

To Study of Impact of Financial Technology on Banking Sector in India

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Abstract— *The rise of Financial Technology (FinTech) has transformed the worldwide financial services business, particularly the banking sector in India, one of the world's fastest-growing economies. This paper provides a thorough evaluation of FinTech's impact on Indian banking, including implications and consequences. FinTech refers to modern technology that improves existing financial techniques, making them more accessible to the public. Indian banks are aggressively collaborating with FinTech firms to modernize services, but they confront hurdles in keeping up with technology. FinTech improves financial processes, promotes digital finance, and boosts economic growth by expanding access to financial services. The study investigates how FinTech applications—such as blockchain, e-wallets, biometric sensors, smart chips, online transactions, artificial intelligence, and mobile banking—are changing the way that banks conduct business. The FinTech business is growing as traditional banks work with them, and this will have an impact on financial services in India and globally in the future.*

Indexed Terms- *Fintech, Banking sector, India, Financial services, payment and transaction, Blockchain, E-banking, Net banking*

I. INTRODUCTION

The introduction of Financial Technology, or FinTech, has heralded a new age in the worldwide financial services business. With India as one of the world's fastest-growing and most dynamic economies, FinTech's impact on the country's banking sector has been nothing short of revolutionary. This study aims to give a complete examination of FinTech's influence, implications, and ramifications for the Indian banking sector. Financial technology is the microscopic technology and innovation that directs traditional financial methods of providing financial services. The use of smartphones for mobile banking, investing, and cryptocurrencies are examples of technology that make financial services more accessible to the public.

Financial technology firms include both startups and established financial and technology companies that want to succeed or increase the use of financial services supplied by existing financial companies. According to Wikipedia, "fintech is a new financial industry that applies technology to improve financial activities." Fintech refers to new applications, processes, products, or business models in the financial services industry that are comprised of one or more complementary financial services and delivered as an end-to-end process over the Internet.

Fintech firms have grown fast in the last three years, and the industry is anticipated to expand further, with more than half a billion dollars flowing into them. Banks and financial institutions are also focusing on the fintech sector, forming partnerships with various fintech firms and actively participating in the ecosystem. Banks are working hard to provide easier, faster, more comfortable, and secure services while also conveying the modern technology age; however, they are facing several challenges, particularly with the development of financial technology companies, which has forced banks to keep up with technology. Financial technology, abbreviated as FinTech, is an invention designed to compete with traditional financial approaches in the provision of financial services.

II. LITERATURE REVIEW

Zavolokina et al.,(2016) and Puschmann (2017) characterize it as the fusion of technology and finance. Financial innovation is closely associated with Fintech, which involves the creation of novel products, services, processes, and companies in the financial sector, as observed by Frame and White.

Demirguc-Kunt et al. (2018) define Fintech as the use of cutting-edge technology to provide financial services in a more convenient, secure, and transparent manner than traditional banking institutions. Fintech encompasses a wide range of processes, including monetary transactions, payment loans, lending technology, blockchain technology, insurance, and asset management.

According to Ali Yakhlef's (2001) research, as technology increasingly takes over the transaction processing load, banks are focusing on enhancing their marketing approach and re-inventing their business model. Traditional bank branches, which had an infrastructure enabling transaction processing, were being changed into an open-space interface where bank specialists could interact intimately with their customers, providing specialised advising services with a greater emphasis on consumer banking.

Panjwani and Shili (2020), tested the influence of financial technology on the growth of the Islamic banking sector in the modern world. The sample taken for this study is the Islamic banking sector in the contemporary world for the period 2014 to 2018. The results showed that financial technology appears to play a key role in the empowerment of people who do not have access to financial services, resulting in immediate and sustained interest for people, the planet, and wealth. The financial sector's fast change has affected people all across the world. The rapid digitalization prompted a significant increase in the use of technology in the banking business, particularly in the Islamic banking sector. This study investigates how financial technology advances motivate financing efforts to improve the quality of Islamic banking sector services in today's world, as well as the new concept of digital Islamic banking.

Ntwiga (2020) investigated, the influence of FinTech on banks' collaboration by measuring the technical efficiency in the Kenyan banking sector. The sample taken for this study is five banks for the period from 2009-2018 in Kenyan. The results showed a positive relationship between financial technology and banks efficiency, as financial technology helped to increase technical efficiency on a large scale. The results showed that the period before the use of technology

was suffering from a lack of efficiency and high productivity.

Pu et al. (2021) illustrated the interaction between banks industry and FinTech in Lithuania by collecting annual reports from Lithuanian banks during 2003-2019 and analyzing the FinTech sector by SWOT & PESTEL analysis. Regression analysis results reveal that FinTech companies improve banks' efficiency especially in payment services and increase customer satisfaction and FinTech affects economic growth by financial inclusion.

Wong and Ho (2020) looked into the influence of FinTech innovations on the Hong Kong banking industry. For this study 45 banks in Hong Kong were chosen as a sample for the period 2017-2019. The measurement of financial technology is the percentage of a bank's financial services and operations that have already integrated FinTech innovations, while the metrics of banks are cumulative changes in their cost-to-income ratio and return on assets.

Glomber (2017) claimed that FinTech adaptation should expand financing and lending opportunities, increase independent investment opportunities, improve settlement methods, and facilitate access to and provision of insurance services. It then makes it appropriate to conclude that the functions of FinTech include upgrading of services, processes and products, and risk management under different FinTech operation models in which the functions are applied individually in order achieve the most efficient and best results.

III. OBJECTIVE OF THE STUDY

- To study about the quality of services in Fintech
- To understand the attractive Fintech products
- To facilitate speed of services, convenience, and simplicity in Fintech services
- To understand whether fintech innovations have any impact on the stability of the financial system in India

IV. RESEARCH METHODOLOGY

Research Design:

Design of research. Create a proper questionnaire to obtain usable data. Research is the systematic collection and analysis of information (data) in order to gain a better knowledge of a topic with which we are concerned or interested. A research design is a framework or plan for a study that guides data collection and analysis. It is the pattern that is followed to complete the study. The primary goal of research cannot be met without a competent research design. It specifies the strategies and procedures for gathering the data required to carry out the research efficiently. It is the general operational pattern of the project that specifies what information needs to be collected and from what sources and by what methods.

Source Of Data:

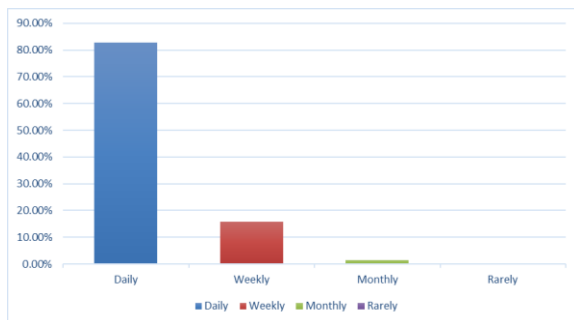
There are primarily two data collection sources. There are two types of data: primary data and secondary data. The questionnaire is used to obtain primary data. This study's data collection method is a questionnaire. Primary data will be collected via a questionnaire from customers and employees of the selected banking sector.

Data Collection Method:

Primary data collection method includes surveys or questionnaires, Interviews, observation, experiments, and focus groups. In this research focus is on questionnaires for data collection method. Questionnaire design is done on the basis of objectives and other important aspects.

V. DATA ANALYSIS AND INTERPRETATION

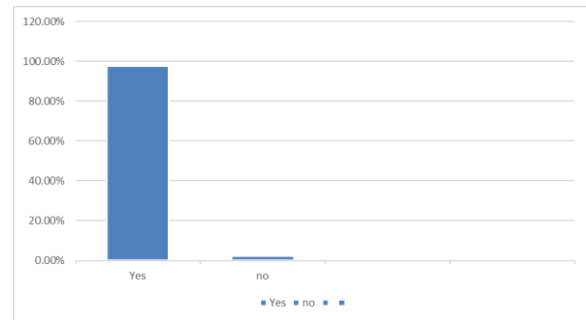
1. How frequently do you use banking services?



Data Interpretation

When looking at how frequently customers use banking services, it becomes clear that a sizable majority (82.9%) do so on a daily basis, which suggests a high degree of engagement and reliance. A lower percentage (15.7%) utilise financial services once a week, indicating regular but infrequent communication. The small percentage of respondents (1.4%) who reported monthly usage suggests that they use financial services only sometimes. Interestingly, a very small percentage denotes infrequent use. These findings emphasise how commonplace everyday banking contacts are and how essential banking services are to consumers' daily lives.

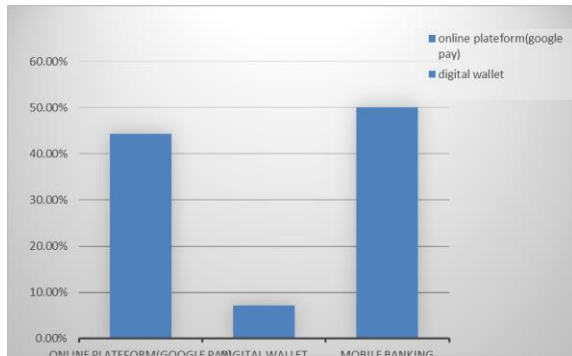
2. Have you ever used any FinTech services for banking transactions?



Data Interpretation

The findings show a high acceptance rate of FinTech services for banking transactions, with 97.6% of respondents confirming positive use. In contrast, only 2.4% of respondents said they have no experience with FinTech services in this context. This high rate of FinTech adoption highlights the growing popularity and acceptance of technology-driven solutions in the banking sector, indicating a significant shift in consumer behaviour towards new financial services.

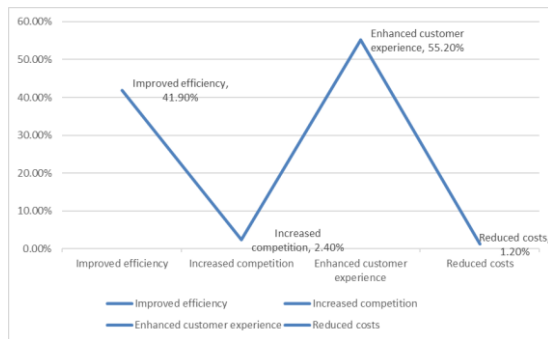
3. specify the type of FinTech services you have used (e.g., mobile banking apps, online payment platforms, digital wallets, etc.)



Data Interpretation

These findings highlight the wide range of FinTech services desired by users, demonstrating a diverse approach to harnessing technology for financial needs. The data show the various types of FinTech services used by respondents for banking transactions. Mobile banking appears as the most popular option, with 50% of respondents reporting its use. Online payment solutions, particularly Google Pay (GPay), trail closely behind, with 44.3% of respondents using this service. Digital wallets account for a smaller but significant share, with 7% of respondents using them for financial transactions.

4. how has FinTech influenced traditional banking services?

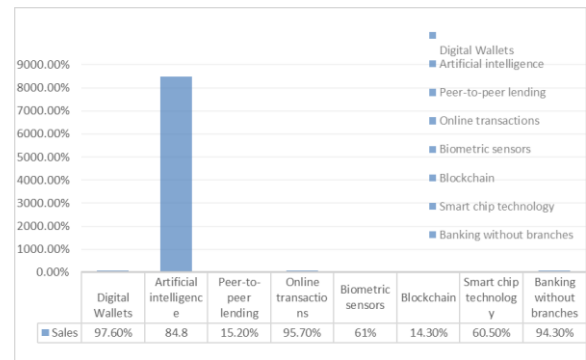


Data Interpretation

FinTech has improved efficiency, cut costs, and improved the client experience overall to drastically change traditional banking services. According to the report, 41.9% of respondents believe that FinTech integration has increased efficiency and decreased

operating expenses. Furthermore, 55.2% emphasise how FinTech solutions have improved the client experience, pointing to a move towards more approachable and user-friendly banking services. This indicates that even though just 2.4% of respondents said FinTech has boosted competition in the industry, its main effects have been on improving customer happiness and optimising processes inside established banking systems.

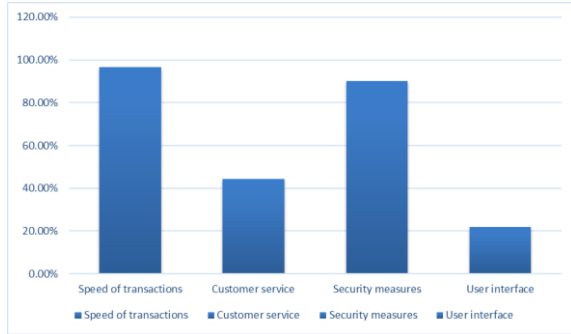
5. Which Fintech products do you find most attractive?



Data Interpretation

According to the data, respondents strongly preferred specific FinTech products over others. Digital wallets and online transactions were voted as the most appealing options, with 95.7% and 97.6% of the total votes. This suggests a notable preference for digital payment options due to their convenience. With 84.8% of respondents considering artificial intelligence appealing, it is clear that people are becoming more interested in AI-driven financial services like risk assessments and personalized suggestions. Biometric sensors and smart chip technologies are particularly popular, suggesting a preference for increased security measures in financial transactions, with 61% and 60.5% of respondents, respectively. While peer-to-peer lending, blockchain, and branchless banking all scored lower attractiveness scores, it is apparent that digitization and technological improvements are altering the financial services sector, with a focus on convenience, security, and innovation.

6. What factors contribute the most to your perception of the quality of Fintech services?

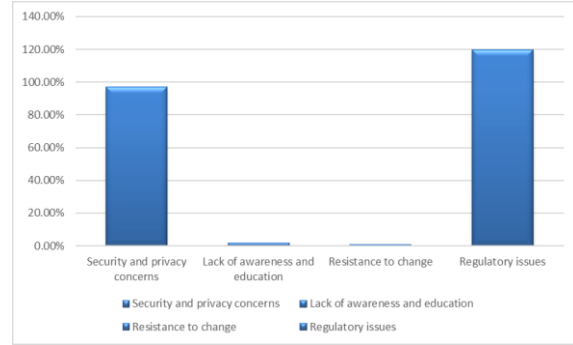


Data Interpretation

The information shows that respondents' perceptions of the type of FinTech services are highly influenced by some important elements. The fastest transactions stand out among these, as highlighted by a remarkable 96.7% of respondents who cited it as a critical factor. This emphasizes how important it is becoming to conduct financial transactions quickly and effectively in the digital age. In addition, security measures are deemed crucial by 90% of participants, suggesting a general apprehension regarding the safeguarding and preservation of monetary resources and information.

However, while 44.3% of respondents identify customer service as a contributing element, it trails speed and security, implying that, while vital, it may not be as influential in shaping overall impressions of FinTech service quality. Interestingly, the user interface, while mentioned by just 21.9% of respondents, is still a component to consider, showing that a visually appealing and intuitive interface may improve the overall user experience but may not be as important as transaction speed and security measures.

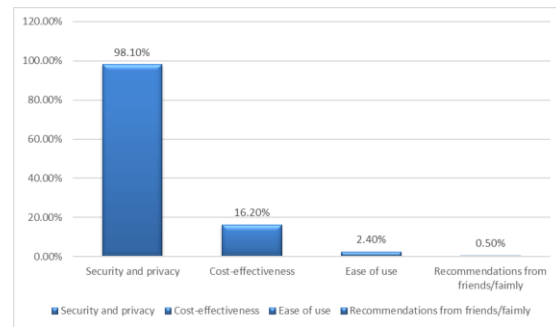
7. What challenges or concerns do you associate with the integration of Fintech in the banking sector?



Data Interpretation

The survey reveals considerable problems and concerns connected with FinTech integration in the banking industry, with security and privacy concerns topping the list, highlighted by 97.1% of respondents. This demonstrates a widespread concern about the security of sensitive financial information and the possible vulnerabilities created by technological improvements. Furthermore, while a tiny minority of respondents (1.9%) identify lack of knowledge and education and resistance to change as problems, these factors remain significant impediments to successful integration. This suggests that, in addition to addressing security and privacy concerns, efforts should be put towards increasing understanding and acceptance of FinTech developments inside the banking industry in order to allow smoother adoption and reduce resistance to change.

8. What factors would influence your decision to adopt new FinTech services?

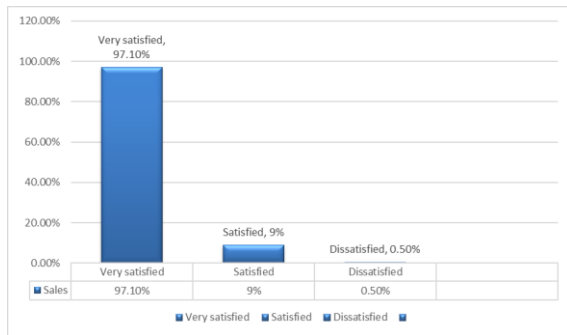


Data Interpretation

When evaluating the adoption of new FinTech services, various variables come into play, with security and privacy being the most important at 98.1%. This represents consumers' primary worry

about protecting their financial data and transactions. Cost-effectiveness follows at 16.2%, indicating that while consumers prioritize security, they are equally concerned about the economic ramifications of using such services. Ease of use, at 2.4%, shows that, while important, it ranks lower than security and cost-effectiveness. Recommendations from friends/family, at 0.5%, have a minimal impact on decision-making, presumably due to the highly personal nature of financial issues. Overall, this research highlights the vital relevance of security and privacy in the adoption of new FinTech services, with other aspects taking a back seat.

9. How satisfied are you with the Fintech services provided by your bank?



Data Interpretation

Data suggests that there are different levels of satisfaction with the FinTech services that banks offer, suggesting that the level of happiness is not monolithic. Although precise measurements are needed to draw a firm conclusion, it seems likely that satisfaction levels fall on a spectrum. A number of factors, such as the variety of services provided, accessibility, transaction clarity, security protocols, promptness of customer care, and overall user experience, may affect customer satisfaction. In the fast changing FinTech market, banks must fully comprehend and handle these elements if they hope to improve client happiness and retention.

VI. FINDINGS

Financial services and banks are implementing financial technology in response to consumer demand for a convenient and user-friendly banking experience, as well as rapid technological innovation.

Because fintech is constantly evolving, it comes to reason that they will diversify into new industries to better their performance, such as software for financial institutions and retail banking, among others.

OBJECTIVE 1. To Study About the Quality of Services in Fintech

37.3% of the respondents said that excellent towards the ease of use in technology

31.3% of the respondents said that average towards the transparency in rules.

40.3% of the respondents said that good for the speed of transactions

OBJECTIVE 2. To understand the attractive Fintech products

30% of the respondents said that strongly agree towards the block chain.

30% of the respondents said that agree towards the mobile payments.

60.5% of the respondents said that agree towards the smart chip technology.

94.3% of the respondents said that agree towards the banking without branches.

61% of the respondents said that agree towards the biometric sensors.

OBJECTIVE 3. To facilitate speed of services, convenience and simplicity in Fintech services.

38.7% of the respondents are satisfied towards the uses efficient technology.

44.7% of the respondents are satisfied towards the speed of connectivity of the app.

52% of the respondents are highly satisfied towards the transparency status.

46.7% of the respondents are satisfied towards the online customer support.

56% of the respondents are satisfied towards the gives useful and clear reports.

CONCLUSION

India is a country that is steadily climbing the Fintech ladder and offers many chances for Fintech companies to access the diverse market and succeed as long as they have a solid go-to-market strategy and a careful match between their solution and their customers. Payments and lending are the two main industries in India where Fintech is most prevalent. Approximately

40% of the over 600 Fintech businesses already operating in India are in the payments and loans space. Thus, these two Fintech divisions will receive particular emphasis in the following chapters. The growth of the Fintech industry has also helped India's economy as a whole. However, there are still certain issues with online security and the percentage of unbanked people that use it. So, the initiatives taken must not be faded away because of these little but not the least factors. So the regulators should formulate the effective policies to remove it as such the fintech sector can upgrade the banking system of India completely. As the technology grows rapidly with the parallel demands of customers for convenient and user-friendly banking experience has influenced financial services and banks to adopt financial technology. Fintech is constantly getting their way up so it can be said that they would also step on more areas to perform better such as with software for retail banking, financial institutions and many more.

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