



FinTech and Digital Finance: Foes or Friends after COVID-19 Pandemic?

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Abstract

Purpose- In the recent years, there is a high decline in the financial intermediation cost all thanks to the increased competition and technological advancement. The aim of this research is to find the awareness level and frequency of using FinTech during and after COVID-19. We also study FinTech in the terms of geographical profile of respondents.

Design/methodology/approach- The data used in this research are both Primary and Secondary. Primary data was gathered from 143 respondents through online structured questionnaire. The survey was conducted in the State Haryana.

The study is descriptive and exploratory in nature. Findings- The findings of the paper revealed that the frequency and the use of Digital financial services and FinTech increased after the pandemic. The needs of the people increase its demand. Further, the geographic profile of respondents has no influence on the use of FinTech but gender and annual income have significant influence on the frequency of using DFS on monthly basis.

Practical implications- Based on the findings, the awareness level and frequency of using FinTech has been revealed. Suggestions and Recommendations have also been passed on how FinTech helps in accelerating financial inclusion and how the use of FinTech can be increased in the rural areas.

Originality/value- The use of FinTech is increasing day by day, there is a need to analyse the use of FinTech amongst the section of population, especially those who are living in rural areas. This research also examines the role of FinTech in accelerating financial Inclusion. The motive of financial inclusion is also to provide financial services to each and every section of society including rural areas.

Index Terms- FinTech, Digital Financial Services, Digital payments, Financial Inclusion, COVID-19, Digital Finance

Paper type- Research paper.

Keywords: FinTech, Digital Financial Services, Digital payments, Financial Inclusion, COVID-19, Digital Finance

1. Introduction

The term FinTech comes from Financial Technology, which is a technical term. It is driven by different evolving frontier technologies. FinTech is used for the purpose of describing new technology that seeks to automate and enhance the use and delivery of financial services. FinTech is used to assist, customers, business owners and companies to accomplish their financial lives, processes and operations in a better way, by utilizing specialized algorithms and software that are used with the help of smartphones and computers (Gai *et al.*, 2018). Some of the examples of FinTech applications are payment apps, P2P lending apps, crypto apps, investment apps and many more. It is a chain of new technological applications, innovative services and products, new models of business that have a major influence on the supply of financial services and financial market (Vijai, 2019). The innovative technology gathers and attracts the attention of users because it has the following benefits: reduces the operating cost effectively, improves efficiency in the operations, disrupts the existing structure of industry, blurs the industrial boundaries, provide new and innovative ways of entrepreneurship and easy access of financial services. As there are lot of benefits of Fin Tech, it influences the traditional model of development of finance industry and it changed into FinTech. There is high promotion and growth in the Finance Industry after the development of FinTech (Damilola, 2022). After this, it is easier to gather and analyse the data related to financial market and also there is a reduction of asymmetry in the information. The strategies related to Trading and Investment based on Big Data and AI also redefines the mechanism of price discovery of the financial market and also enhance the stability and efficiency of financial market. It helps in improving the speed of transactions and also promotes liquidity in the financial market. The regulators of financial market help in warning, analysing and preventing associated systematic risk in a more effective and efficient manner. The smart financial technology saves the cost of labour and also decrease duplication of staff by combining artificial intelligence with Big Data (Anifa *et al.*, 2022). The application and development of FinTech especially helps the poor people in accessing financial services in convenient way at low cost and also shares results in a reform manner. Various countries are sharing the accomplishments of FinTech due to “Belt and Road” like the mobile payment of our country helps in financial and economic growth of countries along with “Belt and Road” (OGUAMA, 2020).

FinTech helps in proving financial processes and services in easier, faster and secure manner. The industry of FinTech covers everything from the solutions of processing of payment to mobile banking applications. This industry is expanding and continues to expand in the recent coming years (Rao *et al.*, 2022). The traditional banks are also now actively investing in, partnering and attaining with the start-ups of fintech. This will help in setting digital minded customers by the banking institutions and also accomplish the current needs and wants. The traditional banking now moves to the industry forward and stays relevant. FinTech reduces the bank visits of the customers and the awareness regarding the digital financial services are also increased after the pandemic (Giudici, 2018). Now, the users make digital payments more frequently. The recent growth also increases the concern of cybersecurity in this industry. The immense growth of the fintech marketplaces and companies on an international scale led to the exposure and growth of vulnerabilities in the infrastructure of FinTech while targeting it for the cyberattacks (Alaassar *et al.*, 2021). But fortunately, the continuous evolvement of technology minimizes the present risk of fraud and mitigation of continuously emerging threats. The main focus of many companies related to financial technology is on Mobile Banking. In this current era of personal finance, users demand the easy and convenient access of their bank accounts, especially on their smartphones. Now, most of the banks offer any type of mobile banking feature, as the use of digital financial services increased after the pandemic. The individuals who are not even aware of digital financial services also started using them after the emergence of pandemic. The advancement in the digital financial services, Fintech services and online banking significantly impacts the households of lower level of income and small businesses (Khurana, 2018). The ability of DFSs enhance the financial inclusion and this is the reason that economic growth is now potential boon. The use of online banking by government works as a means to guide vulnerable group. The central bank also encourages the users to adopt digital financial services and products. To enhance equitable and sustainable digital financial inclusion, banks, governments and regulators must take some steps to address the diverse capabilities and situation of the customers.

2. Literature Review

The opportunities and challenges in Fintech Industry was discussed by the researcher. The author explains the present financial technology in India and the evolution of Fintech Industry. Various terms related to Fintech industry such as Blockchain, Alternate Lending, Repo advisory, Digital Payment was also discussed in this paper. The result of the study shows that Fintech Industry in India growing very fast because Fintech service decreasing the cost of financial service. The Government should also Encourage the Fintech Industry (Vijai, 2019)). There is an emphasis on financial innovation in service industry. This paper talks about the new innovation used in financial industry. The author discusses how Fintech changes the traditional banking system. In this paper, author adopted the systematic literature review and analyse the current trend of Fintech. The author found that fintech industry in financial world growing very fast. Fintech helps in improving the financial service and reduces operational cost (Anifa *et al.*, 2022). The five technical aspects which covers security and privacy, Data technique, Hardware and infrastructure application and management service model was discussed in this paper. The author found that the data driven framework to facilitate and standardize future fintech researches and technical deployment. The author suggested a few research directions related of FinTech. The author organizes the paper in 5 sections, section 1 relates with the introduction, section 2 summarizes the challenges of security and privacy in Fintech, Section 3 reviews the main technique of data oriented solution, Section 4 represents major aspect of facility and equipment in Fintech, Section 5 gather recent achievement of Fintech, Section 6 illustrate the service diversity of Fintech and recent relevant research, Section 7 propose the framework of Fintech based on the literature review, section 8 conclude the research paper (Gai *et al.*, 2018). Crowdfunding model and the legal and regulatory treatment of each model was discussed in this paper. The author discusses the peer-to-peer crowdfunding, Donation based crowdfunding, Equity based crowdfunding and the Reward based crowdfunding. The author discusses the crowdfunding scheme that portends financial implication for the Nigeria economy and it would be a most encouraging things for the legislature to remove all. The author tells the various way of financing through various type of crowdfunding. The author also illustrates the legal and regulatory framework for each type of crowdfunding model (OGUAMA, 2020). The role of Fintech company in West Africa was conversed by the author. The company have potential growth but due to lack of capital they are not been able to achieve the growth. Fintech helps these organisations to raise money. The author concluded that there is a need of collaborative effort for the purpose of overcoming the challenges faced in the growth of FinTech. There is a need of uniform strategy that fit to all the sector. Government should also take part in order to promote Fintech so that economic growth can also be achieve (OGUAMA, 2020).

The examples of risk were discussed by the author such as underestimation of creditworthiness, market risk, fraud detection and cyber-attack. So, there is need of proper framework in fintech sector. For the regulation and supervision in the Fintech industry Regtech, and Suptech technology was also introduced. Suptech provide tools to regulatory authority and improve efficiency. Regtech is the use of information technology for enhancing the regulatory and compliance process. The main vision of this paper was to encourage the development and growth in financial technology. This goal can be achieved by management of risk and finance industry. The researcher discussed the major component that has significant impact on Fintech awareness among youth. In this paper, the author discusses different type of non-financial institution, financial institution and different type of Fintech company. This paper is based on secondary data and researcher used a descriptive research design. The author aims to identify the satisfaction level of Fintech user by considering various factor. Second objective was to identify the factors related to mobile payment use and to know the importance of internet. Third objective was to know the importance of internet as it enables for the emergence of technology (Rao *et al.*, 2022). Fintech is a new application, process, product, or business model in finance industry. In this paper, author discussed the evolution of fintech in

India. The author found that fintech sector also gave a boost to Indian economy. Since there are many challenges in Fintech industry like security issue and usage rate of unbanked population. So, fintech needs to formulate effective policies and remove hindrances from fintech sector. The two broad segments where fintech is most active in India are payments and lending start-up (Khurana, 2018). The author revealed the use of fintech under the category job and education. The finding of the study enables the future participant to reflect on the career development. In this paper, author use the public accessible online tools such as goggle trend to analysis the online searching trend on fintech job related information.

3. Design of the Study

3.1. Objectives of the Study

- To analyse the use of FinTech on the basis of geographic profile of respondents.
- To find the awareness level and frequency of using FinTech during and after COVID19.
- To explore the role of FinTech in accelerating Financial Inclusion.

3.2. Methodology of the Study

The nature of the present study is basically exploratory and descriptive. Exploratory research is used while understanding the role of FinTech in promoting financial inclusion with the help of available literatures and descriptive research practiced to analyse the use and awareness level regarding FinTech during and after COVID-19 with the help of collected responses through questionnaires.

3.3. Sources of Data

The research is based on both primary and secondary methods for the purpose of collection of data. But specifically primary data was used, that was gathered through questionnaire. The data was collected from the respondents who have bank accounts and are using Digital Financial services. Secondary data was used to check the role of FinTech in accelerating financial inclusion.

3.4. Sampling Technique

- The target population of this research is the people of all age group, gender, area, income level and occupation.
- Convenience and purposive sampling method was used for selecting the sample from the population.
- The sample size for this research is 143 respondents.
- The sample is collected from different districts of the State Haryana.
- Emphasis was made on the area of respondents while collecting the data as the aim of research is to check the impact of geographic profile of respondents (rural, urban and semi-urban) on the awareness and use of FinTech.

3.5. Tools for Data Collection

The present research is mostly based on primary data. The data was collected from total 143 respondents with the help of questionnaire through google form. The google form was sent through mail and some forms was also filled after meeting the respondents personally. The form was total circulated to 170 respondents and 148 respondents filled the form. But 143 forms are usable for the purpose of research. Secondary data was also collected through websites, research papers, research articles and thesis.

3.6. Tools for Analyzing the Data

The primary data was analysed with the help of MS-Excel and SPSS. Various tools and techniques were used for analysing and interpreting the data such as T-test, ANOVA, Chi-square test, Descriptive statistics, Cross tab and Percentage analysis.

3.7. Scope of the Study

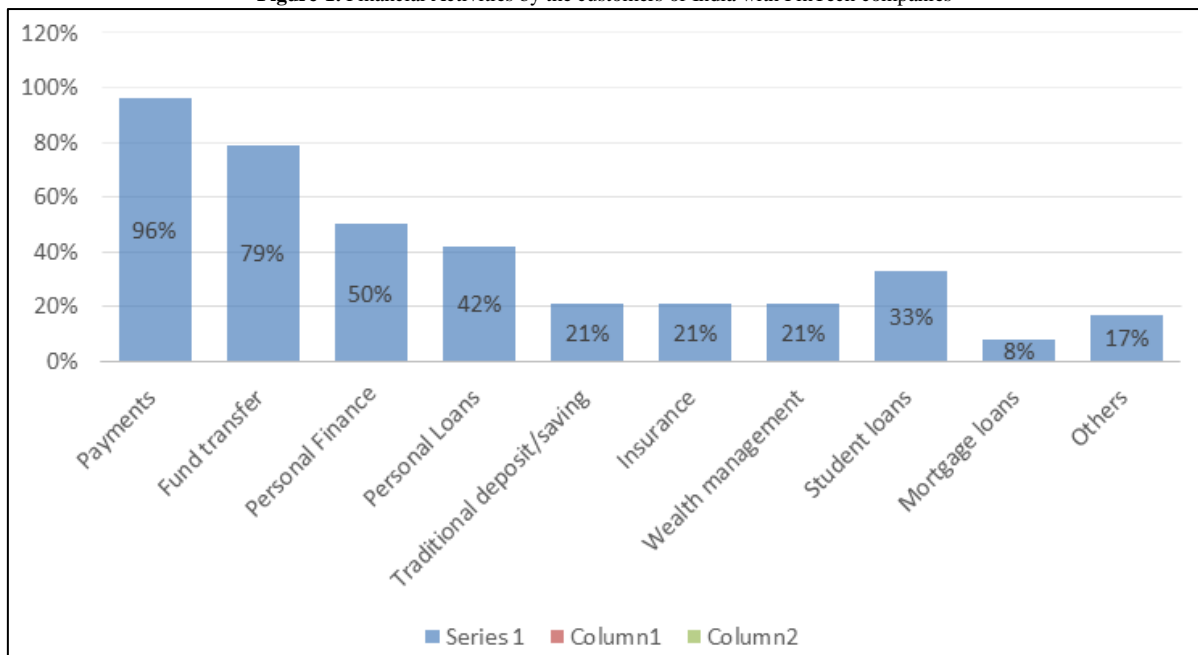
FinTech is a vast term, there are a lot of research opportunities in this field. In this paper, we analyse the use of FinTech on the basis of their geographic profile and also check the awareness level and frequency of using FinTech during and after the pandemic. The future research can cover the demographic profile and then analyse the frequency and awareness level. Due to the time limitation, primary data was collected from 140 people from Haryana Region. The future researcher can increase the sample size and collect data from other regions also. One another objective explores the role of FinTech in accelerating in financial inclusion. Here, the future researcher can cover the unbanked and banked section of the society either before 10 years or before and after the pandemic. So, that we get to know about the changes or developments after FinTech and also the acceleration of financial inclusion through FinTech.

4. Results and Discussion

FinTech helps a lot in reviving the global economy after COVID-19. Government and other regulatory authorities promote the use of technology during and after the pandemic. Financial inclusion not only assist in spurring the growth of economy but also promotes the innovation and industry (Beck, 2020). FinTech works for reshaping the financial services to attain Financial Inclusion. This will directly contribute to the inclusive growth of the country and contributes broad prosperity. FinTech also tries to reach and assist the people who was previously

not covered under the financial system and builds a score of credit so that they can also participate in the growth of economy. FinTech help those people who are not able to meet their financial obligations by providing lower rate of interest, tailored advice and consolidating debts. Hence, we can say that FinTech has the potential to further expand the access of financial services and achieve financial inclusion. For ensuring the access of financial services to each and every one, strategies must cover the section and segment that don't have bank account (Gabor and Brooks, 2017).

Figure-1. Financial Activities by the customers of India with FinTech companies



Source: PwC India FinTech Survey, 2021

The above chart represents the financial activities of customers in India with the FinTech companies. The above data represents the post pandemic situation. Here, the customers use FinTech mostly for the transfer of fund and payments according to the level of percentage. After that, the major purposes are personal loans and personal finance. The level of percentage with insurance, student loans, mortgage loans, traditional savings and deposits are low.

4.1. Respondents

Table-1. Demographic profile of the respondents

Particulars	No. of Respondents (Total respondents: 143)	Percentage
Age		
Below 18	14	10%
18-25	55	37.9%
26-35	38	27.1%
Above 35	36	25%
Gender		
Male	83	57.9%
Female	60	42.1%
Education		
SSC	8	5%
HSC	7	4.3%
Graduation	31	22.1%
Post-Graduation	64	45%
Ph.D.	33	23.6%
Occupation		
Student	62	44.3%
Working professional	52	37.1%
Business	10	6.4%
Homemaker	6	3.6%
Other	13	8.6%
Annual Income		
Less than 2,00,000	65	45.7%

2,00,000-4,00,000	26	17.9%
4,00,000-6,00,000	16	11.4%
6,00,000-8,00,000	13	8.6%
More than 8,00,000	23	16.4%
Area		
Rural	44	30.6%
Urban	68	48.25%
Semi-Urban	31	21.15%

The demographic profile of the respondents was showed in the Table 1. The present study is based on total 143 respondents from different gender, age group, income level, occupation and area. According to the results, 14 (10%) of the sample are below 18 years of age, 55 (37.9%) of the respondents are between 18-25. The above table clearly stated that high no of respondents is between 18-25. The study group covers 57.9% male and 42.1% females. The education background of the respondents shows that a high number of samples are post-graduate and the less no of sample are HSC. The high percentage of respondents are either students or working professionals. Most of the respondents have the income of less than 2,00,000. The respondents belong to rural, urban and semi-urban area.

4.2. Objective 1

Table-2. Count

		Use of FinTech		Total
		Yes	No	
Area	Rural	41	2	43
	Urban	64	5	69
	Semi-urban	31	0	31
Total		136	7	143

The above crosstab represents the geographical area of the respondents and the use of FinTech. In total, 43 respondents belong to rural area from which 41 area using FinTech and 2 are not using. 69 respondents belong to urban area from which 64 are using FinTech and 5 are not using. The least no of respondents are belong to semi-urban area and all 31 are using FinTech. The above table clearly represents that either the respondents are from urban, rural and semi-urban area, they all are using FinTech or Digital Financial services.

Table-3. Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.353 ^a	2	.308
Likelihood Ratio	3.735	2	.155
Linear-by-Linear Association	.545	1	.460
N of Valid Cases	142		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.48.

The p value is .460 that is more in comparison with .05. So, we can say that the null hypothesis is accepted and the alternate hypothesis is rejected. There is insignificant and no significant association between the use of FinTech and the geographical area of the respondents. These values clearly represent that either the respondents are from rural area, urban area or semi-urban area, they are using FinTech and DFS. Now, we can say that the people of rural area are also using digital techniques and Digital Financial Services.

4.3. Objective 2

H₀a: There is no significant difference between the frequency of using Fintech on monthly basis and the socio-economic profile of respondents.

H₁a: There is a significant difference between the frequency of using Fintech on monthly basis and the socio-economic profile of respondents.

Table-4. Age

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.003	3	1.668	1.845	.142
Within Groups	124.771	138	.904		
Total	129.775	141			

ANOVA test has been applied, as age has more than two categories. The p value for the variable age is more than .05. According to Table 4, the p value is .142 which is more than .05. Here, the null hypothesis is accepted and the alternate hypothesis is rejected. So, we represent that the factor age has no impact on the frequency of using

FinTech on monthly basis and there is no significant difference between the frequency of using FinTech and the age of respondents.

Table-5. Education

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.694	3	.898	.872	.457
Within Groups	142.094	138	1.030		
Total	144.789	141			

ANOVA test has been applied, as education has more than two categories. The p value for the variable age is more than .05. According to Table 5, the p value is .457 which is more than .05. Here, the null hypothesis is accepted and the alternate hypothesis is rejected. So, we represent that the factor education has no impact on the frequency of using FinTech on monthly basis and there is no significant difference between the frequency of using FinTech and the education level of respondents.

Table-6. Occupation

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.844	3	.281	.195	.899
Within Groups	198.705	138	1.440		
Total	199.549	141			

ANOVA test has been applied, as occupation has more than two categories. The p value for the variable age is more than .05. According to Table 6, the p value is .899 which is more than .05. Here, the null hypothesis is accepted and the alternate hypothesis is rejected. So, we represent that the factor occupation has no impact on the frequency of using FinTech on monthly basis and there is no significant difference between the frequency of using FinTech and the occupation of respondents.

Table-7. Annual Income

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.145	3	5.715	2.581	.05
Within Groups	305.594	138	2.214		
Total	322.739	141			

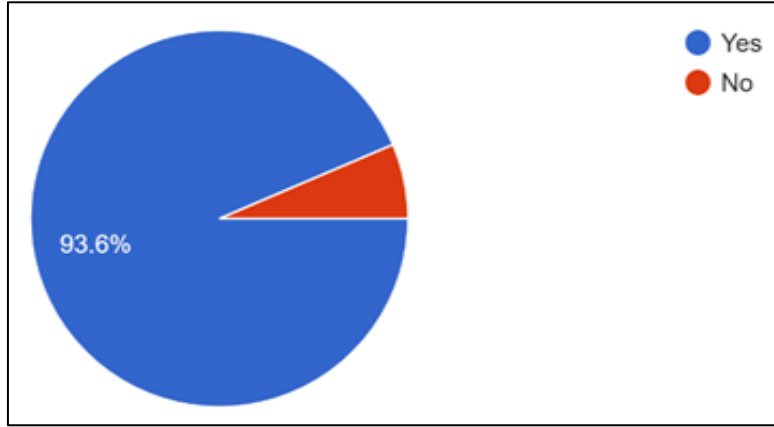
ANOVA test has been applied, as Annual Income of respondents has more than two categories. The p value for the variable age is equal to .05. According to Table 7, the p value is .05 which is equal to .05. Here, the null hypothesis is rejected and the alternate hypothesis is accepted. So, we represent that the factor annual income has an impact on the frequency of using FinTech on monthly basis and there is a significant difference between the frequency of using FinTech and the annual income of respondents.

Table-8. Gender

	Mean	F value	Sig.	Null Hypothesis Reject/Accept
Gender				Reject
Male	1.60	1.598	.448	
Female	1.52			

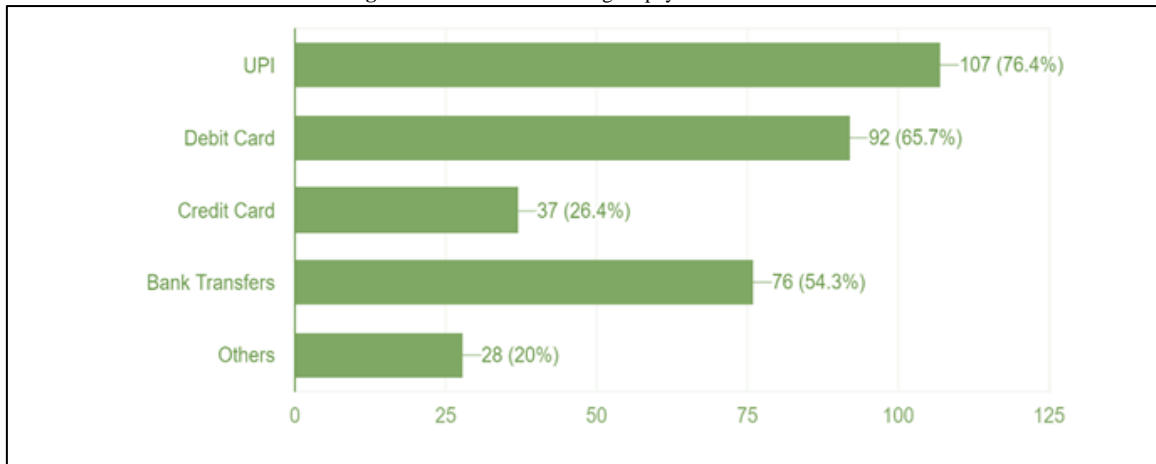
T- test has been applied, as the gender of respondents has two categories. The p value for the variable gender is less than .05. According to Table 8, the p value is .448 which is less than .05. Here, the null hypothesis is rejected and the alternate hypothesis is accepted. So, we represent that the factor gender has an impact on the frequency of using FinTech on monthly basis and there is a significant difference between the frequency of using FinTech and the occupation of respondents.

Figure-2. Awareness regarding FinTech increased during/after the pandemic



The above pie-chart represents the level of awareness of respondents regarding FinTech during and after the pandemic. The figures shows that 93.6% of the respondents agree with the statement that their awareness and knowledge regarding Digital payments and FinTech increased during and after the pandemic whereas, 6.4% of the respondents disagree with the statement.

Figure-3. Use of Different Digital payment mechanism



The figure represents the use of Different Digital payment mechanism. Data reveals that 107 respondents prefer UPI while paying money online, 92 respondents also prefer Debit cards while doing digital payments, 37 respondents are using Credit cards, 76 respondents directly transfers the money in the bank account and 28 respondents are using other method of payments. This represents that the most used method of digital payment is UPI. UPI also comes under FinTech and the use of FinTech is increasing as the most preferred payment mechanism is Unified Payment Interface.

Figure-4. The frequency of using Digital Financial services on monthly basis

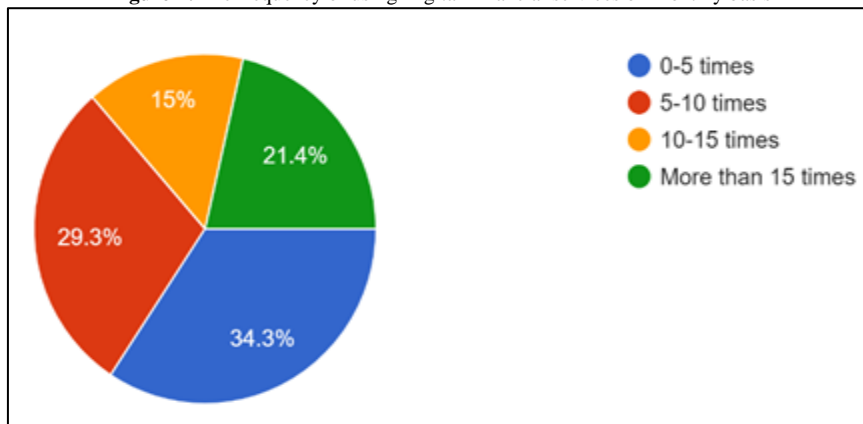


Figure 3 represents the use of Digital Financial services on monthly basis. 34.3% of the respondents feel that they use DFS 0-5 times in a month, 29.3% of the respondents feel that they use DFS 5-10 times in a month. There is not so much gap in the percentages of using DFS in a month, because 21.4% of the respondents use DFS more than 15 times in a month. This shows the increasing use of Digital Financial Services.

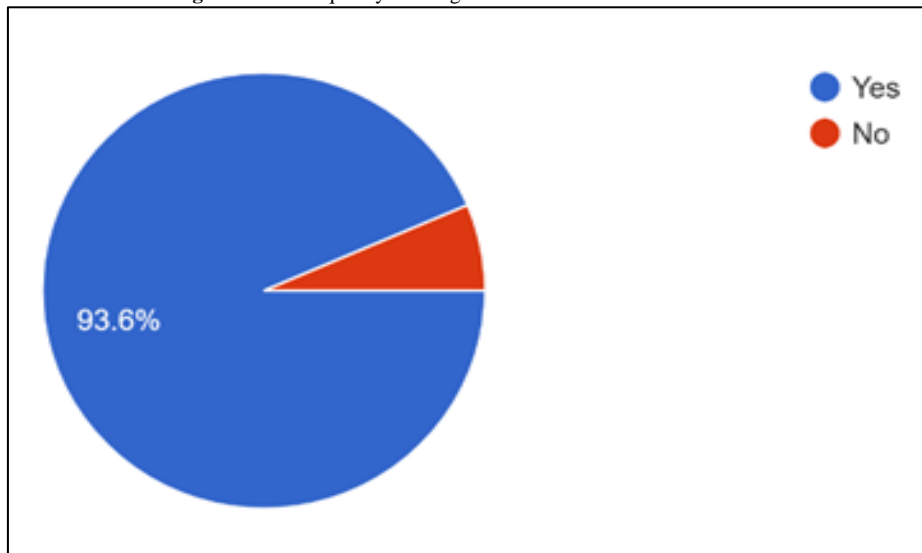
Figure-5. The frequency of using FinTech increased after COVID-19

Figure 4 shows that whether the frequency of using FinTech increased after the pandemic or not. 93.6% of the respondents agree with the statement that their frequency increased after the pandemic and 6.4% of the respondents disagree with the statement. Majority shows that the need of FinTech increased during and after the pandemic. No options are left with the public, as cash payments was not accepted by the sellers and vendors. That's why the use of FinTech increased after COVID-19.

5. Conclusion

Financial technology is not a new term for the researchers, but still “FinTech” is somehow relatively innovative and exciting term. Not all Financial technology impacts in the same way and in the equal manner after COVID: 19. The hardest hit after the pandemic is the payment sector. As pandemic focuses on the cashless transactions and provide digital solutions of banking. In this paper, we discussed the use of FinTech on the basis of geographic area of the respondents. The data found that there is no impact of geographic profile on the use of FinTech. The respondents of every and each region are now using Digital financial services. Further, the awareness level and frequency of using FinTech and DFS increased after the pandemic. The needs and demands of public change after the pandemic. Now, people prefer to do payments online and their frequency of using FinTech on monthly basis also increased after COVID: 19. As in this paper, we collect data from all the types of respondents on the basis of their geographic and demographic profile. The paper found that there is no impact of geographic profile on the use of Digital financial services. But the factor gender and annual income from the demographic profile have significant impact on the frequency of using FinTech on monthly basis. FinTech also helps in boosting financial inclusion as it covers the unbanked section of society. FinTech works for reshaping the financial services to attain Financial Inclusion. FinTech also tries to reach and assist the people who was previously not covered under the financial system and builds a score of credit so that they can also participate in the growth of economy. To enhance equitable and sustainable digital financial inclusion, banks, governments and regulators also taking steps to address the diverse capabilities and situation of the customers.

Recommendations

The policymaker should make decisions and efforts to attract the customers for being digital rather than traditional contact-based methods of payments. While checking the level of awareness and the use regarding FinTech, there is need to cover the entire section and segment by the researchers like rural, urban and semi-urban. FinTech companies should be collaborated with banks and leverage BC Networks with FinTech to safeguard delivery. For the promotion of equitable and sustainable digital financial inclusion, banks, regulatory authorities and government should take steps for addressing the diverse capabilities and situations of customers. This will further develop customized and tailored digital financial services and products, and require proper regulatory protection.

References

- Alaassar, A., Mention, A. L. and Aas, T. H. (2021). Facilitating innovation in fintech :a review and research agenda. Available: <http://doi/10.1007/s11846-022-00531-x>
- Anifa, M., Ramakrishnan, S., Joghee, S., Joghee, S. and Bishno, M. M. (2022). Fintech Innovations in the financial service industry. 19.
- Damilola, A. O. (2022). Fintech and financial inclusionin west Africa: Nigeria’s SMEsMarket. *IJM CER*, 4(1): 210-18.
- Gabor, D. and Brooks, S. (2017). The digital revolution in financial inclusion: international development in the fintech era. *New Political Economy*, 22(4): 423-36.
- Gai, K., Qiu, M. and Sun, X. (2018). *A survey on FinTech*. Elsevier. 12.

- Giudici, P. (2018). Fintech risk management : A research challenge for artificial intelligence in finance.
- Khurana, N. (2018). study of impact of financial technology on banking sector in india. 6(8):
- OGUAMA, L. (2020). Fintech credit market - crowdfunding:. 13.
- Rao, D. M., Popat, P. and Popat, R. (2022). A Research study on perception of fintech during covid-19 pandemic.
International Journal of Research Publication and Review:
- Vijai, D. C. (2019). Fintech in india-opportunity and challanges. *Double Blind Refereed and Reviewed International Journal.*