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Study of Fintech Revolution: A step towards Financial Inclusion in India.

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Abstract

FinTech, a mixture of Finance and Technology, is becoming an acceptable factor to advance the digital financial inclusion in India. DFI is defined as the cost saving mechanism to enable hard-to-reach unbanked or underserved population with some cost saving financial services digitally. The rate of FinTech literacy is enabling the people to use and understand the digital finances. There are different FinTech applications extensively used by people in their day-to-day life which has transformed and improved the entire financial sector by bringing out various innovative offering across payments & transfers, financing & banking and capital market & personal financial management, these includes Paytm, PhonePe, Gpay, and so on across different age groups and gender. With the rapid penetration of mobile and internet connection across India, the move towards digital financial inclusion is increasing at a great speed.

This study aims to compute the percentage of people using different Fintech applications, age group wise comparison on fintech literacy, gender wise comparison on fintech literacy and the impact of fintech literacy on digital financial inclusion. In order to collect the data, we have administered a structured questionnaire and following convenience sampling technique we have collected 110 responses which were further used for data analysis process. In order to obtain the results of the objectives stated above, we have used percentage calculation in MS-Excel and basic pie chart functions for first objective, ANOVA-single factor test and T-test hypothesis testing for the second and third objective respectively and for the last objective that is the impact of fintech literacy on digital financial inclusion we have run a regression model in MS-Excel.

According to the test performed it was found that Gpay was the most used Fintech application accounting 60.90%, followed by Paytm and PhonePe which accounts for 48.20% and 46.40% respectively. As per the second and third objective there is no significant difference in Fintech literacy across different age groups as well as different genders. For the last objective we have

found that Fintech literacy has a significant impact on Digital financial inclusion, as Fintech literacy increases it leads to higher level of digital financial inclusion. The government should arrange different schemes and programs in order to educate people of different age groups and across all genders on fintech services so that the people can take charge of their financial life and enjoy it to full extent.

Keywords: Fintech, India

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1. Introduction

Technology is becoming the driving force of the Indian Financial Sector. With the innovation in Financial Technologies, the finance industry has shown a huge growth over the past few years. The amalgamation of Finance and Technology is known as **'FINTECH'**.

The Financial Stability Board (FSB) defines Fintech as "technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial market and institutions and the provision of financial services". As per the latest report- **"India Fintech: A USD 100 billion opportunity"** by BCG and FICCI, India is strongly poised to realise a Fintech sector valuation of **USD 150-160 billion** by 2025, translating to an incremental value-creation potential of approximately USD 100 billion. Today, India is one of the largest Fintech markets with highest Fintech adoption rate of **87%** in the globe which is greater than the average adoption rate of 64% across the globe. As per **"MEDICI-India Fintech Report 2020", 2nd Edition**, India has about **2100+** Fintech start-ups of which 67% of them has been set over the last 5 years alone.

There are different types of Fintech firms which deals with different sections of financial sector like Payment, Lending, Insurance, Credit, Mobile bank, Direct bank transfer (DBT), Investment, Trading and so on. App like **Paytm, PhonePe, G-Pay** provides with different types of payments options, and it is becoming quite popular among rural areas. Some of these have taken different initiative to penetrate the rural areas and provide them with certain financial services digitally. These are driving a **Digital Financial Inclusion** revolution in the country to bring a change in the quality of life of unbanked communities. DFI involves the arrangement of cost saving digital means to reach currently financially excluded or underserved population with a range of formal digital financial services across different age groups and gender.

With the rapid penetration of mobile and internet connection across India, the move towards digital financial inclusion is increasing at a great speed. Government initiative towards **digitalization of financial system and cashless economy** has been helpful in shifting customer focus towards digital alternatives for financial transactions and services. **UPI, BHIM, KYC and**

Aadhar card are among the government initiative towards digital financial inclusion. RBI acts as a regulatory body to govern the working of different Fintech firms.

Given this background the present study aims to examine the following objectives:

- To compute percentage of people using different Fintech applications.
- To conduct an age group wise comparison on Fintech literacy.
- To conduct a gender wise comparison on Fintech literacy.
- To study the impact of Fintech literacy on Digital financial inclusion.

We have run different tests like, ANOVA, T-test and regression model, in order to examine our objectives. The remainder of the paper is structured as follows, section two includes the methodology section in which the data collection and data analysis procedure is briefly stated. Then comes the result section in which the objective wise results are stated. And finally comes the conclusion in which the overall closure of the study is framed.

2. Methodology

2.1 Measurement Instrument

The structured questionnaire consists of four sections. The first section includes demographic questions like gender, age, occupation and so on.

Followed by this, the second section consists of one multiple choice question related to Fintech application usage.

The third section consists of items for measuring Fintech literacy of people. This section consists of five questions like adoption of neo banks, awareness on online saving account, online loans and so on, which are specified on a 5-point Likert scale where 5 stands for extremely likely, extremely aware, and strongly agree and 1 stands for not likely at all, not at all aware and strongly disagree.

The last section consists of items for measuring Digital Financial Inclusion of people. It consists of five questions like online payment of bills, online investment and so on. These are again arranged on a 5-point Likert scale where 5 stands for always, extremely likely, and very interested and 1 stands for never, not at all likely and not at all interested.

2.2 Data Collection Procedure

A structured questionnaire was administered via online mode to the people residing in Bihar, Jharkhand, Maharashtra, Rajasthan, and West Bengal. The inclusion criteria are such that the individual must be 18 years and above and should be qualified at least up-to higher secondary level to provide their respective responses.

So, according to the thumb rule (Boateng et al, 2018) the minimum calculated sample size is 11*10 i.e., 110. Thus, we have circulated the questionnaire to 150 people, out of which only 110 responded and these 110 responses were used for further test and analysis.

2.3 Data Analysis Procedure

For examining the very first objective, percentage calculation and pie chart has been utilised. A pie chart is a circular statistical graphical interpretation, which is divided into slices or cut by radii to illustrate relative magnitudes or frequencies.

To analyse objective-2, **ANOVA**- single factor test is being executed via Excel. Analysis of variance (ANOVA) is a statistical technique that is used to check if the means of two or more groups are significantly different from each other.

For the study of the third objective, **t-test** is being performed with the help of Excel. A t-test is a statistical hypothesis test that is used to determine if there is a significant difference between the means of two groups.

And for the last objective, investigation is being put forward using **regression analysis** through Excel. Regression is a statistical method mainly used in finance, investing and other disciples for

the estimation of relationships between a dependent variable and one or more independent variables.

3.Results

The results indicate that approximately 49.10% of the respondents were males while 50.90% were females. Most of the participants belonged to the age group of 18-25 years (approximately 72.7%). Around 57.3% of respondents were graduates (Table-1). When probed regarding FinTech literacy, it was found that the individuals belonging to the age group of 18-25 years were mostly aware and used to the fintech application and G-pay was the most widely used application.

Table 1: Socio economic details of respondents

Gender	
Male	54
Female	56
Age	
18 to 25 years	80
26 to 35 years	14
36 to 45 years	10
46 to 55 years	5
56 and above years	1
Marital status	
Married	23
Unmarried	87
Educational qualification	
Higher secondary	20
Graduation	63
Post-graduation	27
Occupation	

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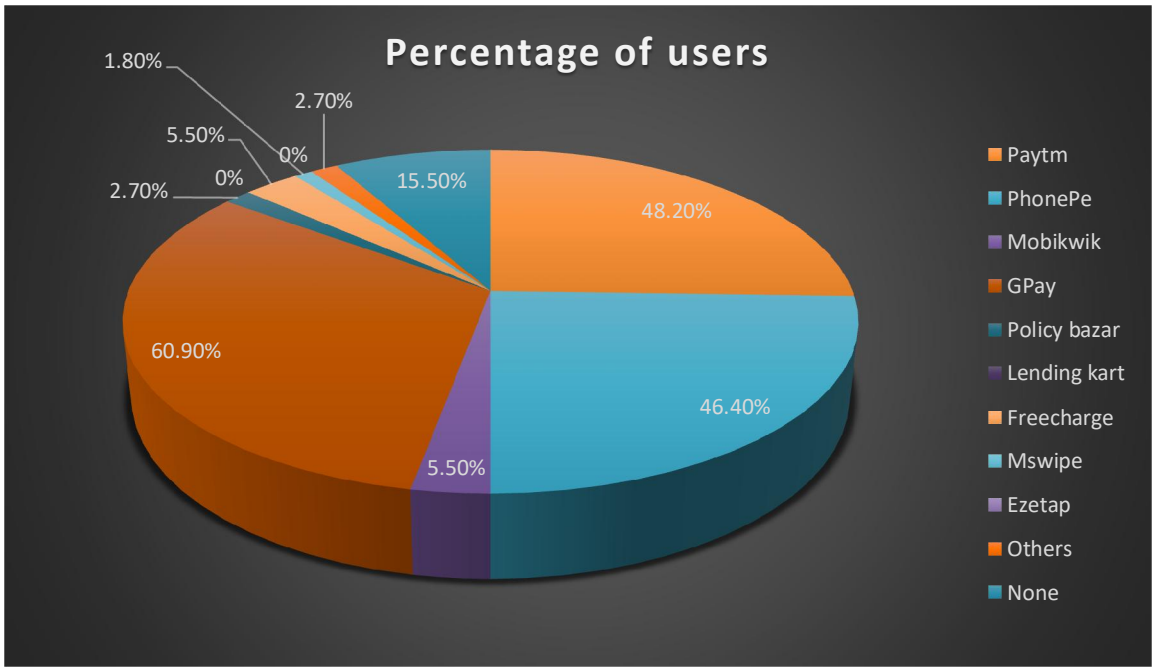
Student	67
Housemaker	7
Job	29
Business	7
Income(annually)	
Less than 3 lakhs	71
Between 3 lakhs to 6 lakhs	20
Above 6 lakhs	19

For the first objective, we have drawn a pie chart through basic Ms-excel function to compute percentage of people using different Fintech applications. According to the performed analysis it was observed that GPay has extensively been used by the end user accounting 60.90% of the entire range of FinTech applications followed by Paytm and PhonePe which accounts for 48.20% and 46.40% respectively.

Figure 1: Percentage of people using different fintech applications.



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Succeeding the first objective, the second one hold to conduct an age group wise comparison on FinTech literacy which has been accomplished through ANOVA test. Summation of the values the FinTech literacy obtained from the Likert scale was put to use.

Table 2: ANOVA test result for age wise comparison on Fintech literacy.

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Fintech literacy (18-25) yrs.	80	1380	17.25	23.63291139
Fintech literacy (26-35) yrs.	14	255	18.21429	15.87362637
Fintech literacy (36-45) yrs.	5	78	15.6	29.3
Fintech literacy (46-55) yrs.	10	172	17.2	29.28888889
Fintech literacy (56 & above) yrs.	1	11	11	

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	65.697403	4	16.42435	0.702708391	0.591815	2.45821
Within Groups	2454.1571	105	23.37293			
Total	2519.8545	109				

As per the above executed test, p-value is greater than 0.05, which means that the test is insignificant, and we accept the null hypothesis. It further indicates that there is no significant difference in fintech literacy across all age groups.

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Considering the third objective, we have put on t-test for gender wise comparison on FinTech literacy. Outcome of the test is shown below. Summation of the values the FinTech literacy obtained from the Likert scale was put to use.

Table 3: T-test result for gender wise comparison on Fintech literacy.

t-Test: Two-Sample Assuming Unequal Variances

	Fintech literacy of male	*Fintech literacy of female*
Mean	17.7962963	16.69642857
Variance	23.37281621	22.68798701
Observations	54	56
Hypothesized Mean Difference	0	
df	108	
t Stat	1.201504939	
P(T<=t) one-tail	0.11609178	
t Critical one-tail	1.659085144	
P(T<=t) two-tail	0.232183561	
t Critical two-tail	1.982173483	

The test manifests that the value of p is more than 0.05, which specify that the test is insignificant, and the null hypothesis is to be accepted. Adding to it, it is being inferred that there is no notable difference in FinTech literacy across gender.

Lastly, the fourth objective mounts regression analysis on the impact of Fintech literacy on digital financial inclusion.

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Table 4: Regression analysis result for the impact of fintech literacy on digital financial inclusion.

Summary Output

Regression Statistics	
Multiple R	0.47093347
R Square	0.22177833
Adjusted R Square	0.21457257
Standard Error	3.97581072
Observations	110

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	486.5090742	486.5091	30.77794	2.0794E-07
Residual	108	1707.163653	15.80707		
Total	109	2193.672727			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	10.57183658	1.416814375	7.461695	2.294E-11	7.763464878	13.38020	7.763464878	13.380208
Fintech literacy(x)	0.439397656	0.079202331	5.547787	2.079E-07	0.282404949	0.596390	0.282404949	0.5963904

Exhaustive scanning of the above test deduces that the p-value is less than 0.05, which essence that the regression is significant, followed by the rejection of null hypothesis. Therefore, the regression coefficient is not equal to zero. So, Fintech literacy has a remarkable impact on digital financial inclusion.

4.Conclusion

The amalgamation of technology with financial services is mushrooming day by day, providing many technologies based financial services across people of different community. Due to this a metamorphosis has been set up which has the potential to further advance digital financial inclusion. FinTech is empowering every individual consumer to take charge of their financial lives.

As per the probation, multiple tests were being manifested for attaining diligent effect of Fintech literacy on the users belonging to different age groups, gender, and annual incomes. The test performed demonstrates unequivocal objectives. Pie chart plotted for calculating the maximum usage of FinTech applications exhibits that 60.90% that is 67 out of 110 responses that has been collected uses GPay. ANOVA single factor test and t-test that has been executed that shows there is no significant difference in fintech literacy level across different age group and gender respectively. The regression model demonstrates that the financial literacy has a significant impact on digital financial inclusion.

The very relevant policy recommendation that can follow from all the three findings is such that as the fintech literacy increases, it leads to higher level of digital financial inclusion, which is desirable. The government wants this to increase, thus they should conduct a lot of fintech literacy programmes. It was also found that the fintech literacy level is same across different age groups and gender. Therefore, the fintech literacy programmes that government should organise need to be targeted to both the genders and across all age groups above the age of 18 years. These steps could bring a Fintech revolution which leads to digital financial inclusion in India.

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