and the survey was conducted by snowball technique to collect the data.

The statistical tools like, percentage analysis, independent sample t-test, Mean, standard division (SD), Kurtosis and Skewness, Cronbach's alpha, and Correlation were applied. In order to understand whether the contents in this questionnaire were internally consistent, a Cronbach's alpha was run. The internal consistency is checked with a reliability test, and is observed that the value ranges from 0.95 to 0.76, which is highly acceptable with a threshold value of greater than .60.

7. Results and Discussions: The questionnaire was filled in and submitted by the respondents, the

response rate could not be ascertained since it was surveyed through snowball technique by sending the links through social media. The analysis of the study is presented here.

7.1 The demographic details of the respondents were collected and presented in Table 7.1. It shows the sample size, gender, age distribution, education, occupation and monthly income of the respondents. Out of the 109 respondents who participated in this study, 57.8 % per cent are male and 42.2 % are female. More than half of the respondents are falling under the age group of 20 to 25 years, more than one third of the respondents are having master's degree, nearly one third of the respondents work in private sector companies and private institutions, and nearly half of the respondents are college students and their income is less than ₹ 20,000 per month, around one fourth of the respondents' monthly incomes are ranging from ₹ 20,000 to ₹ 60,000 and remaining one fourth of the respondents' salary are ranging from ₹ 60,000 to above ₹ 1,00,000 per month.

Table 7.1: Showing Demographic Profile of the respondents

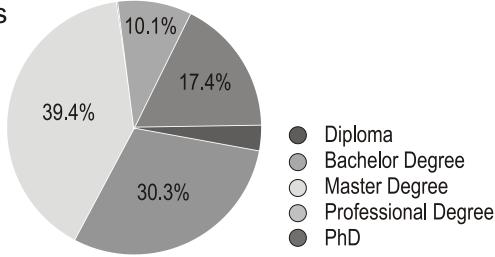
Variables	Frequency	Percentage (%)
Sample size	109	100
Gender:		
Male	63	57.8
Female	46	42.2
Age distribution (in years):		
20 - 25	62	56.9
26 - 35	21	19.3
36 - 45	36	14.7
46 - 55	7	6.4
56 and above	3	2.8
Education:		
Diploma	3	2.8
Bachelor	33	30.3
Master degree	43	39.4
Professional degree	11	10.1
PhD	19	17.4

Employment status:		
Student	57	52.3
Civil service/institution staff	2	1.8
Business management personnel	2	1.8
Employee (private sector/institution)	33	30.3
Self-employed	4	3.7
others	1	0.0
Income (in rupees - ₹)		
Less than 20,000	55	50.5
20,000 - 40,000	11	10.1
40,000 - 60,000	15	13.8
60,000 - 80,000	6	5.5
80,000 - 1,00,000	8	7.3
Above 1,00,000	14	12.8

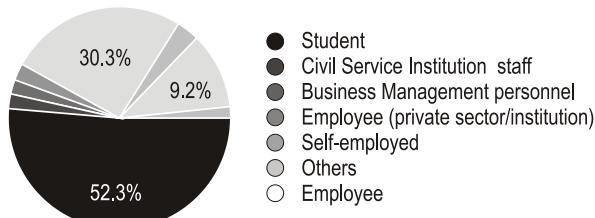
Source: From Survey

Chart 7.1: Depicting Socio-Demographic Variables

3. Education
109 responses



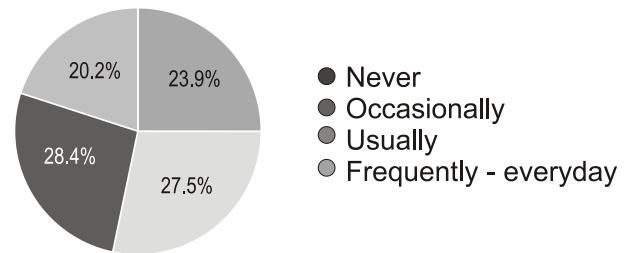
4. Employment Status
109 responses



5. Incoem (in rupees)
109 responses



6. Financial Technology (Fintech) service usage
109 responses



Source: From Survey

Table 7.2: Showing Mean, (SD), Kurtosis and Skewness, Cronbach's alpha, and Correlation Matrix of the variables:

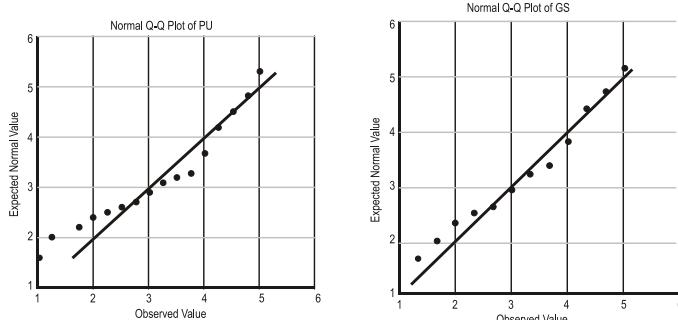
Variable	1	2	3	4	5	6	7	8
PU	0.95							
PEU	.712**	0.90						
TRU	.497**	.675**	0.93					
PR	.290**	.336**	.278**	0.88				
GS	.614**	.722**	.595**	.315**	0.87			
AT	.664**	.641**	.465**	.257**	.672**	0.89		
INT	.662**	.606**	.477**	.302**	.665**	.766**	0.76	
BI	.749**	.810**	.694**	.379**	.786**	.658**	.661**	0.86
UI	.465**	.456**	.400**	.475**	.401**	.570**	.450**	.582**
Mean	3.782	3.575	3.339	3.168	3.517	3.664	3.633	3.609
Standard deviation	1.052	1.020	0.997	0.894	1.012	0.861	0.933	0.936
Skewness	-1.118	-0.883	-0.707	-0.385	-0.649	-0.836	-0.971	-1.190
Kurtosis	0.639	0.232	0.118	-0.250	-0.243	0.403	0.858	0.872

Note: N=110. Diagonal value in parenthesis represents Cronbach's alpha.

**Correlation is significant at the 0.01 level(2-tailed).

Table 7.2 depicts the mean, SD, Skewness & Kurtosis, Cronbach's alpha value, and correlation of the study variables. The internal consistency is checked with a reliability test, and it is observed that the value ranges from 0.95 to 0.76, which is highly acceptable with a threshold value of greater than .60. Hence, there is a high internal consistency among the study variables. The Pearson correlation for all the constructs is quite good with a maximum of ($r = .81$) for the construct. Brand Image (BI) with perceived ease of use (PEU). It is also observed that all the constructs are positively correlated with each other with respect to all the other construct, in the adoption of Fintech service usage. The value of mean for all the variable is greater than 3, which shows a positive opinion towards the adoption of Fintech with respect to the variables identified. Skewness and Kurtosis lies with the acceptable range +3 to -3.

Chart 7.2: Output of Independent sample t test



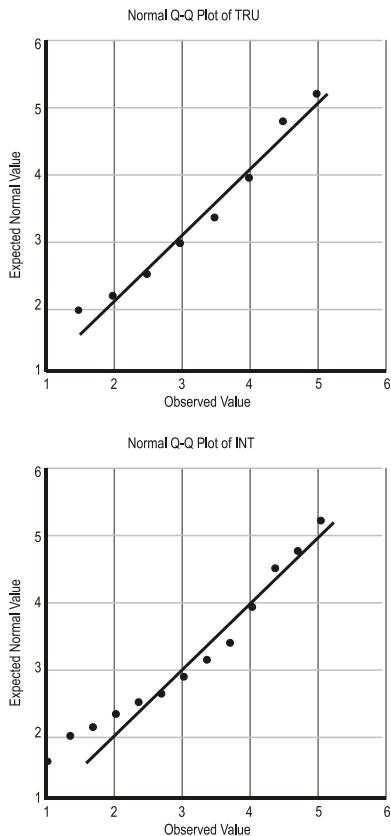
Source: From Calculation

The results of independent sample t test for gender and FSU are presented in the table 5.3. Levene's test check the null hypothesis that the variance of the two groups is equal. Here the p value is .430 so the assumptions are not violated. The value of t statistics is 0.586 and the p value is .559, which is greater than .05, reject alternative hypothesis and accept null hypothesis. It is found that irrespective of the gender the usage of Fintech services is more in the current scenario.

Q-Q plot for the construct Perceived Use (PU), Trust (TR), Government support (GS) and Attitude (AT). The

below Normal Q-Q plot represent that the data follows normal distribution and except few deviations at the extreme of the line. Out of the construct studied only four are presented hereunder.

8. Empirical findings of the study: Key findings of this study reveal the significant impact of perception of digital payment methods on how people choose to pay. In few cases, digital payments may not be accepted so the only option left is cash payment. It has also been observed that some vendors do not accept cash as a payment mode and insists only digital payments. The mode of payment is therefore decided based on the circumstances rather than convenience. However, in order to increase the number of digital payment users, banks and financial institutions in India are sending SMS to the registered mobile phones. In order to use digital payments one has to have the Android phones, therefore it is important to consider this factor while promoting digital payment modes. It is quite natural to find Fintech users in urban and semi urban areas whereas in rural places where more than 60% of the Indian population lives, the digital payment users may be in negligible numbers. There are several reasons for the same, the internet connectivity issues, affordability to buy the Android phones, lack of basic knowledge and skill to use the smartphones, fear of technology, safety and security reasons, and many more. Therefore, to ensure the safety and security of the bank users banks and financial institutions are taking stringent measures by sending SMS alert messages whenever log in to the Net banking accounts, asking for the OTP for any additional withdrawal of money in ATM booths, cautioning the customers not to share the debit card details, OTP, expiry date, CVV number suggesting customers to change their passwords periodically to avoid any financial loss. Apart from the above, the list of dos and don'ts have been communicated to the general public by banks and also through SEBI's Investors Education Workshops the awareness has been created among the general public.

Chart 7.3: Output of Independent sample t test

Digital payment modes are indispensable and instead of complaining about the risks associated with it, the bank users are expected to be cautious and vigilant while making digital payments and Net banking transaction. Password and user ID need to be protected, public internet service need to be avoided, after the use of digital payments immediately account has to be logged out to avoid fraudulent acts. The RBI, banks and other financial institutions could save considerable amount of money by minimizing the transaction cost which is not possible in cash payment mode.

9. Limitations of the study and Future Implications: Most of the respondents are already digitally literate and educated when compared to the population. Therefore, the results of this study may not be generalized. Another limitation is that the responses

were collected through Google Forms therefore personal interaction and observation were absence during the survey. Further research is needed to explore and study the percentage of digital payment users in rural areas and compare it with semi urban and urban areas.

10. Conclusion: In the modern economy the central banks, commercial banks, governments, regulators and service-providers are promoting digitalization of payments and taking initiatives to monitor the Fintech companies. The key regulators in India namely, the RBI, SEBI, IRDAI and the Pension Fund Regulatory and Development Authority ("PFRDA"), have issued draft guidelines and, in the case of RBI and SEBI, operationalized regulatory sandboxes in order for Fintech businesses to live test their innovations in a controlled regulatory environment and building required infrastructure in place to promote digital payment modes. This process of digitalization enables banks and financial institutions to minimize their work pressure. Under this background, this study makes sense in understanding the perception of beneficiaries or the end users about the usefulness of Fintech. The results shows that the adoption intention of bank users in Fintech are positively correlated, it indicates that respondents have positive intention towards the adoption of Fintech services. It is also found that irrespective of the gender the usage of Fintech services is more prevalent today. Digital payment modes are indispensable to all the stakeholders irrespective of their quantum of transaction. It is evident from the current scenario that customers' payment modes will be smoother with digital payments and also it is the order of the day to adapt and accustomed to the innovative Fintech services.

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The Role of Fintech in Financial Inclusion

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Abstract: Fintech helps to achieve financial inclusion through its various applications. Fintech has made the work of financial inclusion much easier. Majority of the people can now have access to various types of financial services such as banking, investing, lending, borrowing and insurance, etc... There has been a rise in the usage of fintech, especially after the spread of covid-19 pandemic. The purpose of the study is to determine the usage level and satisfaction level of people towards services offered by Fintech and to study the role of fintech in financial inclusion. In this descriptive study, the data were collected from 111 respondents from Bangalore and Mysore using random sampling method. The findings of the study include majority of the fintech customers are satisfied with the services as they can transact with ease and speed. However, security was the main concern for the majority of respondents. Fintech companies are able to reach to the all-income group people because of technology. The agility of the fintech made banks to learn from them and forced them to use the technology in their services.

Keywords: Fintech, financial inclusion, financial services, pandemic situation, economic development.

1. Introduction: Due to the pandemic, not only did the physical health of society be threatened but also the financial health. In this crucial condition, financial technology became a ray of hope for society. By using online digital payment applications, people were able to maintain their finances at their homes and it promoted the safety of people. With the rise in the applications of Fintech, there is the emergence of risk. Government and various Fintech companies have enforced the safety and security of the users of the digital payment platforms from uncertainties. Fintech not only helps to create financial inclusion, but also to achieve higher GDP (Sahay, 2020). Fintech is a financial technology to aid various financial services by means of net banking, mobile banking, various banking applications and crypto-currency. It is useful in banking activities, in risk minimization by use of machine learning and artificial intelligence, trading of cryptocurrency, insurance activities, planning through budgeting apps, data analytics and many more. The fintech industry gained its momentum because of convenience, and ease of doing transactions. However, lack of awareness and security are major concerns.

Fintech is of great use for investors because of its two important frameworks, that is Fintech Ecosystem and Digital Transformation. Fintech Ecosystem helps in the investigation of different areas and usefulness of technology involved in financial services, which would help speculators and investors to analyze and predict the future of their investments. Digital transformation made people's lives happy by making financial transactions from home. This has encouraged people

to adopt various applications of Fintech such as mobile banking, net banking, and various digital payment apps, etc. (Imerman & Fabozzi, 2020).

There has been a growth in fintech and its impact over the years, such as; Initially, ATMs, debit cards and credit cards were developed. Then stock market trading came into existence, digitalization of the functions of the bank and its employees were introduced, then E-commerce was developed to aid wide reach of goods and services, and now Digital financing such as net banking, crowdfunding, and various mobile banking apps have been developed by the advancement of financial technology (Wulan, 2017).

Financial innovation has given rise to Mobile money, crowd funding etc. Big data and AI have made the work easier by collecting the readily available data of the clients and this helps to improve their system and reach. Pandemic made online banking popular thereby giving rise to fintech companies and this further increased the use of digital financial services by everyone resulting in the financial inclusion. As financial innovations take place, it becomes important to protect consumer's interest and the main attention should be on adequate disclosure of data of the consumers, prevention of biased business practices, effective utilization of resources, and increasing the financial literacy (Beck, 2020).

Fintech is a trending financial invention and owing to the benefits provided by them, present generation are opting for mobile or net banking and this has forced banks to adopt new technologies in their system. Fintech credits, Crowdfunding, p2p lending etc., are the modes by which fintech allows to give and take credits. Fintech has its own risks; it has the potential to cause micro and macro-economic risks. The development of big tech companies can help in the growth of Fintech, thereby posing a risk to the traditional financial service providers (Vucinic, 2020). Giudici, 2018, noted that various technologies (Artificial intelligence, Big data, and machine learning, etc.) has proved to be useful for consumers, bankers and investors. Every new innovation has its own risks

and Fintech too has uncertainties and various start-ups have come into existence to minimize the risk involved in this sector. One such is risk minimizing technology is Regtech that mainly deals with automation of data monitoring, assessing and analyzing the data to prevent money laundering and it checks upon various changes in regulations from time to time. Thus, along with Fintech, Risk minimizing technology such as Regtech is also gaining popularity and growing rapidly.

Financial inclusion through fintech: Low-income groups of people do not get the opportunity to avail all the financial services and that results in financial exclusion. Fintech, through its technology and digital payments ensures that all groups of the society get an equal opportunity to enjoy all the financial services and thus promotes financial inclusion (Salampasis & Laure, 2017). Financial inclusion is essential for the development of a country and fintech credit helps to achieve financial inclusion. Applications of fintech such as machine learning and data analytics help to determine the credit score and in evaluating credit risk. Countries where there is no financial inclusion can benefit greatly by fintech lending (Bazarbaash, 2019). Mobile banking is one of the ways to establish financial inclusion. Mobile banking has become a massive hit since it is offering the banking services at the tip of the finger, people should adopt themselves for the new technological changes for a better future (Osabutey & Senyo, 2020). Due to lack of banks in villages, people in villages are unable to get financial services such as saving, investing and borrowing, etc. But, fintech, through its online banking helps to get access to various financial services. Mobile Money has made it convenient to pay the bills and insurance premiums (Senyo & Karanasios, 2020).

Design of the study: The objectives of this paper are to determine the usage and satisfaction level of people towards services offered by Fintech and to study the role of fintech in financial inclusion.

Data collection: Primary data has been collected by using structured questionnaire. Secondary data has

been collected by referring to various journals, articles, research papers, blogs and websites.

Sampling design: Simple random sampling method was used to select the respondents from the study in Bengaluru and Mysuru. The sample size for the study was 111.

2. Review of Literature: Managing the bank accounts at the comfort of the house by means of mobile banking has become possible through Fintech. New financial technologies have greatly contributed to mankind by dropping the cost, effort and time and have improved the reach of the services worldwide (Badruddin, 2017).

Technological development in the finance sector has helped to achieve financial inclusion. The government is working hard to ensure that these technological innovations with respect to the BFSI sector are reaching out to the rural population so that the money earned by them are safely invested. The RBI and the Government of India are aiming to achieve financial inclusion; this has resulted in the emergence of online banking services which can be used by anyone and anywhere in India (Kandpal & Mehrotra, 2019).

With the emergence of digital credit and Fintech, lenders and borrowers can connect on various digital platforms such as crowdfunding. With the help of another digital technology- Big data, credit score and credit risk of a consumer can be assessed. Digital credit has greatly reduced the risk of visiting banks and following the long procedure of obtaining credit.

Fintech has a positive impact on the society by making various contributions in both financial and technological sectors. Innovative changes made by Fintech include lower pricing and affordability of financial services, increase in effectiveness and efficiency of banking services and economic growth by means of more people accessing services provided by banks and financial institutions (Carney, 2017).

Patwardhan, Singleton, & Schmitz, 2018, highlighted that progressed information examination and utilization of Fintech applications such as AI have clear

uses in loaning environment and protection, in misrepresentation identification and anticipation, and for better credit appraisal. This presents an opportunity for people who have generally been bolted out because of a need of formal financial records. Additionally, AI can be used for protection and to enhance the conventional endorsing cycle and upgrade controls. The worldwide monetary framework is ready for remarkable development. Fintech can decrease costs and improve access. People need to understand the relationship between Monetary system and the positive impact the technology has on financial sector and the economy. By empowering innovations and overseeing hazards, another monetary framework can be created which is more comprehensive and stronger (Das, 2019).

Due to lack of financial awareness among people and absence of banks in rural areas and complex procedures involving in opening a bank account. But, after the development of innovative financial technology, banks and insurance companies have a bigger reach (Gulamhuseinwala, Bull, & Lewis, 2016).

Durai & Stella, 2019, research states that, the development of technology in finance sector has been useful for banks, its users, and in economic development of the country. Use of mobile payment apps, credit and debit cards has proven to be beneficial and convenient to the customers. Several limitations such as hacking, lack of internet connection and inability to purchase mobile phones due to high cost have been a concern for people to adopt to fintech. Thus, by encouraging the financial education and creating the awareness about the advantages of fintech, financial inclusion can be achieved.

3. Hypothesis statement: The following hypothesis were tested.

Null Hypothesis (H_{0a}): There is no significant influence of Educational Qualification of the respondents on the awareness about Fintech and financial inclusion.

Alternate Hypothesis (H_{1a}): There is a significant influence of Educational Qualification of the

respondents on the awareness about Fintech and financial inclusion.

Null Hypothesis (H_{0b}): There is no significant difference between the level of satisfaction towards the security offered by the digital payment applications and frequency of using digital payment applications.

Alternate Hypothesis (H_{1b}): There is a significant difference between the level of satisfaction towards the security offered by the digital payment applications and frequency of using digital payment applications.

4. Data Analysis and Findings: 30% of the respondents are aware of Fintech; 14% are aware of only financial inclusion; 33% are aware of both Fintech and financial inclusion, and 23% of the respondents were neither aware of Fintech nor of financial inclusion. 96% of respondents have mobile payment apps on their smartphone and around 5% do not use mobile payment apps. While 85% are aware of online financial services, 45% are aware of artificial intelligence, 31% have awareness about machine learning, 40% are aware of cryptocurrency, 24% have knowledge about blockchain, 32% have awareness about crowdfunding, 40% are aware of data analytics and 29% are aware of budget planning apps. 47% of the respondents prefer Net banking, 72% prefer Mobile banking, 60% opts for Digital payment applications, 51% prefers to use Credit/Debit cards and 22% prefers the physical visit to the bank while 81% of the respondents uses Google-pay app to make payments, 69% uses phone pe, 44% makes the payment in Paytm, 13% has PayPal app, 5% uses MobiKwik, 17% uses Bhim app, 27% carry on their transactions in amazon pay and 32% uses apps created by different banks.

57% of the respondents are using the online transaction system from past 1-3 years, 32% are using the online payment system from 3-5 years and 12% are making the online payments from more than 5 years. 87% of the respondents uses digital payment applications to transfer money, 76% uses to pay bills, 72% uses for mobile/dth recharge, 38% uses digital payment applications to claim cashbacks/offers/

discounts, 41% uses the digital payment applications because it helps in keeping track of the transactions, 22% pays the insurance using digital payment applications, 13% takes loans through digital payment applications, 37% uses for purchasing the commodities, 46% uses the digital payments due to easy accessibility, in order to avoid the visit to banks, 45% of the respondents make digital payments, 57% uses the digital payments to save time, 36% uses the digital payments because of the good security, 56% uses because of the ease provided in digital payments, 15% uses the digital payment applications for other purposes.

Satisfaction level: 23% of the respondents are highly satisfied with the security offered by the digital payment applications, 52% satisfied with the security provided in digital payment applications, 21% are neither satisfied nor dissatisfied, 4% are dissatisfied and none are highly dissatisfied towards the security provided in digital payment applications while 35% of the respondents always uses the digital payment applications, 37% often uses the digital payment applications, 23% uses the digital payment applications sometimes, 2% rarely uses the digital payment applications, 4% never uses the digital payment applications. And 29% of the respondents use the budget planning applications and 71% of the respondents do not use the budget planning applications. 27% of the respondents strongly agree that Fintech has made life easy, 43% agrees for the above statement, 27% neither agree nor disagree for the above statement, 3% feels that Fintech has not made life easy, and none strongly disagrees for the above statement.

Financial inclusion: 23% of the respondents strongly feels that Fintech results in financial inclusion, 39% of the respondents agrees that Fintech results in financial inclusion, 31% neither agrees nor disagrees, 7% disagrees for the statement; Fintech results in financial inclusion and none strongly disagrees for the fact that Fintech results in financial inclusion. 16% of the respondents have used crowdfunding platforms, and 84% of the respondents have not used the

crowdfunding platform. 69% of the respondents feels that, hacking risk is the major drawback of online financial services, 27% of the respondents do not use online financial services frequently due to lack of internet connection, 32% of the respondents has a poor network that does not permit for making the online transactions, 17% feels that the lack of provision for making deposits holds them back from using the online financial services, 25% do not use the online financial services due to the risk of forgetting the password, absence of technical knowledge do not let the 14% of the respondents to use the online financial services, according 26% of the respondents amount transfer limit is another drawback of online financial services, 18% feels that other factors are responsible for holding them back from using the online financial services.

Satisfaction level towards the financial services offered by fintech companies: One-third of the respondents were satisfied by the financial services provided by Fintech and very little number of respondents were not satisfied by the financial services provided by Fintech. This shows that Fintech are providing good services and are creating satisfaction among the users.

Table 4.1: Showing Awareness about term Fintech and Financial Inclusion amongst respondents

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	15.985	5	3.197	2.628	.028
Within Groups	127.745	105	1.217		
Total	143.730	110			

Source: From Calculation

Table 4.2: Showing Results of Chi Square Analysis

Chi-Square Tests

	Value	Df	Asymptotic Significance (2- sided)
Pearson Chi-Square	36.191	12	<.001
Likelihood Ratio	35.903	12	<.001
Linear-by-Linear Association	18.160	1	<.001
N of Valid Cases	111		

Source: From Calculation

5. Conclusion: More awareness has to be created among the people about fintech and financial inclusion by conducting training programs so that they use upgraded technological devices and start using fintech services. Digital payment systems should increase security and should build trust among people. Overall, both government and people should work together to make digital India by using the online transaction systems and thus can achieve financial inclusion, where everyone can use the financial transaction functions from any corner of the country. Everything has pros and cons; likewise, Fintech too has its own merits and demerits; but risks and demerits are very little when compared with the benefits. Thus, Fintech helps to provide financial services to everyone and this will result in financial inclusion, which in turn leads to the economic development of the country (Jaksic & Marinc, 2018). Fintech facilitates for digitalization, secured transactions and ease of work for both bankers and customers. Many banks are being partnering with the Fintech companies to provide quality service to their customers and to increase their reach. Traditional banking and Technological banking, both have its own benefits and limitations and their combination would result in a synergy effect (Vasiljeva & Lukanova, 2016). Jan Dhan Yojana, an initiative by the government to increase the awareness about bank accounts has resulted in the creation of 1 billion bank accounts, increase in the usage of smartphones, India has 1.2 billion mobile phone users, increase in the disposable income, growth of middle-class and high-

income groups facilitates the expansion of Fintech. By promoting the knowledge about fintech, everyone can avail the financial services which leads to financial inclusion and results in a good financial health of the public (Panos & Wilson, 2020).

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A Study on “Driving Trends Shaping The Future of Fintech Revolution In India and Its Contemporary Challenges”

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Abstract: Fintech refers to the integration of technology into offerings by financial services companies in order to improve their use and delivery to consumers. It primarily works by unbundling offerings by such firms and creating new markets for them. It simplifies financial transactions for consumers or business and making them more accessible and affordable. It can also apply to companies and services utilizing AI, big data and encrypted block chain technology to facilitate highly secure transactions amongst an internal network. This article focusses on understanding the major trends shaping the future of Fintech in India and break down how the Fintech market is evolving in key service and technology segments. The contemporary challenges faced in successful implementation of Fintech market in India is also discussed.

Keywords: Digital payments, Fintech platforms, Technological innovations, financial literacy, Online frauds

1. Introduction: Fintech refers to the integration of technology into offerings by financial services companies in order to improve their use and delivery to consumers. It primarily works by unbundling offerings by such firms and creating new markets for them. It simplifies financial transactions for consumers or business and making them more accessible and affordable. It can also apply to companies and services utilizing AI, big data and encrypted block chain technology to facilitate highly secure transactions amongst an internal network.

This article focusses on understanding the major trends shaping the future of Fintech in India and break down how the Fintech market is evolving in key service and technology segments.

2. Objectives of the Study:

- To identify the major trends shaping the future of Fintech industry in India.
- To provide a conceptual overview on the evolving role of Fintech market in key service and technology segments.
- To get an understanding on the key trends driving Indian Fintech companies.
- To identify the current challenges in successful implementation of Fintech in India.

3. Fintech industry in India: A quicker look: Banks have conventionally served as the gateway to payment services in India. However, with the rapid advancement of technology, this no longer appears to be the case, as the monopoly of banks in this area is gradually weakening.

In recent years, India's payments infrastructure has seen substantial improvements, particularly with the introduction of new payment mechanisms and interfaces such as Immediate Payments Service (IMPS), Unified Payments Interface (UPI), Bharat Interface for Money (BHIM) and others. The government's 'Make in India' and 'Digital India' projects also played a significant role in accelerating the adoption of Fintech. It is commendable that the Reserve Bank of India has also pushed the growing use of electronic payments to launch a truly cashless society in recent years.

Furthermore, government actions such as the implementation of demonetization and GST have also created a substantial growth opportunity for Fintech projects all over the country. Although demonetization resulted in a lot of chaos and turmoil, eventually, it was the driver for a shift away from a paper based, cash based economy toward digital, electronic, technology driven platforms that boosted the nation's already existing Fintech system. And it is only reasonable to assume that the COVID-19 pandemic has hastened this digitalization across various categories, with contactless and cashless payments promoted to encourage social distancing.

Digital payments have become a way of life in India and it has seen 10 to 15 million new customers coming on to the digital fashion over the last 12 months. Two factors that led to this change were demonetization and Covid-19 pandemic.

Due to various factors such as an innovation-driven startup scene, a highly favourable market, enhanced smartphone and internet penetration levels, a young population with the median age in the 20s, and government-led attempts to promote the industry, the country offers a great space for a Fintech revolution. In addition, the growing awareness of financial technology has provided the Indian Fintech industry with a much-needed boost.

Fintech companies growing partnerships with traditional banking, insurance and retail sectors, where they are actively catering to evolving customer needs, will further accelerate Fintech's expansion in India.

All these factors indicate a positive shift towards Fintech and present a huge growth potential for the industry, with the country gearing towards massive adoption.

4. Latest Statistics on Indian Fintech Sector: There are over 2100 Fintech companies in India, out of which more than 67 percent have been set up in the last five years. India's Fintech segment has also seen exponential growth in funding; investments worth more than US\$8 billion were received across various stages of investment in 2021.

Recently on December 3, 2021, at the launch of InFinity forum, a thought leadership forum on Fintech, Indian PM Narendra Modi called for a 'Fintech revolution' in India with a 'security shield', primarily to be driven by income, investments, insurance and institutional credit. The statement comes at a time when India has the highest Fintech adoption rate in the world at 87 percent and significantly higher than the global average rate of 64 percent. Enabling factors for this include the Digital India initiative, a conducive policy environment and the presence of a sizeable talent pool.

During the pandemic, when every other sector has experienced slump in growth, the Fintech sector has thrived as COVID-based restrictions curtailed physical movement and encouraged contactless transactions. According to Amitabh Kant - CEO of NITI Aayog, the Indian fintech industry has a cumulative funding of over US \$27.6 billion and according to a report by Boston consulting group and FICCI, Indian Fintech sector is expected to be valued at over US \$150 billion by 2025, implying a USD 100 billion in incremental value creation potential. To achieve this goal, India's Fintech sector will need investments of \$20-25 billion over the next few years, according to this report titled 'India Fintech: A USD 100 Billion Opportunity.'

Over the last two years, there has been a massive adoption of digital payment systems in India, making it a lot more convenient to go about with basic financial services. This growth and expansion of the Fintech ecosystem in India have been aided by a number of

factors, including the growing availability of smart phones, increased internet access and high-speed connectivity.

5. Key factors shaping Fintech market in India:

Supply side enablers such as exponentially growing computing power, wide spread internet dispersion and increased internet speed and coverage, coupled with demand side stimulants like need for inclusive financial services, customer expectations and the business need to reduce costs while providing faster, safer and more reliable services are some of the key factors shaping the Fintech revolution in India.

Furthermore, as Fintech platforms and services mature with a strong user base and product market fit, they have been identifying more opportunities to diversify their revenue streams, inturn giving rise to Super apps. Super apps bring a varied set of services under one umbrella that can facilitate multiple daily use cases. With increasing levels of digitalization, greater affordability of smartphones and a COVID-induced preference for digital services, Super apps are finding greater acceptance across the Indian market. It is also worth noting that BigTech, such as Google, Amazon and WhatsApp, have nipped their offerings to provide tailored services in India like Google Pay, Amazon Pay, and WhatsApp Payments respectively.

Payments app Paytm, too is set to become a Super app. Paytm has brought in financial service product and services, including payment, investment, loan and insurance on the same platform that also integrated e-commerce, value added services for merchants, and consumer internet services (such as gaming and entertainment) in one app.

Presently, at global level, there are 187 Fintech unicorns of which 18 Unicorns are in India. These are Paytm, Policy Bazaar, Razor Pay, Bill Desk, Zoho, Zerodha, Pine Labs, Cred, Charge bee, Digit, Groww, Zeta, Bharat Pe, Coin DCX, OfBusiness, Slice, Upstox and Acko. Slice was the most recent entry in the Fintech unicorn list, raising US \$ 220 million in a series-B round.

Most of these platforms have now taken to financial services re-bundling by incorporating a bundle of services under the same umbrella, driven by opportunity to monetize the data and user base. These firms are cross selling different financial products and services. For example, Pine Labs, which was primarily a POS/Payment gateway firm has now ventured into value added services for merchants, rewards and loyalty, consumer financing, neo banking, as well as merchant lending. Similarly, Yono, which was primarily as digital banking platform, has now grown into a venture that also caters to new customer acquisition, pre-approved consumer loan and insurance as well as e-commerce. All these key factors are shaping the Fintech revolution in India.

6. Different Fintech segments in India:

Real time payments, faster disbursal of loans, investment advisory, transparent insurance advisory and distribution, peer to peer lending, and several other services that traditionally required human capital are now rapidly becoming a part of the digital-native Fintech landscape. The Fintech ecosystem in India can now focus on lending for both consumers as well as MSMEs. At the same time, more traditional financial services such as insurance, personal finance and gold lending are included within this sector.

PayTech: In this segment, the consumer centric services offered include third party application providers (TPAP), prepaid card/Wallet, bill payment, QR code payment, payment aggregator, and point of sale (POS). Business centric services include corporate cards, B2B payments and invoice payments. In this segment, Fintech comes into play through use of services like payment gateway, card networks, and application programming interface.

(API)/White label solutions, as well as payment security. Paytm, PhonePe, MobiWik and Google Pay are the major players in this segment.

LendTech: The consumer centric services offered in this segment include buy now pay later (BNPL), personal loan, salary loan, gold loan, auto loan, education loan, and P2P lending while the business

centric services include corporate card, fixed term finance, as well as trade finance. Fintech services employed in this segment include collections management, credit bureau, alternate credit scoring, lending as a service, and loan origination system (LOS) and loan management system (LMS). Google Pay, M-Swipe, and Razor Pay are emerging as leading lending platforms for consumers as well as merchants.

Digital banking: Technology is leveraged in this segment through establishment of digital subsidiary of banks, retail neobanks, as well as SME (small and medium enterprise) neobanks. The Neobanks are basically digital platforms for business banks. The Fintech services employed in digital banking include conversational platforms, account aggregators, API providers and aggregators, banks with open APIs, banking as a service and core banking. Yono, Kahatabook, and Crazybee are some of the major firms with primary engagement in digital banking.

InsurTech: The scope of services offered through the use of technology in this segment include insurance comparison platforms, digital insurers, electronic insurance, as well as employee insurance. In this segment, Fintech can be employed by providing services like claims management, sales platform, underwriting risk management, insurance infrastructure API, insurance product configurator and policy admin system. Policy bazaar is a market giant in this segment.

WealthTech: Within this segment, technology can be employed to provide services related to wealth and expense management through robo advisors, discount brokers, mutual fund investment platforms, research platforms and alternative investment platforms. The Fintech services applicable in this segment are white label robo advisors, portfolio management suite and Cap Table management. Prominent firms in this segment are Zerodha and Small case.

Finance Fintech: The various services that can be provided in this segment include:

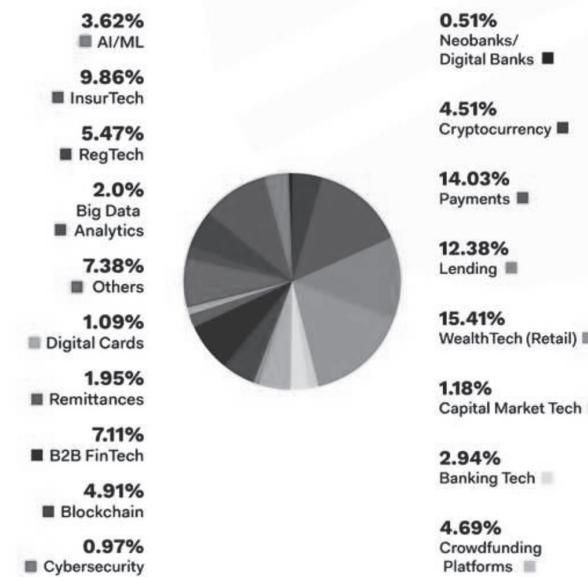
- *Accounting:* Services are provided at the level of enterprises, SMEs and micro size businesses.
- *Procure to pay*
- *Quote to cash*
- *Taxation*
- *Reconciliation*

RegulationTech: The technology is also being utilized to fulfill compliances and regulatory requirements within the financial services sector, including KYC, digital on boarding, fraud detection, anti-money laundering (AML), as well as banking compliance and risk management solutions.

Fig. 5.1: Showing Fintech Segment

 MEDICI RESEARCH

WealthTech — The Most Saturated Segment in FinTech



Source: www.goMEDI.com

6. Major trends driving Fintech revolution in India:

- Supply side factors:** Growth of Fintech in India is driven by various macroeconomic factors, such as enabling government and regulatory initiatives, India's demographic dividend, increasing national disposable incomes, large unbanked population, improving

internet access and smartphone penetration, and a rapidly evolving e-commerce marketplace.

ii. Governmental initiatives: Government support has been key – not only from the regulatory standpoint – but also in providing critical enabling assistance. Be it broadband infrastructure to enhance internet access in rural areas or digital literacy and financial programs, various government programs have accelerated the growth of the Fintech industry in India. These include Startup India, Digital India program, India Stack, E-RUPI, license for payments banks, Jan Dhan Yojana, recognition of P2P lenders as NBFCs, National Common Mobility Card (NCMC), regulatory sandboxes by RBI, and IRDAI for Fintech. Moreover, a robust public digital infrastructure aided with Aadhar, UPI, account aggregation etc. and a supportive regulatory environment has eased and augmented the technological transition in India. Regulators (RBI, IRDAI, and SEBI) have undertaken numerous measures to ensure increased accountability and the uninterrupted availability of secure and affordable digital financial systems. As of statistic taken on October 2021, India's Unified Payments Interface (UPI) has seen participation of 261 banks and has recorded 4.21 billion monthly transactions worth over US \$100 billion.

iii. Investments in India's Fintech sector: In line with global trends, India's Fintech ecosystem has seen tremendous growth in recent years, making it one of the world's largest and fastest-growing Fintech markets. According to Tracxn's database, the total volume of Fintech funding till June 2021 was US\$20.8 billion, with 36 percent of the funds raised in the last two years and amounting to US\$8.6 billion. Further, in the first three quarters of 2021, investments worth US\$4.6 billion were recorded in India's Fintech space with Pine Labs receiving investment worth US\$600 million, followed by BharatPe (US\$370 million), OfBusiness (US\$207 million and US\$160 million), Digit Insurance (US\$217 million), and Khatabook (US\$100 million). Recently, consumer internet group Prosus's payment arm PayU acquired the Indian payment gateway service provider BillDesk for US\$4.7 billion.

A sectoral breakup of the funding received over the last two years (US\$8.6 billion) reveals that the payments segment remains the biggest funding segment (48.5 percent), followed by alternate lending (28 percent), internet first insurance platforms (7.9 percent), investment tech (5.4 percent), banking tech (5 percent) and finance and accounting tech (3 percent).

According to S&P Global Market Intelligence, despite the pandemic, the Asia-Pacific region managed a steady inflow of investments. In 2020, India topped among Asia-Pacific (APAC) countries in Fintech investment with 121 deals amid COVID-19 led disruptions in the funding ecosystem. It must be noted that investments into the Indian fintech landscape were almost double that of China.

According to UK's Chancellor of the Exchequer Rishi Sunak, British fintech firms have announced investment plans worth over US\$132 million for the Indian market.

iv. Demographic opportunities in India: The total number of internet users in India has increased from 795.18 million at the end of December 2020 to 825.30 million at the end of March 2021, registering a quarterly growth rate of 3.79 percent, as per data by the Telecom Regulatory Authority of India (TRAI). India's active number of internet users is further expected to expand, mainly driven by high rate of rural adoption. It is further estimated that by 2030, India will add 140 million middle-income and 21 million high-income households, driving the demand and growth for the Indian Fintech space.

v. Demand side factors: As the financial services industry is evolving from following a transactions-based approach earlier to adopting a more consumer centric approach, the cutting-edge technology employed by the Fintech space has created a niche for itself by offering tailor-made products according to consumer preferences. India's fast emerging tech-savvy consumer base led by millennials is leading the adoption of mobile-first products and services. Across various parts of the country, especially in tier 2 and

tier 3 cities and smaller towns, consumers have leapfrogged cards and wire transfers and moved directly to smart phone banking. Moreover, it has been observed that in the smartphone banking space, it is easier to onboard new customers.

Additionally, Fintech is significantly contributing towards bridging the social gap in India by providing employment as well as democratizing education by providing solutions to overcome the challenges posed by the traditional financing practices. Recently on December 9, 2021, Paytm signed a MoU with the skill development ministry to train over 6000 young Indians in Fintech through a six-month course and even offer employment to eligible candidates.

Fintech has also helped in augmenting financial inclusion by not only normalizing credit but also by bringing gender parity as studies suggest that overall trend of savings and investments among women in India has improved with increased usage of mobile apps, wallets, and platforms.

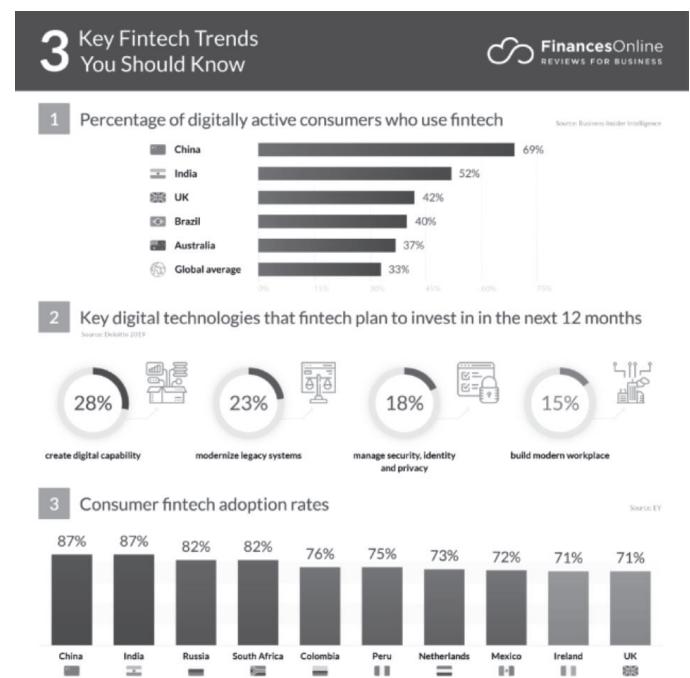
According to Experian estimates, before COVID-19, 22 million Indian consumers were seeking credit every month, and 70 percent of them dropped their applications mid-way due to complexities. The current Fintech industry is normalizing credit in smaller and daily life purchases through mechanisms like buy now pay later (BNPL), which is ensuring provision of frictionless credit to people. Simpli, Lazypay, Flipkart pay later, Scan Now Pay later, etc. are examples of apps as well as processes that are normalizing smaller credit lending in everyday life.

vi. Technological advancements: The overall financial services market is witnessing a major transition leveraging new and cutting-edge technologies, such as block chain, AI, ML, and cloud infrastructure. Three key technology factors driving growth of Fintech include a strong talent pool, increasing collaboration between banks and Fintech enterprises, as well as the fast pace of technological innovations on an everyday basis. According to a UNESCO study, India ranks among the top countries producing university graduates, and around 32 percent of all students in

India pick Science, Technology, Engineering and Mathematic (STEM).

Technology is being exploited to bring in efficiency in processes like payments, claims processing, and savings marketplaces through e-KYC, video KYC, IoT, AI, digital signatures, and account aggregation infrastructure. Moreover, these technological advancements are bringing a sense of security among consumers through biometric identity verification techniques, such as voice, face recognition and iris scanning.

Fig 6.1: Showing Key Fintech Trends



Source: <https://financesonline.com/fintech-trends/>

7. Major challenges affecting Fintech adoption in India: While Fintech adoption in India has been unique, it continues to face certain challenges like risk of data security and privacy leak, platform downtimes, lack of financial literacy and awareness in India, as well as differential adoption rates among MSMEs that dominate Indian economy. Further, rapidly changing regulations due to the evolving nature of the sector also poses cost related challenges for users and

businesses. For example, regulations for investment exits, crypto currency, payment regulations, data and infrastructure security and consumer protection are still evolving. Hence, fintech despite of having huge opportunities has still a tough path to walk on. Below is the probable roadblocks list in the path of Fintech enterprises

i. Restrictive regulatory framework: It is not very easy to enter into the Indian market and perform due to the restrictive regulatory framework designed to prevent frauds. It acts as a huge barrier for the new entrants. They need to fulfil lot of formalities before the start of its operations itself.

ii. Unbanked population: Unbanked population, Poor infrastructure in terms of Internet Connectivity and low literacy level are the other hindrances. Still a huge Indian population (48 percent) do not have bank accounts which are a must for conducting online transactions. Even though the people have bank accounts they still face the issues of poor internet connectivity which takes more processing time to finish the transaction. So people tend to prefer a cash transaction rather than online transaction. Keeping aside, the point of having a bank account and internet connectivity the majority of the Indian population still do not have enough financial literacy level suitable to go for it.

iii. Cash and carry business: It is very tough to change the conservative approach of merchants and users who deal the daily transactions with cash. Majority of the aged people have been doing these transactions in cash from a long time and it is hard to suddenly change their old habits and introduce them to new avenues at this age.

iv. Online frauds: Different frauds leading to loss of money in online transactions is a very hard bite to swallow for the customers. People's money is looted by the fraudsters by using technology and this has been a great challenge in front of the fin tech firms. So the firms indeed have to work hard for bringing improvements in infrastructure and being more consumer friendly.

v. Lack of full government support: Fin tech in India is deprived of lack of government support and Incentives for protecting their interests. At a very basic level this demoralizes the entrepreneurs. They were not provided the right guidance and support to start though it is something for the betterment of the country's economy as well.

vi. Investors trust: Like in any industry gaining investors trust is very difficult in these days, the Fin tech industry is not an exception too. Getting the required seed capital and other investment on time is becoming very difficult and this is going to reflect negative on the operations and functioning.

8. Conclusion: In all segments of financial services there is a plethora of Fintechs emerging in India. By observing the pace of fintechs emergence, the fact that India has enormous entrepreneurial potential cannot be denied. There are around 2100 Fintech start-up firms operating in India, and of these, nearly half were started in the past five years. Both technically and financially the fintech firms need to be groomed well. Indian can see a majority of successful start-ups in a payments space and it is expected the same with the other financial segments as well. The fintech industry need to be encouraged further with different initiatives by the government and other regulatory bodies. When it comes to banking sector, Fintech can be disruptive if the innovations take the backseat. Bankers must continuously look out for the additional benefits and improvements they can provide to satisfy the customers. The future decade will witness the real massive growth of fintech sector in India.

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Empirical Study on Ethical Employee Welfare Measures in Fintech Companies in Hosur Region of Tamil Nadu

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Abstract: In the present research study an attempt is made to identify the level of ethics followed in Fintech companies in providing the employee welfare measures. Employee welfare means anything done for the comfort and improvements of the employees. The basic purpose of employee's welfare is to enrich the life of employees and keep them satisfied and it also helps in retaining the employees. The main aim of providing the welfare measures is to bring development in the personality of the worker his/her social, psychological, moral, cultural and intellectual development to make a good worker a citizen and a member of the organization family. The statutory welfare benefit schemes include the provisions of safe drinking water, facilities for sitting, first aid appliances, latrines and urinals, canteen facilities, spittoons, lighting, washing places, changing rooms, maternity leave, Medi-claim insurance scheme and anti-sexual harassment policy. Employees spend at least half their life time at work or getting to it and they know that they contribute to the organization and reasonably free from worry and they feel that when they are in the trouble, they are due to get something back from the organization. People are entitled to be treated as full human beings with personal needs, hopes and anxieties. The main objectives of the research study are the various welfare facilities provided and to understand the employee welfare measures adopted to find out the levels of satisfaction among employees. The findings of the research are most of the employees working in Fintech organizations are having work experience between 6-10 years have rated neutral for the

interaction level between employees and the top-level management and majority of employees have given neutral to the satisfaction level towards the medical/first aid benefits provided by the organization. As per the suggestion providing the welfare facilities as per the law is the important parameter in retaining the employees in the organization for longer period with commitment. To conclude majority of the employees are satisfied with the welfare measures, working condition, and allowances provided by the Fintech organizations.

Keywords: welfare measures, employee involvement, satisfaction, performance improvement.

1. Introduction: Employee welfare facilities in the Fintech organization effects on the behaviour of the employee as well as on the productivity of the organization. While getting work done through employee the management must provide required good facilities to all employee results in employee satisfaction, work smarter, more efficiently and more effectively. Welfare is a broad concept referring to a state of living of an individual or a group, in a desirable relationship development in the working place. It aims at social development by such means as social legislation, social reform, social service, social work and social action. Labour welfare is an area of social welfare conceptually and operationally which covers a broad field, connotes a state of well-being, happiness, satisfaction, conservation and development of human resources, and helps to motivation of employee. The basic propose of employee welfare is to enrich the life of employees and to keep both

statutory and non-statutory laws require the employer to extend certain benefits to employees in addition to wages or salaries. The intensity of work and the physical work environment are among the more important non-financial factors affecting employment relationship. Labour welfare includes various facilities, services, and amenities provided to workers for improving their health, efficiency, economic betterment and social status. Welfare measures are in addition to regular wages and other economic benefits available to workers due to legal provisions and collective bargaining. The purpose of labor welfare is to bring about the development of the whole personality of the workers to make a better workforce. The very logic behind providing welfare schemes is to create efficient, healthy, loyal and satisfied labour force for the organization. The purpose of providing such facilities is to make their work better and to raise their standard of living. The concept of 'employee welfare and safety measure' is flexible and differs widely with times, region, industry, country, social values and customs, degree of industrialization, the general socio-economic development of the people and the political ideologies prevailing at particular moments. It is also according to the age group, socio-cultural background, marital status, economic status and educational level of the workers in various industries the research work is being carried out.

2. Statement of the Problem: The employee has to be provided with the ethical welfare facilities which plays an important role in fulfilling the economic, social and psychological needs of the employees. Satisfied needs of the employees and a favourable working environment will lead to productive work. The companies need to encourage their employees to perform better, improve, efficiency and retain good employees. The present study is an earnest attempt to determine employee welfare measures in the organization. It is indeed necessary for any organization to understand the need of their employees and fulfil them before they leave the organization. If nothing is done by the organization then there are chances to lose talented employees

from any organization to its competitors. Hence, it is necessary for any organization to ensure employee satisfaction towards the welfare measures. The aim of the work is to draw a relationship between employees' welfare facilities and the level of job satisfaction in the companies.

3. Objectives of the Study: The following objectives are framed for the present study:

- To find out the various ethical welfare facilities provided in Fintech companies.
- To know the levels of satisfaction among employees with respect to the welfare measures.
- To understand the extent of awareness among employees with the statutory and non-statutory welfare measure.

4. Scope of the Study: The research work is done in the area of ethical employee welfare measures and create employee's loyalty with the organization and lead to increase the social status of the employees and the organizations in the society. Economic growth of the Fintech organization which may be highly helpful for the HR department of the company to make decisions for the future implementation of the welfare measures and to satisfy employees of Fintech organizations.

5. Review of Literature:

Satyanarayna and Reddi (2012) this study states that the overall satisfaction levels of employees about welfare measures in the organization cover is satisfactory. However, a few are not satisfied with welfare measures provided by the organization. Therefore, it is suggested that the existing welfare measures may be improved further.

Sindhu (2012) the research stated the employee welfare measures increase the productivity of organization and promote healthy industrial relations thereby maintaining industrial peace. Organizations provide welfare facilities to their employees to keep their motivation levels high. Business houses provide many such statutory and non-statutory things policies to maintain satisfactory level of their employee. When they get better canteen facilities, good water to drink,

clean restrooms, clean and hygiene wash rooms and bathrooms, regular medical check-ups, health insurances, Employee assistance programme, grievance handling department, better facilities to sit or good work place gives employee a high level of satisfactory level. This gives an organization to grow much faster.

Upadhyay and Gupta (2012) the study concludes that communication plays a major role in increasing the satisfaction of an employee. Satisfied employees are reported to have high morale. Welfare measures and work experience does not necessarily relate to satisfaction. Therefore, its recommended that company should provide for adequate welfare measures but should not burden itself by increasing the cost part of it in greed to earn the competitive edge and declare itself as most desired company. Other factors like good and open communication, providing motivating factors, empowerment etc should be taken into consideration for increasing the employee satisfaction level.

Virpi Sillanpa, (2013) the research states that earlier research highlights the need for the welfare service sector to measure the impacts of their services. However, it seems that the welfare services lack measures to show their long-term effects and impacts. This paper aims to present a framework to measure the multidimensional impacts of welfare service innovations and report the empirical results from two case studies. The framework proposed in the research may serve as a practical tool for decision-makers for assessing the impacts of different services and service innovations in the welfare service sector. This type of assessment is needed, for example, when new service innovations are designed and budgeted for.

Mohan and Panwar (2013) this research deals with the retail stores at Udaipur are providing not only intramural facilities but also extramural welfare facilities. It is stretching its hands to provide amenities that may improve health and living standards of the employees. The effective and efficient policies and welfare facilities make the employee to perform the job better, which leads to effectiveness of the organization.

Resma and Basavraju (2013) the author stated the employee welfare is a comprehensive term including various services, benefits and facilities offered to employees of the organization. This study enlightens the concept of welfare measures; it also highlights the employee's perception regarding the various statutory welfare measures provided by the Donimalai Iron Ore Mine, Bellary.

Logasakthi and Rajagopal (2013) this research revealed the employees enjoy not only the satisfaction of their jobs but also various facilities given by the firms. The labours extend their maximum support for the improvement of the company. The personal department takes care of the total human resources in the company. The management provides all the health safety and welfares to the employees that will help to produce better performance in the work and working environment.

Srinivas (2013) the study has identified welfare facilities and employee's satisfaction level about welfare facilities adopted at Bosch limited, Bangalore. It is found that most of the, welfare facilities like medical, canteen, working environment, safety measures etc., are provided by the company and most of the employees are satisfied with the welfare facilities adopted by the company towards the employee's welfare.

Nanda and Panda (2013) the study stated that the Rourkela Steel Plant has adopted a better kind of welfare activities which create an effective working environment and thus better productivity. There is different kind of welfare schemes like medical allowance, death relief fund, insurance, housing and transportation facilities recreation club etc. are provided by the company to the employees to maintain the industrial relation better one. The premises and the departments are maintained healthy. Also, proper safety measures have been adopted in the organization. All matters relating to safety, health and welfare of employees are properly implemented.

Koustab Ghosh, (2015) The research explains the purpose of this paper is to explore the relationships

among the welfare constituents of benevolent leadership, ethical climate, and organizational citizenship behavior (OCB) by examining the direct as well as the indirect impacts of benevolent leadership constructs on OCB mediated through the ethical work climate (EWC). This study substantiated the point that the welfare orientation exhibited by top and senior management as the core of benevolent leadership behavior in not-for-profit organizations influenced the EWC and OCB among the organizational members that in turn would enable them to meaningfully engage themselves with the socially relevant projects and community development activities.

Colin McKay and Heather Welsh, (2015) It plays a vital role in protecting the human rights of people in Scotland with learning disabilities and mental illness, by visiting those who are in receipt of care or treatment, investigating situations of concern, providing advice and guidance, monitoring the Mental Health Care and Treatment Scotland Act 2003 and Adults with Incapacity Act 2000 and shaping relevant policy and legislation.

Anniken and Hagelund, (2016) the purpose of this paper is to explore the consequences of more active and individualized welfare policies for conceptualizations of professionalism and competence in the welfare services. Efforts to professionalize activation work takes place in the absence of a specific professional knowledge base to guide daily work. The paper explores how relevant competence and skills are defined in such a context, both from the perspective of the authorities and from the front-level workers themselves. A key finding is that such competence tends to be defined in terms of the ability to manage communicative processes and relations. Paradoxically, the active turn in social policy with its emphasis on work and activity seems to entail a competence ideal that is inward looking and psychologizes.

6. Research Methodology: The research design used for the study is descriptive research design in nature and to know the characteristic features of the

respondents while the primary data was collected with the help of a structured questionnaire. The secondary source of information was also gathered for the analysis purpose and accordingly the convenience sampling technique was used. Tools used for the analysis of the data are Percentage Analysis, Correlation Analysis, Chi Square Analysis and Anova.

7. Hypothesis Statement:

H_{0a} : There is no significant relationship between welfare facilities and job satisfaction.

H_{1a} : There is significant relationship between welfare facilities and job satisfaction.

H_{0b} : There is no significant relationship between External factor and Health factor and internal factor.

H_{1b} : There is significant relationship between External factor and Health factor and Internal factor.

H_{0c} : There is no significant relationship between Experience and Income.

H_{1c} : There is significant relationship between Experience and Income.

8. Results and Discussion:

Table 8.1: Test for Association Between Employee Welfare Facilities and Job Satisfaction-One Way Anova

	Sum of Squares	df	Mean Square	F	Sig
Between Groups	.810	3	.270	1.643	.190
External Factor Within Groups	8.873	54	.164		
Total	9.683	57			
Between Groups	.273	3	.091	.512	.676
Health Factor Within Groups	9.603	54	.178		
Total	9.876	57			

Between Groups	2.593	3	.864	4.332	.008
Internal Factor Within Groups	10.773	54	.200		
Total	13.366	57			

Source: From Calculation

From the above table it is analysed that the calculated value of external factors and health factors is more than level of significance (0.05). Therefore, we accept alternative hypothesis and reject null hypothesis. Hence, there is significant relationship between welfare facilities and job satisfaction.

The calculated value of internal factor is less than level of significance (0.05). Therefore, we reject alternative hypothesis and accept null hypothesis. Hence there is no significant relationship between internal factor and dependent variable.

Table 8.2: Results of Correlation Analysis

	Employee Assistance	External Factor	Health Factor	Internal Factor
Pearson Correlation	1	.421**	.390**	.054
Employee Assistance Sig. (2-tailed)	.001	.002	.685	
N	58	58	58	58
Pearson Correlation	.421**	1	.191	.216**
Health factor Sig. (2-tailed)	.001		.150	.103
N	58	58	58	58
Pearson Correlation	.390**	-.191	1	.164**
Health factor Sig. (2-tailed)	.002	.150		.219
N	58	58	58	58

Pearson Correlation	.054	.216	.164	1
Internal factor Sig. (2-tailed)	.685	.103	.219	
N	58	58	58	58

Source: From Calculation

From the above table it is analysed that there is a high degree of positive correlation between personal growth and independent variables. Therefore, there is significant relationship between external factor & health factor and internal factor.

Table 8.3: Results of Chi Square Analysis to test the Association between Experience and Job Involvement Income

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.842a	12	.381
Likelihood Ratio	15.842	12	.199
Linear-by-Linear Association	1.072	1	.301
N of Valid Cases	58		

Source: From Calculation

From the above table it is analysed that the calculated value is more than level of significance (0.05). Therefore, we accept alternative hypothesis and reject null hypothesis. Hence, there is significant relationship between Demographic variable and independent variable.

9. Major Findings of the Study: Most of the Male employees are working in the organization and the Employees working in the organization are having the work experience between 6-10 years. More number of employees are qualified with higher degrees hence their earning is very much proportionate with their qualifications. A good strength of employees has given neutral to the leave facilities provided by the organizations. Maximum number of employees have rated very well for the working environment. Most of the male and female employees are satisfied with the

working hours of the organizations and the female employees are satisfied with the maternity benefits. Such that the employees are happy of having good interaction level between employees and the top-level management. Maximum number of employees are satisfied with the promotion policy provided by the organization and the allowance paid. Neutral opinions were given for the time spent in the organization and satisfied with the training programs. Most of the employees are satisfied with the medical/first aid benefits and the transport facilities provided by the organization.

10. Suggestions: The company management have to make effective communication with the employees and provide all the details regarding ethical welfare facilities during the selection period. Management has to take care of the rest time during their working hours, proper transport facility and leave to the employees. The employee-employer relationships and the companies should give promotion to those suitable and deserving employees. The companies must do some betterment on the mediclaim insurance factor and adaptable employee assistance scheme has to be followed. Majority of the employees are neutral with the internal factors like canteen, security, first aid facility etc,. Some of the employees are satisfied with the health factors of welfare benefits provided by the organization. Providing some monitory or non-monitory benefits will be more helpful in retaining the employees in the organization for longer period.

11. Conclusion: From the study it was identified that most of the employees are satisfied with the ethical welfare facilities provided in Fintech organizations. Majority of the employees are happy and comfortable with the salary structure, working condition, and allowances provided by the organizations. Evaluating the performance and having a supportive approach towards the employees by the management will ward off the problems and increases the satisfaction level of employees. Showing concern and finding solution for the same will be the best way to improve the satisfaction level of employees. Finally, I would like to conclude that the employees of Fintech companies are

highly satisfied with their work and organizational functioning.

12. Social Implication of the Research: Employees are the assets of the company and they contribute their time and knowledge towards their job. They are the main reason for the company to increase sales and service satisfaction to the customers. The employees should be satisfied towards the welfare benefits provided by the organization hence may enable the firm to increase its productivity and survive in the long run. The survival of long run provides stable return to its shareholders and employment opportunities for the society.

13. Scope for future research: This study is focused on the employee welfare measures in the Fintech companies. In the future study researchers may concentrate to a particular sector or make comparative study of companies in the similar industry. The further study may concentrate on impact of casual worker, employees, and contractors in the same company or similar company in the same industry.

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Fintech Model With Special Reference to SME in UAE

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Abstract: Small and medium enterprises (SME) lending is completely forbidden and considered as high-risk segment in UAE. A new conceptual working model is developed with the existing complexities. This model requires government and industry support, if the support is denied, then this model will not work. This proposed model will overcome the risk of banks and make them to look at the profiles of SME and offer merit-based finance. This Model will open up 50bn dollar market and if this happens UAE will grow rapidly.

Key Words: SME, UAE, Non-oil GDP, SME finance, Risk Management, FOGAPE.

1. Introduction: With more than 300,000 business units in UAE, listed companies are just 67 in ADX and 59 in DFM, put together 126 (0.042%) which is not a good sign for the country which aims to improve their non-oil GDP growth by 40% in 2016. In UAE, 90% of the business is with SMEs which gives work to 60% of the labor force and add to 70% of UAE's Gross domestic product (Emine, 2012). Banks in UAE are reluctant to back SMEs and the dismissal rates (Khalifa Asset SME Financing White Paper, 2013) were 50-70% in SME loaning. In developing business sectors, SMEs assume a critical function in making work and they are significant supporters of Gross domestic product; (Abdulla and Bin Bakar, 2000); (Kutllovci and Shala, 2013), (John, 2014). The government of UAE and other GCC countries have created major policies for SMEs and a rapid growth is anticipated over the next decade; (Emine, 2012); UAE Ministry of Economy, 2011; (Diaa, 2014); (Everington, 2014); (Gutcher, 2014). Troubles on admittance to Back hinders the development of SMEs and economy of the nation (Beck, 2007) (Beck & DemirgucKunt, 2006); (Klonowski, 2012); (Petersen & Rajan, 2002); (Wagenvoort, 2003); (Woldie, Mwitta, & Saidimu, 2012); (Ayyagari et al., 2008); (Wu, Song, & Zeng, 2008). SMEs are the key drivers of growth in developed countries (Ayyagari et al., 2011); (Beck, DemirgucKunt, & Levine, 2005).

Abu Dhabi is the government capital of the Unified Bedouin Emirates and the biggest of the seven emirates having a populace of 2.784 million and having a Gross domestic product of AED 960,146 million. Significant

contribution (50.9%) to the Gross domestic product was from Oil Area and the oil and gas sends out remained at AED 185.2 million. Abu Dhabi's Gross domestic product per capita pay contacted the \$70,000 mark which is higher than the normal pay of the Unified Bedouin Emirates and it positions third on the planet after Luxembourg and Norway. Notwithstanding Oil emergency, Abu Dhabi is as yet in a solid financial situation as it has not caused any immediate obligation in longer than 10 years. The emirate keeps on being the most elevated supporter of the UAE'S all out Gross domestic product and continues giving liberal monetary dies down to the more modest emirates in the nation.

By Gross domestic product structure per area in 2013, development area involves the primary spot among non-oil areas with 9% commitment followed by assembling with 5.7%, monetary exercises, protection and property exercises imparted the third spot to 4.8% each, though open administration and guard were at 4.6% followed by transportation and putting away with 3.7% and discount and retail with 3.6%. The volume of non-oil unfamiliar exchange of the Emirate of Abu Dhabi in 2013 assessed with AED 623 billion including AED 100 billion of imports. All out fares arrived at AED 523 billion including AED 16 billion as non-oil trades. All out volume of re-sends outstretched around AED 16 billion.

Within excess of 300000 business in UAE, however the recorded organizations are 67 in ADX and 59 in DFM, set up 126 (0.042%) which is certainly not a decent sign for the nation which expects to improve their non-oil Gross domestic product development by 40% in 2016. The principal issues with the SME's was not brought into spotlight despite the fact that there where parcel of discussions and investigates in this field.

About 94% of the 300,000 business undertakings are SMEs. Out of these 300,000 SMEs just 100,000 are bankable. The current Market Size is 100bn and the SME market is relied upon to develop at 30%. Be that as it may, the significant issue is 200,000 SMEs are not offered advances. In excess of 40 Banks in UAE

are having SME money item yet neglect to offer the credit to them because of different reasons. There were 0-70% of dismissal rates (Khalifa Asset SME Financing White Paper, 2013) in SME loaning. This dismissed SMEs are given credit by private monetary foundations and some of the time business banks at a high rate, which prompts default. Concerning Dubai SME Credit frames over 40% of the Gross domestic product and the Gross domestic product 's fundamental donors are Administrations and exchanging. The significant commitment (42%) to Dubai's work is from SMEs and in that 30.6% comes from Little and Miniature SME Fragments (Eissa Al Zaabi 2014). From the Graph Above we can see that the Genuine SME advances to add up to Advances is just 4% in UAE, yet when contrasted with other Islamic Talking nations Morocco stands first with 34% followed by Turkey. Additionally, we can derive that, about 77% of Dubai SMEs have no admittance to bank loaning and 80% of Dubai new businesses are self-financed.

2. Major Challenges: As indicated by the insights given by the Dubai Office of Business and Industry, SMEs contribute 86% of occupations in the private area and 60% to the nation's Gross domestic product. Around 50% of the SMEs imploded during their initial five years of tasks; (Khalique et al, 2011). There are numerous purposes behind their disappointment, yet the most widely recognized reasons are examined beneath:

2.1 Financing Issue: The greatest test for the advancement of SMEs in UAE is the accessibility of account. We realize that working capital is the blood of business and the accessibility of working capital credits is an essential which guarantees the development of SMEs. Bank Finance is the most widely recognized and often utilized was another significant issue looked by SMEs in UAE.

2.2 Ineffective Business Links: SMEs go about as columns and establishments for the developing nation. In any case, the test which UAE faces in setting this base is helpless availability and systems administration. The organizations are not firmly weaved and associated which could offer the help to the new and forthcoming type of getting finance for SMEs; (Norton,

2003). An overview led by Abu Dhabi Gathering of Financial Advancement indicated that 67% of the business people said that inaccessibility of advances and credit from the banks was the significant issue looked by them.

2.3 Lack of Management Skills: Another factor which goes about as a hindrance to the development of the SMEs is the absence of the executives' abilities of the business visionaries. As the organizations develop, wide abilities set are needed to deal with the activities and to hold/deal with the representatives. Absence of abilities in the entrepreneurs and the absence of aptitudes and mastery among individuals holding the administration position has caused the disappointment of the most SMEs; (Silva and Majluf, 2008). Business visionaries for the most part don't have such administration ability to handle issues of different sorts and to concoct creative methodologies to additionally develop the business and increment authoritative execution.

3. Research Methodology: The serious issue looked by SMEs in UAE was acquiring money; (Norton, 2003). The scientist built up Another SME Account Model for banks to conquer the money issue. This model follows up on defeating the different monetary danger looked by the monetary foundations.

4. SME Fintech Model: UAE business credit market was 300billion, however banks offered advance to tune of 100billion in the year 2021 which records to 33% of the complete market. The significant issue for the banks for non-contribution of advances was credit hazard. This has been to a great extent because of three elements: (I) instructive imbalances identified with SMEs that make chances, for example banks are generally unfit to check the reliability of SMEs and hence request higher charges and security prerequisites; (ii) low income per customer; and (iii) the requirement for nearby presence, and along these lines for an enormous branch organization, which may not really be ideal from a cost point of view, particularly in an agricultural nation setting; (Beck et al., 2008).

In view of IFC study (given underneath), In creating economies the all-out interest for credit by all formal and casual MSMEs in 2011 was assessed to be \$2.1 to \$2.6 trillion \$3.2 to \$3.9 trillion universally, which is identical to 30 to 36 percent of current exceptional SME credit. The absolute number of formal and casual MSMEs is assessed to be 360 to 440 million in creating economies.

Chart 4.1: Formal SMEs in Developing Economies

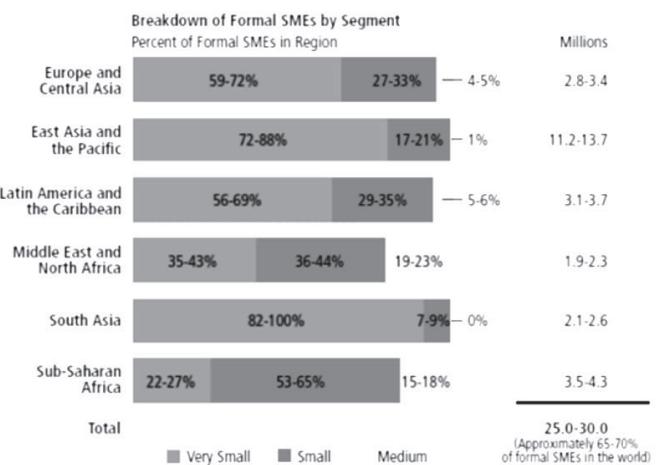


Table 4.1: Existing (UAE current Loan Market Structure)

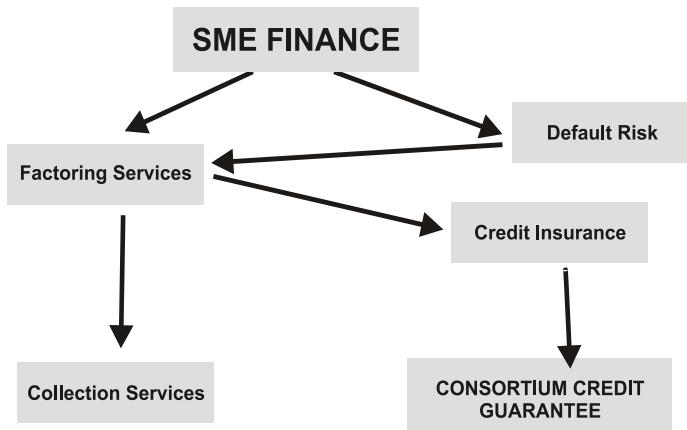
	Current Market	Volume of Business	Expected Growth 2025
No. of SMEs	300,000	300bn	400,000
No. of SMEs not bankable	200,000	200bn	250,000
No. of SMEs Offered Loan	100,000	100bn	150,000

Source: IFC Enterprise Finance Gap Database

From the above table, it is obvious that the SME current market size in 300bn including 300,000 SMEs of which just 33.33% of the SMEs are just offered credits and the market is required to develop by 400bn in 2017. Presently we can comprehend the power of the subject, where we can locate that 200bn dirhams is unexplored by monetary establishments because of

the credit default issue. This made the scientist to build up another model to fund this chaotic section.

Chart 4.2: SME Fintech Model



Source: From Study

5. Methods and Concepts used:

Default Risk: This is the major risk (loan will become NPA) faced by the financial institutions on issue of SME loans.

Factor: Factor means financing on receivables; where the receivables of business communities are financed as working capital loan.

Credit Insurance: This is an insurance which covers the default risk by taking a small premium.

Consortium Credit Guarantee: Consortium means a special investment group which is formed to offer Partial Credit guarantee to Financial Institutions to cover the credit risk of business loans.

The model proposed has been gotten from an effective model called FOGAPE from the condition of Chile and the Canadian banks utilized this amazingly to beat the monetary danger. Incomplete Credit Assurance (PCGs) are additionally an effective illustration of explicit public projects to help SME admittance to back. PCGs were founded in a few created and agricultural nations, where it might add little esteem except if they are appropriately planned or assessed; (Saadani et al., 2011). Planning PCGs ideally requires dealing with the unpredictable harmony between high

effort and also, and monetary manageability; (Saadani et al., 2011). In Canada, for instance, it is assessed that 75 percent of the absolute assurances were being utilized by firms that would have confronted challenges getting an advance without the plan; (Riding et al., 2007). FOGAPE—a public asset to ensure advances to little firms in Chile—utilized inventive plan for SMEs, having a one of a kind offering technique where banks can offer for the assurances as indicated by the danger profile of the SMEs, and setting up a danger-based methodology with sensible expenses that rely upon the default rates. FOGAPE has a yearly reach of 30,000 assurances and a low total deficit proportion of 1.5 percent; (IFC, 2011).

6. Plan of operation: The Scientist attempted to utilize FOGAPE Model to make Another SME money Model. In UAE SME account fragment is high danger because of different reasons. In this way, in our new model, the analyst attempted to decrease the danger by financing the SME credits through a Factor. In this Model, the factor renegotiates 80% to the Credit sum quickly to the Monetary Organization by which the Default danger of the monetary Foundation was completely covered. However, the default hazard was moved to the Factor. The default danger of the factor will be covered by a Danger Protection which takes a little charge from the factor to cover the danger of the EMI. This is called as Halfway Credit Assurance, where the advance isn't covered however just the EMI is covered. Thus, every EMI the default hazard is covered by this Credit Danger Insurance agency. This Credit Danger Insurance agency is shaped by a Consortium which comprises of Government, Industry and Monetary Foundation (FOGAPE Model).

7. Findings and Discussion: This model has been disclosed to government and the public authority and numerous different banks. Value of this model has been investigated and the working achievability must be tried. This model has demonstrated huge reaction from banks where they truly valued the plan, yet they are powerless until the public authority consents to accompany a consortium to help this movement.

8. Conclusion: As talked about, SMEs are the spine for UAE development, yet a great deal of unsolved issues that are restricting the development of UAE. As a commitment to society, the scientist has built up another SME Money model which was very much tried in Canada (FOGAPE) can a potential answer for understand the long-standing issue looked by the SMEs in UAE.

9. Scope for further work: The theoretical SME Account Model is tried in UAE now and the equivalent can be applied in any of the GCC nations, since all the GCC nations face the comparable sort of SME issues. Expectation this model will offer an answer for the long-standing issues looked by the SMEs.

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A Study on Financial Technology Sector's New Emergence: Mobile Banking

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Abstract: Technology plays a significant role in banking sector and it is one of the largest financial institutions continuously explores the opening of technology facilitate services to offer better customer experience and convenience. Mobile banking is an Information Communication Technology (ICT) application became part of every individual in the information era and it is considered to be an essential use among people in different countries who are probable to have divergent cultural backgrounds. Mobile banking is a growing alternative channel for offering financial services as well as benefits to the people in remote area to access the banking services at ease. India is the world's biggest telecom market, with a great potential for growing banking services through mobile. The main objective of the study is to analyse the perceptions of respondents towards using Mobile banking services. The findings of the study were most of the mobile banking user were male and comes under 20-30 years of age group. Garrett ranking technique revealed that most of the respondents expressed their positive opinions towards mobile banking service.

Key words: Fintech, New Emergence, Mobile banking, Customer Perception, Payments and Security

1. Introduction: Financial technology is otherwise called as fintech, it refers to any technology meant to ease the provider of financial services and simplify financial operations. Fintech is a broad term that encompasses a wide range of services, from online banking and insurance to lending and investment apps. What all kinds of fintech have in common is that they all aim to improve financial procedures and the banking experience (apextechinc.com). According to the research (EY Fintech Adoption Index 2017), India has risen to second place behind China in terms of Fintech service adoption (Priya and Anusha 2019).

Fig 1: Components of Fintech



Source: <https://apextechinc.com/>

2. Mobile Banking: The increased use of smart phones brings tremendous opportunities for the expansion of mobile banking (Goyal et al 2012). Mobile phones are becoming a priority for banking institutions looking for advanced techniques to serve their customers. One cannot dispute the dramatic surge in smart phone usage. The majority of people nowadays use technological devices for their shopping and banking requirements and mobile banking applications are increasingly gaining popularity as a more cost-effective and time-saving alternative to conducting money transfers in local branches.

Mobile payments have the potential to compliment cash, cheques, debit cards and credit cards and it may also be used to pay bills (particularly utilities and insurance premiums) along with access to account-based payment instruments like Internet banking payments, electronic funds transfer, direct debit, and electronic bill presentment (Goyal et al 2012).

2.1 The purpose of Mobile Banking: Mobile banking is a technology that allows people to manage their personal accounts and complete banking operations more efficiently by using an app. Mobile has emerged as a key channel of communication between customers and financial organisations. The leading financial institutions competing to provide their customers with the greatest mobile banking experience possible. People may use their smart phones to pay credit card bills, check account balances, pay utility bills, deposit checks, and do a variety of other things. People no longer need to attend land-based institutions to be served, therefore physical in-store interactions are no longer the norm. It was no wonder that people are increasingly enjoying the convenience of managing all of their accounts in a single location, at any time and from any location (apextechinc.com).

According to a Business Insider 2019 research study stated that 89 per cent of the respondents use mobile applications for personal funds, and the proportion rises to 97 per cent among tech-savvy youngsters. Previous generations have also reported benefits from mobile services and younger people have a stronger need for high-tech solutions, the demand for first-rate mobile banking will only increase.

Advantages of Mobile Banking:

- Reduced Operational and Transactional costs
- ↓
- Improved Communication with customers
- ↓
- Enhanced Security
- ↓
- Increasing Loyalty
- ↓
- Better User Engagement
- ↓
- Another Marketing Channel

Source: From Study

3. Review of Literature: Brown et al (2003) identified mobile phone usage has increased dramatically throughout Africa, particularly in South Africa, where preliminary growth projections were substantially exceeded. As a result, this technology enables services like banking to achieve critical mass. Mobile banking is available at all major retail banks in South Africa, however very few clients utilise it. This study investigated the characteristics that impact mobile phone banking adoption in South Africa in order to have a better knowledge of how to possibly boost the rate of adoption. A paradigm created in Singapore to identify characteristics impacting Internet banking adoption was utilised as a foundation, and it was modified to examine mobile phone banking. Influencing factors observed included relative advantage and consumer banking demands, with perceived risk having a significant negative impact.

Bankole et al (2011) stated several research have confirmed that information and communication technology (ICT) adoption is culturally influenced and mobile banking is an ICT tool that is widely used by people from many nations with widely different cultural backgrounds. The study examined that the use and adoption of mobile banking has shown a variety of results in various countries throughout the world, this was due to the diversity of cultural landscapes in different countries. The respondents were mobile banking users who included students and employees from a variety of professions. From the selected group of mobile banking consumers, 231 samples were collected. Statistical and qualitative methodologies were used to analyse the data. This study investigated the factors that influence mobile banking adoption in Nigeria and the result stated that culture is the most significant element determining the adoption of mobile banking customers in Nigeria.

Gomber et al (2018) introduced a new fintech innovation mapping technique that allows for an evaluation of the extent to which changes and transformations are occurring in four major sectors of the financial services industry. It was discussed about operations management in financial services and

the changes that are taking place; secondly technology innovations that have commenced to influence the implementation and stakeholder value connected with payments decision, crypto currencies and block chain technologies. Thirdly, multiple fintech innovations that have impacted deposit services, lending and the use of social media. Fourthly, issues concerning investments.

4. Statement of the problem: The financial services background in India is being transformed by Fintech firms and it has expanded dramatically during the last two years. According to EY's Fintech Adoption Index 2017, India ranked second in the world in terms of Fintech adoption rate (52%) across 20 markets. Fintech adoption is surprisingly strong in India and Indian customers have welcomed the usage of mobile payments in their routine day-to-day activities powered by mobile wallets and many more recent advances such as the Unified Payment Interface (UPI) platform. Mobile banking is a growing alternative channel for providing financial services. India is the world's second biggest telecom market, with a great potential for growing banking services via mobile. Hence, the study is attempted to know perceptions of respondents towards using mobile banking services.

5. Objectives of the study:

- To study the demographic Profile of the Mobile Banking Users.
- To analyse Perceptions of respondents towards using Mobile banking services.

6. Research Methodology: Coimbatore was taken for the study since it is the third largest city of the state and one of the most industrialized cities in Tamilnadu. This study is designed to analyse perceptions and opinions of urban mobile banking users. In this regard a primary data was collected from mobile banking users especially from educated persons. The study used simple random sampling technique to collect data from 50 respondents through the structured web-based questionnaire. The study area was divided into five zones such as North zone, South zone, East zone, West zone and Central zone.

In each zone 10 samples were collected from respondents. For analysis purpose Percentage and Garrett Ranking Technique was used.

7. Results and Discussion:

Demographic Profile of the Mobile banking Users: The study analysed demographic profile of the mobile banking users, the variables taken for the study such as Gender, Age, Educational Qualification and Annual Income of the respondents.

Table 7.1: Showing Demographic Profile of the Respondents

Variables	Categories	Frequency	Percentage
Gender	Male	27	54
	Female	23	46
	Total	50	100
Age	20-30 years	20	40
	30-40 years	15	30
	40-50 years	9	18
	Above 50 years	6	12
	Total	50	100
Educational Qualification	Higher Secondary	10	20
	Graduate	22	44
	Post Graduate	16	32
	Doctorate	2	4
	Total	50	100
Annual Income (In Rs)	Rs. 1,00,000-1,50,000	17	34
	Rs. 1,50,000-2,00,000	22	44
	Rs. 2,00,000-2,50,000	8	16
	Above 2,50,000 rupees	3	6
	Total	50	100

Source: From Survey

The study found that most (54%) of the respondents were male because most of the female users expounded that, there was a risk in using mobile banking. Remaining 46 per cent of them were using mobile banking services. Regarding age group of the respondents it was found that majority (40%) of the respondents belongs to 20-30 years of age group the

reason behind was young people tend to have positive attitudes towards mobile banking. Followed by 30 per cent of them were 30-40 years of age group, afterwards 18 per cent of them comes under the category of 40-50 years of age group. Only 12 per cent of the respondents come under above 50 years of age group. While analysing educational qualification of the respondents most (44%) of them were graduates, followed by 32 per cent of the respondents completed their post-graduation and 20 per cent of them completed their higher secondary level. Least four per cent of them only have their doctorate. This result shows that education is must to operate mobile banking since it reduces financial risk. With regards to annual income of the respondents it stated that, majority (44%) of the respondents having annual income of Rs.1,50,000-2,00,000, similarly 34 per cent of them getting their annual income of Rs. 1,00,000-1,50,000. About 16 per cent of the respondents having Rs. 2,00,000-2,50,000. Remaining six per cent of them having above Rs. 2,50,000 rupees.

Usage of Mobile Banking Service: The study analysed Usage of mobile banking service by customers. The time period of using mobile banking classified in to four that was less than 1 year, 1 to 2 years, 2 to 3 years and more than 3 years. Frequency of using mobile banking services also analysed that was daily, weekly, monthly and rarely.

Table 7.2: Usage of Mobile Banking Service

Variables	Categories	Frequency	Percentage
Time Period	Less than 1 year	8	16
	1 to 2 years	13	26
	2 to 3 years	18	36
	More than 3 years	11	22
	Total	50	100
Frequency of usage	Daily	9	18
	Weekly	22	44
	Monthly	14	28
	Rarely	5	10
	Total	50	100

Source: Field Survey

The study found that highest (36%) percent of respondents were using mobile banking service for about 2-3 years. 26 per cent of them expounded their time period was 1-2 years, like wise 22 per cent of them using mobile banking for more than 3 years. Remaining 16 per cent of them stated that, they were using mobile banking for less than a year. Frequency of their usage also analysed, it was found that major (44%) portion of the respondents using the mobile banking services weekly, about 28 per cent of them using monthly once and 18 per cent were using daily. Only 10 per cent of them stated that they were using mobile banking service very rarely.

Perception towards mobile banking services by customers: Garrett Ranking technique was used to estimate the perception towards mobile banking services by customers. The orders of value given by the respondents were converted in to rank by using the formula. To find out the most important factor which influences the respondent, Garrett's ranking technique was used. As per this method, respondents have been asked to give the rank for all factors and the outcomes of such ranking have been converted into score value with the help of the following formula:

$$\text{Percent Position} = \frac{100 (\text{R}_{ij}-05)}{\text{N}_j}$$

R_{ij} = Rank given for the i th variable by j th respondents

N_j = Number of variables ranked by j th respondents

Table 7.3: Perception towards mobile banking services by customers

S. No	Perception towards mobile banking service by customers	Rank
1	Mobile banking is more convenient than traditional banking methods.	1
2	Mobile banking would help me to manage my finances more effective.	4
3	Mobile banking was compatible with lifestyle.	3
4	It would be difficult to use mobile phone banking.	10
5	Mobile banking would require a lot of mental effort.	9
6	Mobile banking might be frustrating.	8
7	Mobile banking is a risky mode to use	7
8	I am concerned about the safety of mobile banking.	6
9	The process of mobile phone banking was simple for me to understand.	5
10	Mobile banking saves more time	2

Source: Computed from Field Survey

Most of the respondents expressed their positive opinion towards mobile banking services, it was found from the result mobile banking is more convenient than traditional banking methods ranked as first. Ultimately Mobile banking saves more time it was ranked as second because every day people are racing against time, so mobile banking plays an important role in everyone's life. Mobile banking was compatible with everyone's lifestyle it was ranked as third. Majority of the respondents stated that mobile banking would help them to manage their finance more effective it was ranked as fourth. The process of mobile banking was very simple to understand stated by some of the respondents it was ranked as fifth. Few of the respondents reported that they were concerned about safety and risky it was ranked as 6th and 7th rank. Finally mobile banking is frustrating, it requires mental effort and it was very difficult to use reported by the respondents ranked as 8th, 9th and 10th rank.

8. Conclusion: As mobile technologies progress and mobile devices become more prevalent in daily life, a new sort of payment system known as mobile payment (m-payment) has evolved, enabling users to pay from their wireless devices, particularly mobile phones, wherever they go. The growth of mobile phone usage in India has been phenomenal because it can be used for all types of payments anywhere at any time. However, security challenges such as authentication and permission for mobile payment transactions, as well as fraud management, remain, but the research study indicated a good attitude toward mobile banking services. The study also found that all of the respondents belong to educated person holding more awareness on mobile banking services. The study suggested that the government and other regulatory agencies should continue to support the financial technology through various measures.

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A Study on “Loan Predictions Using Fintech Decision Tree Analysis”

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Abstract: In today's world, banking sector is crucial to the modern economy. As the primary supplier of credit, it provides money for people to buy cars and homes and for businesses to buy equipment, expand their operations, and meet their payrolls. The credit cards, debit cards, and checking accounts that banks make available facilitate all kinds of everyday transactions. They also help drive e-commerce, where cash is of little use. With banking products becoming increasingly commoditized, Analytics can help banks differentiate themselves and gain a competitive edge. Machine learning forecasting for banking enables more accurate reporting by automating credit risk testing for both banks and customers. By evaluating a consumer's financial history, recent transactions, and purchasing patterns, machine learning can make accurate forecasts of future spending and income. Predictive analytics helps banks distinguish between the various portfolio risks effectively, by optimizing the collections process. It helps banks segregate risky customers from the risk-free ones. This can help banks devise actions and strategies to achieve positive results. Predictive Analytics is a stream of advanced analytics which uses new as well as historical data to forecast activity, behaviour, and trends to predict the future. This involves data mining, modelling, employing statistical analysis techniques, and automated machine learning algorithms to make the predictions. It helps organizations discover business issues in real time and address them at the right time to get the best outcomes.

Keywords: Banking Sector, Modern Economy, Machine learning forecasting, credit risk, Predictive analytics, Positive Results, Data Mining, Statistical Analysis.

1. Introduction: All loans are treated via way of means of a financial institution. They may be discovered in all varieties of urban, semi-urban, and rural settings. Customer first applies for a residence mortgage, and then the corporation verifies the client's mortgage eligibility. The corporation desires to automate the mortgage eligibility procedure (in actual time) primarily based totally at the statistics supplied via way of means of the client while filling out the net utility shape. Gender, Marital Status, Education, Number of Dependents, Income, Loan Amount, Credit History, and different records are included. To automate this procedure, they created a trouble to pick out the purchaser segments which are certified for a mortgage amount, letting them goal those purchasers individually.

The idea of borrowing has existed because the sunrise of humanity, however now it has many aspects. This extends to non-public credit score exchanges for non-public performance-primarily based totally repayments, with credit score as earnings from unsecured every day contributions, besides with inside the banking zone, which calls for collateral for public lending Will be granted. The uniform prevalence of defaults and the resultant defaults is contemplated with inside the diploma of financial institution closures and the diploma of sovereign defaults that the creditors have absolutely experienced. A financial institution mortgage chance evaluation desires to recognize the motive for this chance. In addition, the range of exchanges with inside the economic zone is developing rapidly, and the quantity of statistics approximately client conduct and lending chance is expanding. The

cause of this paper is to pick out the sort or info of the client making use for the mortgage.

The time period mortgage refers to a kind of credit score car wherein a amount of money is lent to every other celebration in change for destiny compensation of the fee or foremost amount. In many cases, the lender additionally provides hobby and/or finance expenses to the foremost fee which the borrower have to pay off further to the foremost balance. Loans can be for a precise, one-time amount, or they'll be to be had as an open-ended line of credit score as much as a distinctive limit. Loans are available many distinctive bureaucracies together with secured, unsecured, commercial, and private loans. A mortgage is a shape of debt incurred via way of means of an person or different entity. The lender—normally a corporation, economic institution, or government—advances a amount of money to the borrower. In return, the borrower has the same opinion to a sure set of phrases together with any finance expenses, hobby, compensation date, and different conditions. In a few cases, the lender might also additionally require collateral to stable the mortgage and make certain compensation. Loans may additionally take the shape of bonds and certificate of deposit (CDs). It is likewise viable to take a mortgage from a 401(k) account.

2. Review of Literature: R. Ghatge, P.P(2006) developed the artificial neural network model to predict the credit risk of a bank. The Feed-forward back propagation neural network issued to forecast the credit default. They also compare the results with the manual calculations of the bank conducted in year 2004, 2005 and 2006. The results give the better and higher performance over manual calculations of bank.

Alaraj, M, Abbod, M (2008) Introduced a credit risk model that are based on homogenous and heterogeneous classifiers. Ensemble model based on three classifiers that are logistic artificial neural network, logistic regression and Support vector machine. The results show that the heterogeneous classifiers ensemble gave improved performance and accurateness as compared to homogeneous classifiers ensemble.

Dr. A. Chitra, S. Uma (2009) introduces a two-level ensemble model for prediction of time series based on radial bias function network (RBF), k nearest neighbour (KNN) and self-organizing map (SOP). The aim is to increase the prediction accuracy. They construct a model named PAPEM i.e., Pattern prediction Ensemble Model that uses Mackey dataset, Sunspots dataset and Stock Price dataset as dataset and shows the proposed model performs better than the individuals. The Comparison of various classifiers done on root mean square, mean absolute percentage error and prediction accuracy. The results show that the PAPEM model is better than standalone classifier.

Board Diversity And Its Effects On Bank Performance(2010) This study analyses the effect of board diversity (gender and nationality) on performance in banks. By making use of a sample of 159 banks in nine countries during the period 2004-2010, our empirical evidence shows that gender diversity increases bank performance, while national diversity inhibits it. Complementarily, according to their institutional characteristics, we also show the moderating effect of investor protection and bank regulatory regime on this previous relationship, analysing their substitution or complementary roles. Our results also suggest that these institutional factors play a significant role in these effects.

Problem Loans and Cost Efficiency in Commercial Banks (2012). This paper addresses a little examined intersection between the problem loan literature and the bank efficiency literature. We employ Granger-causality techniques to test four hypotheses regarding the relationships among loan quality, cost efficiency, and bank capital. The data suggest that problem loans precede reductions in measured cost efficiency; that measured cost efficiency precedes reductions in problem loans; and the reductions in capital at thinly capitalized banks precede increases in problem loans. Hence, cost efficiency may be an important indicator of future problem loans and problem banks. Our results are ambiguous concerning whether or not researchers should control for problem loans in efficiency estimation.

Income Contingent Loans. For Higher Education International Reforms (2014) it is well known that higher education financing involves uncertainty and risk with respect to students' future economic fortunes, and an unwillingness of banks to provide loans because of the absence of collateral. It follows that without government intervention there will be both socially sub-optimal and regressive outcomes with respect to the provision of higher education. The historically most common response to this market failure - a government guarantee to repay student loans to banks in the event of default - is associated with significant problems.

Income contingent loans offer a possible solution. Since the late 1980s ICLs have been adopted in, or recommended for, a significant and growing number of countries, and it is this important international policy reform that has motivated the chapter.

An ICL provides students with finance for tuition and/or income support, its critical and defining characteristic being that the collection of the debt depends on the borrowers' future capacity to pay. ICL have two major insurance advantages for borrowers over more typical arrangements: default protection and consumption smoothing.

A Comparative Study of Machine Learning Approaches for Non-Performing Loan Prediction (2015) Credit risk estimation and the risk evaluation of credit portfolios are crucial to financial institutions which provide loans to businesses and individuals. Non-performing loan (NPL) is a loan type in which the customer has a delinquency; because they have not made the scheduled payments for a time period. NPL prediction has been widely studied in both finance and data science. In addition, most banks and financial institutions are empowering their business models with the advancements of machine learning algorithms and analytical big data technologies. In this paper, we studied on several machine learning algorithms to solve this problem and we propose a comparative study of some of the mostly used non-performing loan models on a customer portfolio dataset in a private bank in Turkey. we also deal with a class imbalance problem

using class weights. a dataset, composed by 181.276 samples, has been used to perform the analysis considering different performance metrics (i.e., precision, recall, f1 score, imbalance accuracy).

3. Research Methodology:

3.1 Data Description: The primary data for this research will be to get the real time opinions but as there are several researches conducted out this has a lot of secondary data available online for the research purposes in which the model has been created which notifies but also has alerted the user using many machine learning and deep learning algorithms. Due to the researchers conducted, a lot of data is available online. So, here we are going to use a dataset from Analytics Vaidya and we are mainly going to use a deep learning algorithm called Decision Tree.

4.1 Pre-processing: Initially the Attributes which are critical to make a Loan Credibility Prediction is identified with Information Gain as the attribute-evaluator and Ranker as the search-method. Manual pre-processing is also performed.

2. Final dataset after pre-processing is divided in such a way that there is 80 % training set and 20 % test set. Test set is used to validate the final result of the classifier.
3. Fitting a Decision-Tree algorithm to the Training set.
4. Predicting the test result.
5. Test accuracy of the result (Creation of Confusion matrix)
6. Visualizing the test set result.

4.1.1 Train Test Split Ups: The dataset has to be split into training data and testing data and it plays a vital role in increasing the accuracy for the results in the model. One of the mores in machine learning is that to divide the data into train data and test data into 80:20 format, it is the commonly used format but does not necessarily be the same. The table below shows how much data were used to train and test from each class. We must use same number of samples from each

class to train and then to test. That's one way to check how accurate the model is performing. The model and remaining 100 samples will be utilized to test the model performance. So, on the whole we have 3600 samples to train the model and 400 samples to test the model accuracy.

4.1.2 Data Mining: Data mining is the process of analysing data from different perspectives and extracting useful knowledge from it. This is the core of the knowledge discovery process. Various steps for extracting knowledge from raw data, Various data mining techniques include classification, clustering, association rule mining, prediction and sequential patterns, neural networks, regression, and more. Classification is the most commonly applied data mining technique that uses a pre-sorted set of samples to develop a model that can classify the entire population of a dataset. Fraud detection and credit risk applications are particularly well suited for classification techniques.

4.2 Important Terminologies in Decision Tree:

4.2.1 Information Gain: Information Gain is used to determine which feature/attribute gives us the maximum information about a class. Information Gain is based on the concept of entropy, which is the degree of uncertainty, impurity or disorder. Information Gain aims to reduce the level of entropy starting from the root node to the leave nodes. It is calculated by subtracting the sum of squared probabilities of each class from one. It favours larger partitions and easy to implement whereas information gain favours smaller partitions with distinct values. A feature with a lower Gini index is chosen for a split. The classic CART algorithm uses. Information is a measure of a reduction of uncertainty. It represents the expected amount of information that would be needed to place a new instance in a particular class. These informativeness measures form the base for any decision tree algorithms. When we use Information Gain that uses Entropy as the base calculation, we have a wider range of results whereas the Gini Index caps at one.

4.2.2 Gini Index: Gini index or Gini impurity measures the degree or probability of a particular variable being wrongly classified when it is randomly chosen. To find the best feature which serves as a root node in terms of information gain, we first use each descriptive feature and split the dataset along the values of these descriptive features and then calculate the entropy of the dataset. This gives us the remaining entropy once we have split the dataset along the feature values. Then, we subtract this value from the originally calculated entropy of the dataset to see how much this feature splitting reduces the original entropy which gives the information gain of a feature

The feature with the largest information gain should be used as the root node to start building the decision tree. ID3 algorithm uses information gain for constructing the decision tree.

4.2.3 Entropy: It is used to measure the impurity or randomness of a dataset. Imagine choosing a yellow ball from a box of just yellow balls (say 100 yellow balls). Then this box is said to have 0 entropy which implies 0 impurity or total purity.

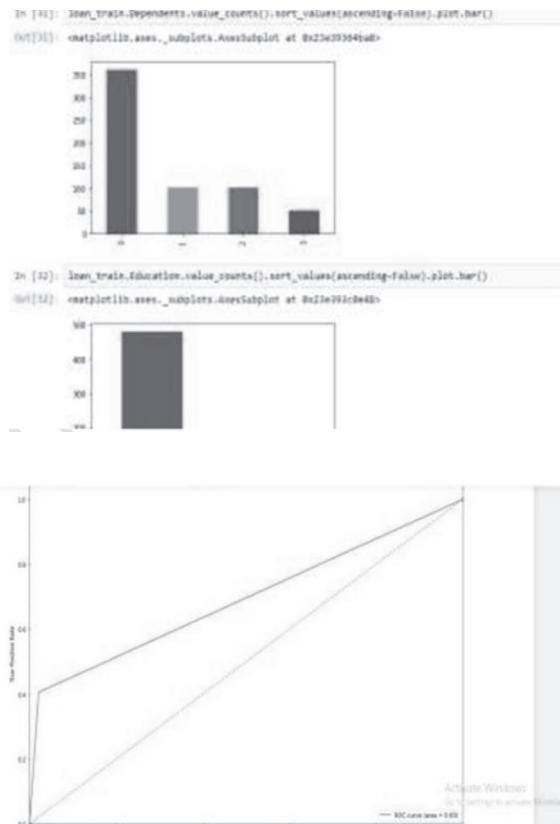
Now, let's say 30 of these balls are replaced by red and 20 by blue. If we now draw another ball from the box, the probability of drawing a yellow ball will drop from 1.0 to 0.5. Since the impurity has increased, entropy has also increased while purity has decreased. Shannon's entropy model uses the logarithm function with base 2 ($\log_2(P(x))$) to measure the entropy because as the probability $P(x)$ of randomly drawing a yellow ball increase. When a target feature contains more than one type of element (balls of different colours in a box), it is useful to sum up the entropies of each possible target value and weigh it by the probability of getting these values assuming a random draw. This finally leads us to the formal definition of Shannon's entropy which serves as the baseline for the information gain calculation:

Where $P(x=k)$ is the probability that a target feature takes a specific value, k .

4.3.5 Decision Tree: A Decision Tree is a structure that includes a root node, branches, and leaf nodes. Each internal node denotes a test on an attribute, each branch denotes the outcome of a test, and each leaf node holds a class label. The topmost node in the tree is the root nodal. Decision Tree algorithm belongs to the family of supervised learning algorithms. Unlike other supervised learning algorithms. The goal of using a Decision Tree is to create a training model that can use to predict the class or value of the target variable by learning simple decision rules inferred from prior data (training data). In Decision Trees, for predicting a class label for a record we start from the root of the tree. We compare the values of the root attribute with the record's attribute. On the basis of comparison, we follow the branch corresponding to that value and jump to the next node.

5. Application Result: The below table shows the accuracy and other criteria when the model is developed.

```
In [10]: loan_ID=loan_train.Loan_ID
In [11]: loan_train.drop(['Loan_ID'],axis=1,inplace=True)
In [12]: loan_train['Gender'].value_counts()
Out[12]: Male    409
Female    112
Name: Gender, dtype: int64
In [13]: loan_train["Gender"]-loan_train.Gender.astype('str').transform(lambda x: x.replace("nan","Male"))
In [14]: loan_train['Married'].value_counts()
Out[14]: Yes    308
No     213
Name: Married, dtype: int64
In [15]: loan_train["Married"]-loan_train.Married.astype('str').transform(lambda x: x.replace("nan","Yes"))
In [16]: loan_train['Dependents'].value_counts()
Out[16]: 0    345
1    180
2    161
3+    51
Name: Dependents, dtype: int64
```



From a proper analysis of positive points and constraints on the component, it can be safely concluded that the product is a highly efficient component. This application is working properly and meeting to all Banker requirements. This component can be easily plugged in many other systems. There have been numbers cases of computer glitches, errors in content and most important weight of features are fixed in automated prediction system, so in the near future the called software could be made more secure, reliable and dynamic weight adjustment. In near future this module of prediction can be integrate with the module of automated processing system. The system is trained on old training dataset in future software can be made such that new testing date should also take part in training data after some fix time.

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An Overview on Fintech in UK: Learning Points for The Indian Companies

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Abstract: Internationally Fintech's rise especially in the UK and it aims to improve public access to online financial transactions, raise financial literacy, and achieve financial inclusion. The goal of this research paper is to discover the UK's fintech strategies and how it can be applied to Indian settings. Fintech is required to strike the correct balance between consumer protection and financial stability, while also offering enough incentives for Fintech innovation. Previous studies have attracted regulators and law workers, entrepreneurs, and investors who participated in technology applied in the field of innovative financial services in India. The strategies of UK also help to Indian economy to grow further.

Keywords: Fintech, Strategies and Opportunities.

1. Introduction: In the worldwide the UK has become one of the destination centres for fintech hub, with substantial financial services experience, technological skill, and progressive legislation are made them in the top of the list. With £3 billion in venture capital attracted in 2020, the UK fintech sector is the top-ranked investment destination in Europe. It ranks second in the world only behind the United States, with more deals and capital invested than Germany, Sweden, France, Switzerland, and the Netherlands combined. In order to support fintech innovation, the UK has access to world-class talent as well as a progressive regulatory framework.

2. Review of Literature: Him and Shin (2016) evaluated the Government intervention in the fintech sector and They discovered that the Chinese government employs a techno-globalist approach in the fintech industry to improve its global competitiveness, as well as a technonationalist strategy to create "national champions" and safeguard home enterprises from foreign worldwide players.

Begenau et al (2018) were analysed the big data and firm size and They show that data is a storable, sellable, and priced asset, hence data investment should be valued similarly to physical asset investment. Understanding how to value data as an asset might help us better comprehend new economy business values and assess overall economic activity.

Wonglimpiyarat (2018) directions on Policy and the crowd funding system in Thailand is in a the moment, this funding system is in its early stages of

development, and as a result, it requires various government supports to assist SMEs. Crowd funding mechanisms must evolve in tandem with the Fintech industry, and the Thai government must collaborate to improve policy coherence in the development of a start-up eco-system for entrepreneurial development.

Nakashima (2018) studied The Internet of Things (IoT) is a crucial commercial activity in modern society for businesses of all sizes. It does not simply mean employing technology, but attaining social creation through technology.

Anshari et al (2019) analysed Agro Pay, the digital marketplace for agriculture, provides vital services for investors to make transactions effectively at any time and from any location. Crowdfunding allows investors to invest in a wide range of agricultural goods using their smartphone.

Jagtiani and Lemieux (2018) Changing the way people think about money and banks LendingClub's consumer lending activities have expanded into places where traditional banks may be underserved, such as highly concentrated markets and locations with fewer bank branches per inhabitant. In locations when the local economy is struggling, the percentage of Lending Club loans increases.

Anagnostopoulos (2018) Banks and regulators Consumer welfare, regulatory and supervisory advantages, and financial services sector reputational gains are all possible results of disruptive innovation. As the financial services business develops, it becomes increasingly more critical.

Drasch et al (2018) our taxonomy can serve as a useful classification of cooperation scenarios and their distinctive characteristics, especially for policymakers. For the purpose of determining legal actions, policymakers might study and build on the suggested cooperation patterns. Case-based research methods, for example, should match and assess legislation for each of the specified qualities e.g. banking licenses, patent law and antitrust legislation).

Acar and Citak (2019) overviewed Fintech integration phases in banks and how they reduce risk and raise fintech understanding in departments. As a result, the majority of departments are able to communicate with Fintech's and see the value of external engagement.

Degerli (2019) When it comes to Fintech regulation, regulators frequently take one of three approaches: ignore, liken, or regulate. Financial services, being one of the most heavily regulated areas of the Turkish economy, are far from being overlooked.

3. Opportunity highlights in UK Payment Technology

(Paytech): The evolving payments landscape has aided in the development of a strong paytech industry in the United Kingdom. With investment potential in digital commerce, cross-border payments, mobile POS payments, and more, the UK is at the forefront of the payment technology revolution.

3.1. Wealthtech: The investing and asset management industries are being transformed by wealthtech. Robo-advisors, portfolio management tools, micro-investment and social trading platforms, as well as B2B software solutions, all have a lot of potential.

3.2 Credit and lendingtech: Lendingtech provides technologies that enable lenders to increase the speed with which they handle payments. It provides individualised experiences for loan and mortgage consumers and is anticipated to grow rapidly.

3.3 Digital banking: Deposits, transfers, account administration, and loan management are all available through digital banking, which is available via internet or mobile banking. Almost a quarter of British adults have a digital-only bank account, with 66 percent of banking clients stating that they intend to convert completely to a digital bank in the future.

3.4 Distributed Ledger Tech (DLT) and digital currencies: In 2026, the financial sector's use of block chain technology is predicted to reach a global market size of £16.7 billion. In the near future, the market is projected to be dominated by crypto currency and

trading platforms, non-fungible tokens (NFTs), alternative asset trading, and support structures.

4. Commercial maturity: The UK financial technology industry accounts for 11% of the global industry and employs around 2,500 people. Six of the top ten fintech companies in the world are headquartered in London, according to Fintech 50. The fintech industry has been highlighted by the UK government as a key area for future economic growth. It has pledged to implement a number of major recommendations from The Kalifa Review of UK Fintech in order to keep the UK at the forefront of the financial technology revolution.

5. Key UK assets: The United Kingdom is a global financial centre, with over 90,000 financial and professional services firms in London alone. Manchester, Edinburgh, Newcastle, Leeds, Bristol, Belfast, and Cardiff are just a few of the rapidly increasing regional clusters. All of them have a large talent pool, well-established industry specialisations, and local governmental measures that support them.

The UK's banking and technology sectors, as well as a world-class education system, offer a vast pool of fintech talent. The industry employs around 76,500 people in the UK, with that number expected to rise to 105,500 by 2030. The Global Talent Visa for Digital Technology is expected to attract and expedite digital technology talent from all over the world.

The UK fintech industry benefits from a favourable regulatory environment. The Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA) work together to create a business environment that is both competitive and innovative. This can aid organisations in expanding and developing their fintech businesses in the United Kingdom.

Singapore, South Korea, China, Hong Kong, and Australia have all signed fintech bridge agreements with the United Kingdom. By lowering obstacles to international markets, these bespoke agreements provide great prospects for expansion and collaboration.

6. Research & Development capability: The UK technology ecosystem supports successful digital transformation of financial operations and assists organisations in remaining market competitive. Fintech, financial services, big data, computer science, cyber security, data analytics, and artificial intelligence all have centres of excellence around the UK. Almost 3 million individuals work in the UK tech sector, accounting for roughly 9% of the total employment.

Fintech accelerators and incubators like Level 39 and Fintech Innovation Lab London help start-ups develop their fintech solutions. They can offer direction, assistance, and counsel to businesses. The Barclays Accelerator, NatWest Entrepreneur Accelerator, JP Morgan, and Goldman Sachs have all joined the ranks of corporate accelerators.

7. Business and government supports in UK: With key initiatives like the FCA's Regulatory Sandbox, the Global Financial Innovation Network (GFIN), the Open Banking framework, and the AI Sector Deal, the United Kingdom has set the global benchmark for policy-led innovation.

Through its Innovation Hub scheme, the FCA has taken steps to ease the regulatory burden on fintech firms. By establishing efficient and transparent commercial partnerships between banks and fintech firms, the Fintech Pledge shows government and industry commitment to the growth of the UK's fintech sector.

8. Mini Case studies:

Oak North: Oak North is a UK fintech company that uses its next-generation credit platform to reshape lending to small and medium-sized enterprises around the world. With a £2.1 billion valuation in 2019, OakNorth was Europe's most valuable fintech. In the same year, it received a £327 million investment, the largest round of any fintech company in European history [12].

Onfido: Onfido uses AI technology to verify a user's true identity by comparing their photo ID to their facial biometrics. From almost 2,000 companies in Europe, Onfido was named first in the Fintech 50 in 2020 list.

It was recognised for its work in fraud prevention and remote identity verification at the 2021 Cyber Security Breakthrough Awards.

Starling Bank: Starling Bank is a digital challenger bank that offers personal, business, joint, euro, and US dollar current accounts, as well as a children's debit card. Starling Bank presently has over 2 million customer accounts and £5.4 billion in deposits, and is valued at £1.4 billion. For the fourth year in a row, it was crowned 'Best British Bank' in 2021.

Indian Scenario: The Fintech segment in India has seen an exponential rise in funding over the last few years, investments worth more than \$8 bn have already been witnessed across various stages of investment in 2021.

While Payments and Alternative Finance segments constituted more than 90 percent of the sector's investment flows in 2015, there has been a major shift towards a more equitable distribution of investment across sectors since to include InsurTechs, WealthTechs, etc. India has over 17 Fintechs which have gained 'Unicorn Status'.

In 2020 September, India saw phenomenal growth in digital payments, with a monthly volume of over 5.7 billion transactions totally \$2 trillion (Total Digital Payments). With 25.5 billion real-time online payments transactions in 2020, India will surpass the United States, the United Kingdom, and China combined.

The Fintech revolution in India is the result of years of work building the basis for key enablers through significant projects such as:

Jan Dhan Yojana: The world's largest financial inclusion initiative, "Jan Dhan Yojana," has aided in the enrolment of over 435 million beneficiaries in new bank accounts for direct benefits transfer and access to a variety of financial services applications such as remittances, credit, insurance, and pensions, allowing Fintech companies to develop technology products to reach India's large consumer base.

Financial Literacy: The RBI's Centre for Financial Literacy programme and the establishment of the National Centre for Financial Education are two recent initiatives aimed at boosting financial literacy in India. These steps are intended to encourage financial education for all sectors of the Indian people.

E-RUPI: e-RUPI is a person- and purpose-specific digital payment instrument that enables contactless and cashless payment solutions and is expected to play a key role in making Direct Benefits Transfer easier and more successful. The solution is being used for cashless vaccination payments for Covid-19.

India Stack is a set of APIs that enables governments, corporations, entrepreneurs, and developers to use a unique digital infrastructure to tackle India's hard problems in terms of delivering services without the need for physical presence, paper, or cash. The India Stack has been a major reason behind Fintech's rapid development. It is one of the most significant digital efforts in the world, with the goal of establishing a public digital infrastructure built on open APIs to encourage public and private digital activities, and it has been a catalyst role in India's digital growth.

9. Conclusion: Fintechs are rapidly emerging sector in the world and the Indian government and business enterprises engaged in the Indian economy have not paid enough attention in these areas. In this regard, based on the achievements of the United States, the United Kingdom, and other nations, either the Government of India or the private enterprises need to make a bold decision to climb up and take advantage of the Fintechs. The demographic dividend of India's population will aid the country's ascension to the top of this list.

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2. The Editor shall support initiatives designed to reduce academic misconduct. The Editor shall support initiatives to educate researchers about publication and peer review process.
3. The Editor shall provide clear advice to reviewers. The Editor shall require reviewers to disclose any potential competing interests before agreeing to review a submission.

4. The Editor shall encourage reviewers to comment on ethical questions and possible research misconduct raised by submissions.

Guidelines for Peer Reviewers

1. The Peer reviewer shall review manuscripts for which they have the subject expertise required to carry out a proper assessment.
2. Peer reviewers shall respect the confidentiality of peer review and shall not reveal any details of the manuscript under review and of its review.
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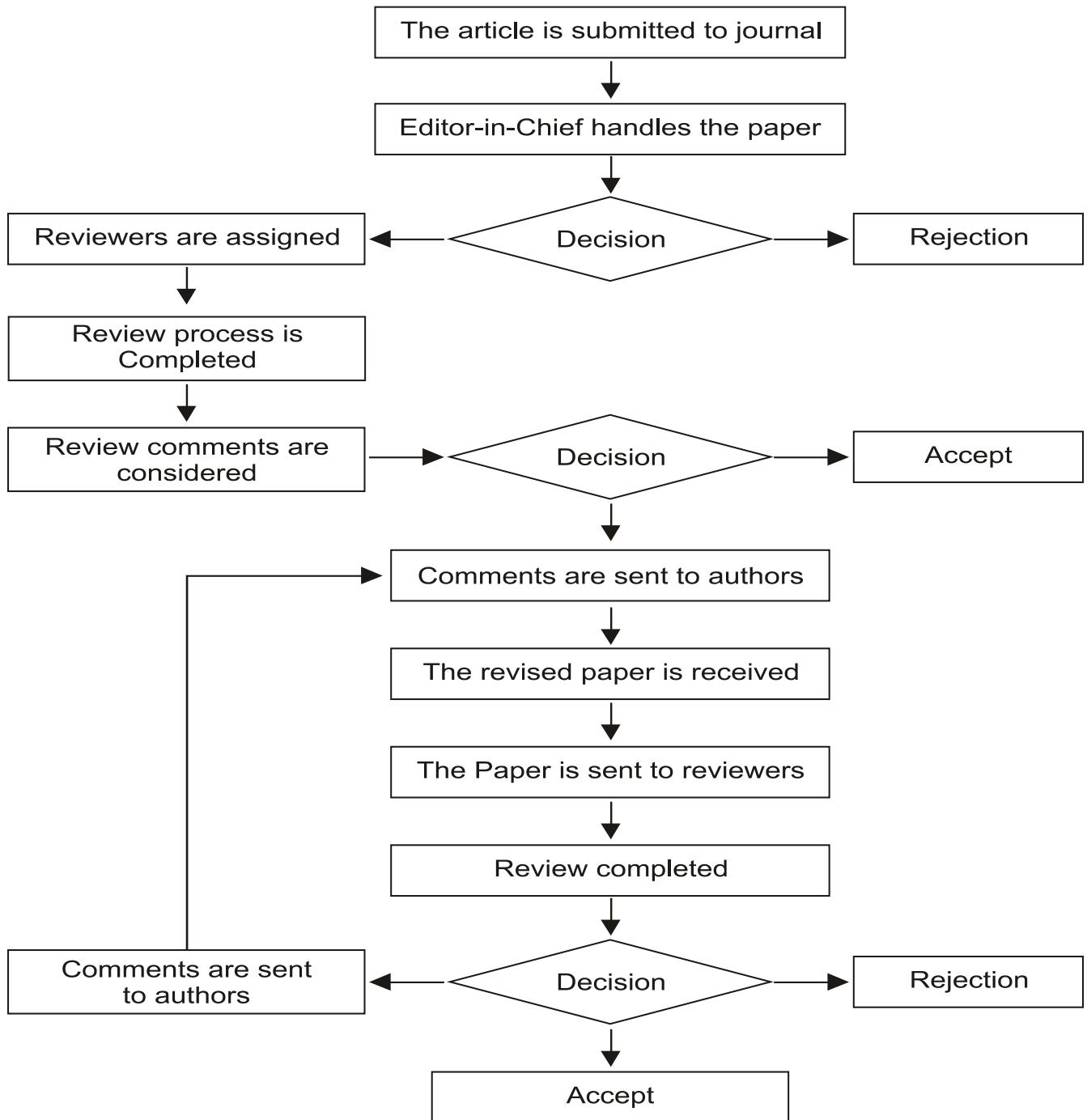
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Theme for the Next Issue:

**"Redefining Business Strategies:
New Age Business Models"**

AMBER JOURNAL'S PEER REVIEWING PROCESS - Flowchart

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CALL FOR PAPERS

The theme of the volume 13 Issue 2 of AMBER is "**Redefining Business Strategies: New Age Business Models**". We seek submissions from academicians, industry experts, entrepreneurs and research scholars. Submissions, if found eligible, will be put through two stage blind review process by external reviewers. All submissions must be sent to amber@abbs.edu.in

Redefining Business Strategies: New Age Business Models

The need to develop sustainable, flexible and profitable business models is more urgent today than ever before. Business model innovation gained a lot of attention and interest, especially in 2020, with the spread of corona virus pandemic, throwing many businesses out of gear. In the COVID world, digital transformation has emerged as a priority for many organizations, putting business models up for accelerated innovation. With customer preferences and demographics changing tremendously, companies are forced to move out of the comfort of traditional business models and push the envelope to offer something more valuable to the customer. Business organisations are looking to restructure their business models in order to stay relevant and show resilience. Of the diverse reasons for this update, one sticks out in ensuring that a real value delivered to end consumer. A successful Business model is one that offers resilience by adapting to changing market conditions and business needs. The agile business model is here to stay, especially in the hyper connected world.

Guidelines for Publication:

- * The paper should be based on original research work not yet published, not exceeding 8000 words. If the paper has been sent for publication elsewhere, that fact must be notified.
- * The paper must include the title, author's name, designation, mailing address, mobile number and e-mail address in the first page.

- * Abstract should not exceed more than 250 words. Along with the abstract, author(s) need to specify four to six key words in the second page.
- * Soft copy must be submitted in A4 size, MS-Word format only in Times New Roman with heading of 14 font size and remaining text size 12 with spacing 1.5 as a single line. There must be no tab for the first sentence of every paragraph.
- * Abstract and full paper should be sent as a word document only (Either as Doc. Or Docx.).
- * No publication fee would be charged.
- * Manuscripts would be checked for plagiarism.
- * The third page must contain the title followed by the body of the manuscript.
- * Manuscripts are reviewed through 2 stage blind peer review system by experts in the subject area. To ensure anonymity, the author's name and other details should only appear on the first page and should not be repeated anywhere else.
- * All references have to be arranged in alphabetic order and must be numbered.
- * The internet sources must be placed after other references and must be numbered separately.
- * The reference must be present in APA Format.
- * The Author is required to sign copyright form.

Quick Note:

Soft copy of the paper must be emailed to amber@abbs.edu.in

IMPORTANT DATES

Last Date of Submission of Full Paper:

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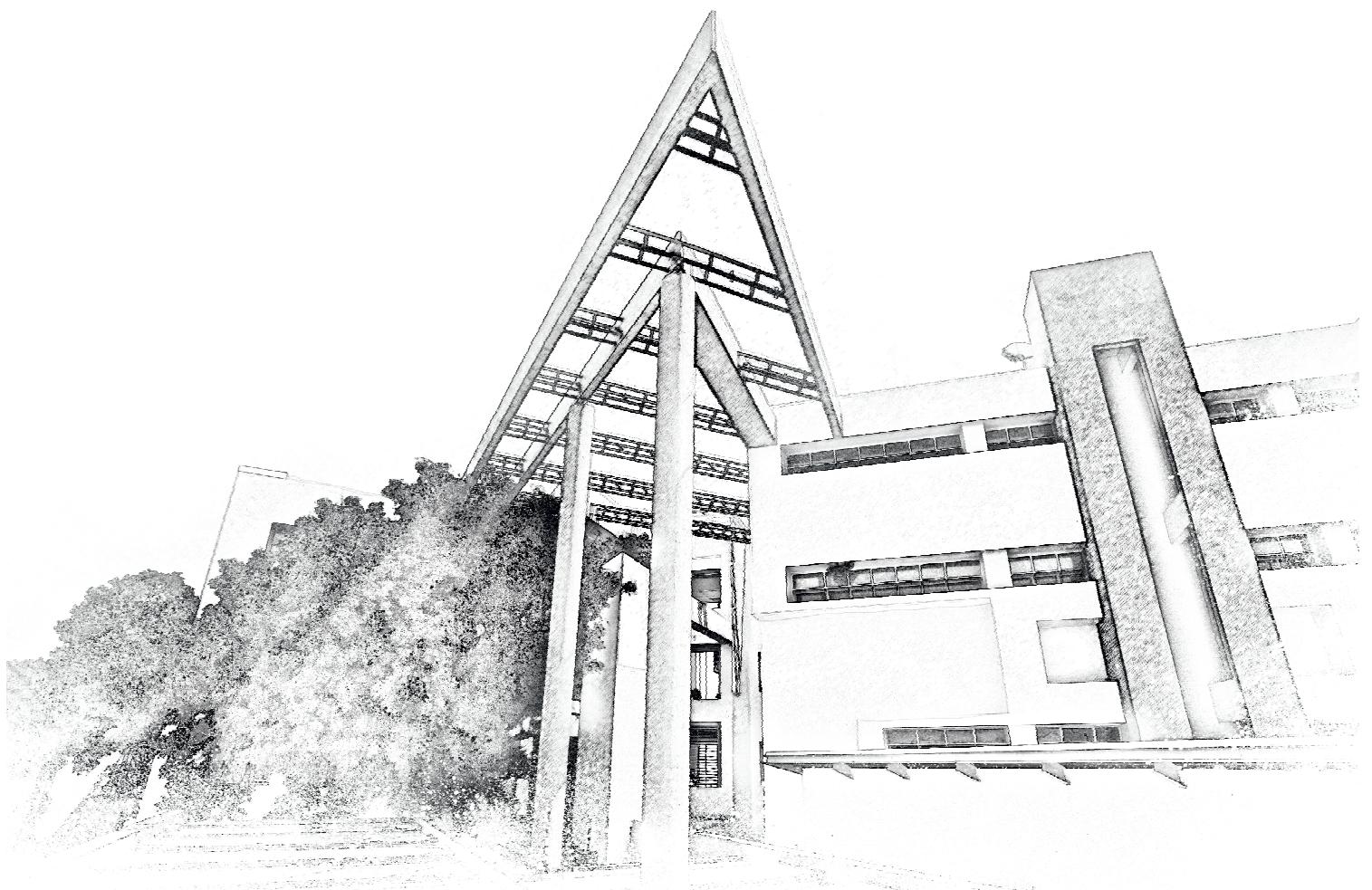
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