A Study on Level of Digital Financial Inclusion among the urban youth of Gujarat.

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Abstract- The financial inclusion of youth is very important. Youths use and have access to money. Access to formal financial services can be the enabler for youth, contributing to their empowerment and increase wellbeing. Hence, this paper presents the preliminary finding on an investigation of the level of digital financial inclusion and barriers that affect digital financial inclusion among the urban youth of Gujarat. The outcomes of the study show that there are 71 respondents found a lower level of Digital Financial Inclusion and 74 found a high level of Digital Financial Inclusion using the discriminant score. It is found that low level of digital financial literacy, risk and trust, cost and technology, and unsatisfaction are barriers analyzed for Digital Financial Inclusion using principal component analysis.There is a significant relationship between demographic factors gender, age, education qualification, profession, and level of digital financial inclusion. While there is no significant relationship between demographic factors marital status and monthly income and level of digital financial inclusion.

Key Words: Digital Financial Inclusion, Formal Financial Services, Digital Banking, Barriers of Digital Financial Inclusion

I.   INTRODUCTION

Financial Inclusion leads to inclusive development of the country. It is a key objective of most of the country. Nevertheless,progress made to date in advancing financial inclusion, almost half of the world's young adults are financially excluded according to global findex report. Digital Financial Inclusion includes the distribution of cost-saving digital means to influence currently financially excluded and underserved populations with a range of formal financial services suited to their needs that are reliably distributed at a cost affordable to customers and sustainable for financial service providers. To reach billions of customers, banks offer digital financial services for financially excluded and underserved populations. Numbers of formally excluded and underserved customers are converted from cash-based transactions to formal financial services like payments, savings, fund transfers, credit availing, etc. using smartphones and other digital technology to access these financial services. This paper attempts to study the level of Digital Financial Inclusion of the young urban households of Gujarat and to identify various barriers for Digital Financial Inclusion among the urban youth of Gujarat.

II.   REVIEW OF LITERATURE

1. Byakod, Chaya, Kulgude, Sharma, Singh, and Mazumdar (2018) argue that the main problem in acceptance of digital payment in rural areas is the non-availability of training regarding usages of digital transaction. For research purpose primary data was collected from survey method using a questionnaire. To test the reliability of the questionnaire researcher applied Cronbach Alpha. For data analysis, various statistical methods and graphs were used. This study is focused on identifying variables that affect the adoption of digital payments, to study the level of awareness and adoption of digital payment in rural by characteristic on demographic profile and hurdles of adoption for digital payment and technological limitation association with digital payments.

2. Jham& Aggarwal (2018) noted that the Government of India takes various steps for Financial Inclusion, but till 100% financial inclusion is not achieved. There have been several barriers such as remote locations, religious and culture, community, and class diversification. Furthermore, is very difficult to reach grass root of the economy for the government. To overcome this barrier government has tried its best. Now a day in India mobile phone network and internet is easily available and cover the maximum population of the country. The availability of internet facilities and mobile phones in the remote area use

full for digital financial inclusion. According to RBI, mobile banking is the biggest change in banking. The number of mobile banking services increased 277.68% during the year 2010 to 2012.

3. Ozili (2018) argues that digital finance impact financial inclusion and financial stability. Researcher highlight that Forced financial inclusion, Data security, Voluntary financial exclusion problem, Difference in Income Level, Underestimation of Risk, Agency Problem, and Challenges of fintech as business models are hurdles for digital finance. This paper is based on secondary data collected from books, journals, and periodic. The researcher focused on the impact of digital finance on financial inclusion and financial stability and the benefit and risk of digital finance, digital financial inclusion, and financial inclusion.

4. Praveeenkumar P. (2019) noted that financial services are still not reaching to poor class of people. Digital financial services are innovative platforms for financial inclusion drive. Digital financial services are relying on mobile networks and internet services. Digital financial services also depend on the financial literacy of people. This study focuses the digital financial inclusion among tribal people. This study is focusing on financial inclusion, digital financial inclusion, and awareness of digital finance literacy among people. In this study primary as well as secondary data evaluated for digital financial inclusion. The researcher found that only 17.9% of respondents using e-valet and e-payment. 14.3% of respondents using the mobile application. It is suggested the digital financial inclusion is not reaching to bottom level of society. Many tribal people are digitally financially excluded even they are financially included. Illiteracy regarding digital financial products and services and fear of the use of it are the main reasons behind digital financial exclusion.

STATEMENT OF PROBLEM

Poverty, Inequality, and Migration are major global challenges now a day. Plenty of studies have confirmed that access to financial services has a measurable impact on Poverty and Inequality. These financial services facilitate an underprivileged group to make day-to-day financial transactions smoothly. Financial transactions may include sending or receiving money, saving, loan, insurances, pensions, etc. Several barriers affected inclusion growth. There are Lack of trust, High costs, lack of documentation, Insufficient funds, other accounts in the family, and Religious reasons. The government has launched many schemes so that underserve and financially excluded people can have access to financial services.

The researchers have done research work to know the level of digital financial inclusion of the young urban household of Gujarat. Researchers also attempt to know various barriers to Digital Financial Inclusion.

OBJECTIVES OF THE STUDY

1.   To explore and analyze the Digital Financial Inclusion level among the urban youth of Gujarat State.
2.   To study the relationship between various demographic factors and the level of Digital Financial Inclusion among the urban youth of Gujarat State.
3.   To analyze various barriersto Digital Financial Inclusion among the urban youth of Gujarat State.

HYPOTHESES OF THE STUDY

1.   H0: There is no significant association between gender and level of digital financial inclusion.
2.   H0: There is no significant association between age and level of digital financial inclusion.
3.   H0: There is no significant association between marital status and level of digital financial inclusion.
4.   H0: There is no significant association between the city of the living and the level of digital financial inclusion.
5.   H0: There is no significant association between education qualification and level of digital financial inclusion.
6.   H0: There is no significant association between profession and level of digital financial inclusion.
7.   H0: There is no significant association between monthly and level of digital financial inclusion.

Primary data was collected from 149 respondents from four selected cities of Gujarat State, i.e. Ahmedabad, Surat, Vadodara, and Surat. Non-probability sampling was used for data collection. Primary Data is collected from structured questionnaires via online survey tools called Google form in two languages, English and local language Gujarati. To get knowledge about the research area and develop a theoretical framework and develop research hypotheses, the data is collected from various secondary sources like books, magazines, journal papers, websites, reports, working papers, etc. Microsoft Excel was also used to find some descriptive analysis. SPSS 25 has been used to perform various tests like Chi-Square, Discriminant Analysis, and Factor Analysis. Cronbach Alpha is the measure to check the reliability of the instrument. The alpha value of more than 0.70 is acceptable according to some past studies done in the area. With the help of SPSS 25, a Reliability test has been performed on Likert Scale questions. For the attitudinal scale used in the questionnaire, the Cronbach Alpha value obtained was 0.843. Thus, the research instrument used was consider as reliable.

IV.   ANALYSIS AND INTERPRETATION OF DATA

Demographic Profile:

1. Gender of Respondents

Table 1: Frequency Analysis of Gender of Respondents.

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	84	56.4	56.4	56.4
	Female	65	43.6	43.6	100.0
	Total	149	100.0	100.0	

The gender of respondents was classified into two categories, i.e., Male and Female. Table 1 shows the result of frequency analysis of the Gender profile of the respondents which shows that out of 149 respondents the 56.4% (n = 84) respondents were male and 43.6% (n =6 5) respondents were Female.

2. Age of Respondents

Table 2: Frequency Analysis of Age of Respondents.

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Between 15 to 24 Years	43	28.9	28.9	28.9
	Between 25 to 30 Years	47	31.5	31.5	60.4
	Between 31 to 35 Years	59	39.6	39.6	100.0
	Total	149	100.0	100.0	

The age of respondents was classified into three categories, i.e., Between 15 to 24 Years, Between 25 to 30 Years, and Between 31 to 35 Years. Table 2 shows the result of the frequency analysis of Age profile of the respondents which shows that out of 149 respondents, respondents having age Between 15 to 24 years have percentage is 28.9% (n = 43), Between 25 to 30 years have percentage is 31.5% (n = 47) and Between 31 to 35 years have percentage is 39.6% (n=59).

3. City of Living of Respondents

Table 3: Frequency Analysis of City of Living of Respondents.

City					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ahmedabad	39	26.2	26.2	26.2
	Surat	30	20.1	20.1	46.3

		Frequency	Percent	Valid Percent	Cumulative Percent
	Vadodara	24	16.1	16.1	62.4
	Rajkot	56	37.6	37.6	100.0
	Total	149	100.0	100.0	

For data collection 4 Major cities of Gujarat state were selected these are Ahmedabad, Surat, Vadodara, and Rajkot. Table 3 shows the results of frequency analysis of City of Living of respondents. 26.2% (n = 39) respondents reside in Ahmedabad city, 20.1% (n = 30) respondents were from Surat city, 16.1% (n = 24) were from Vadodara and 37.6% (n = 56) from Rajkot city.

4. Marital Status of Respondents

Table 4: Frequency Analysis of Marital Status of Respondents.

Marital Status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unmarried	88	59.1	59.1	59.1
	Married	61	40.9	40.9	100.0
	Total	149	100.0	100.0	

The marital status of respondents was classified into two categories, i.e., Unmarried and Married. Table 4 shows the frequency analysis of the Marital Status of the respondents. Frequency analysis of the marital status of respondents shows that Unmarried respondents have a percent of 59.1% (n = 88) and Married respondents are 40.9% (n = 61).

5. Education Qualification of Respondents

Table 5: Frequency Analysis of Education Qualification of Respondents.

Education Qualification					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below SSC	18	12.1	12.1	12.1
	SSC	27	18.1	18.1	30.2
	HSC	15	10.1	10.1	40.3
	Graduate	29	19.5	19.5	59.7
	Post Graduate	60	40.3	40.3	100.0
	Total	149	100.0	100.0	

Education Qualification of respondents was classified into Below SSC, SSC, HSC, Graduate, and Post Graduate. Table 5shows the result of the frequency analysis of the Education Qualification of respondents. Which shows that out of 149 respondents the Below secondary school education (Below SSC) percentage is 12.1% (n = 18), respondents having secondary education (SSC) having percentage 18.1%, Higher secondary (HSC) having percentage is 10.1% (n = 15), respondents who are graduate their percentage is 19.5% (n = 29) and postgraduate percentage is 40.3% (n = 60).

6. Professions of Respondents

Table 6: Frequency Analysis of Professions of Respondents.

Professions					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Salaried	67	45.0	45.0	45.0
	Businessman	26	17.4	17.4	62.4
	Self Employed	33	22.1	22.1	84.6
	Daily Wager (Worker)	23	15.4	15.4	100.0
	Total	149	100.0	100.0	

The classification of the profession of respondents is done as Salaried, Businessman, Self Employed, and Daily Wager (Worker). As per table 6, the frequency analysis of professions of respondents shows that out

of a total of 149 respondents, 45% (n = 67) of respondents were Salaried, 17.4% (n = 26) of respondents were Businessman, 22.1% (n = 33) of respondents were Self Employed and 15.4% (23) were Daily Wager (Worker).

7. Professions of Respondents

Table 7: Frequency Analysis of Professions of Respondents.

Monthly Income					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Rs. 10000	33	22.1	22.1	22.1
	Rs. 10000 to 25000	42	28.2	28.2	50.3
	Rs. 25000 to 50000	34	22.8	22.8	73.2
	More than Rs. 50000	40	26.8	26.8	100.0
	Total	149	100.0	100.0	

The monthly income of respondents was categorized into Below Rs. 10000, Between Rs. 10000 to 25000, Between Rs. 25000 to 50000 and More than Rs. 50000. Frequency Analysis of respondents (n = 149) shows that the respondents having income below Rs. 10000 is having a percentage of 22.1% (n = 33), with respondents having an income range between Rs. 10000 to 25000 have the 28.2% (n = 42), respondents having income between Rs. 25000 to 50000 the percent is 22.8% (n = 34), respondents having income more than Rs. 50000 is 26.8% (n = 26.8).

Exploratory Factor Analysis of Barriers that affect Digital Financial Inclusion:

To know the Barriers which are the Digital Financial Inclusion of urban youth of Gujarat, the researcher has applied factor analysis. To check the adequacy of the sample size for conducting factor analysis of variables KMO test was applied.

The significant value of the KMO test is between 0.5 to 1 and the below table shows that the value is 0.815. So, the number of samples is adequate to conduct the factor analysis.

Bartlett's test of sphericity shows that whether the data collected by researchers is suitable to conduct factor analysis or not. The significance level of Bartlett's test of sphericity is 0.05 levels the value shown in the below table that the value of statistics is 0.000 which is less than 0.05. it shows that the collected data is suitable to conduct the factor analysis.

H0: Inter item correlation matrix is an identity matrix.

H1: Inter item correlation matrix is not an identity matrix.

The Chi-square value is 1184.154 which is significant and the p value is less than the significant value that is 0.05, the difference is significant so the inter-item correlation matrix is not an identity matrix.

Table 7: KMO and Bartlett's Test for Barriers that affect Digital Financial Inclusion.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.815
Bartlett's Test of Sphericity	Approx. Chi-Square	1184.154
	Df	105
	Sig.	.000

Table 7 shows the commonalities values of each variable it is the regression value of each variable in scale, which is shaped by all the other variables. The statistics value for this is 0.4 the value in the commonalities table is given is more than the statistical value of 0.40, which shows that all the variables can study further and considered for the factor analysis.

Table 8: Communalities for Barriers that affect Digital Financial Inclusion.

Communalities		
	Initial	Extraction
BDFI1	1.000	.758
BDFI2	1.000	.804
BDFI3	1.000	.524
BDFI4	1.000	.728
BDFI5	1.000	.670
BDFI6	1.000	.790
BDFI7	1.000	.630
BDFI8	1.000	.568
BDFI9	1.000	.715
BDFI10	1.000	.757
BDFI11	1.000	.793
BDFI12	1.000	.748
BDFI13	1.000	.531
BDFI14	1.000	.756
BDFI15	1.000	.810
Extraction Method: Principal Component Analysis.		

Table 9: Total Variance of Items referring Barriers that affect Digital Financial Inclusion.

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.519	36.793	36.793	5.519	36.793	36.793	3.140	20.935	20.935
2	2.704	18.027	54.820	2.704	18.027	54.820	3.038	20.252	41.187
3	1.307	8.716	63.536	1.307	8.716	63.536	2.683	17.886	59.073
4	1.051	7.008	70.545	1.051	7.008	70.545	1.721	11.472	70.545
5	.756	5.040	75.585						
6	.637	4.247	79.832						
7	.604	4.027	83.859						
8	.499	3.328	87.187						
9	.400	2.666	89.853						
10	.378	2.523	92.376						
11	.312	2.080	94.456						
12	.252	1.677	96.133						
13	.234	1.560	97.693						
14	.201	1.341	99.034						
15	.145	.966	100.000						
Extraction Method: Principal Component Analysis.									

The eigenvalue is standardized from the above table to decide the number of factors extracted from Factor Analysis. Idea Eigenvalue is 1. So those factors which had the Eigenvalue 1 or more than 1 had been considered for the study. Each factor shows the percentage of variance in descending order. Eigen for 1st Factor is 3.140, for 2nd Factor is 3.038, 3rd Factors is 2.683, and for 4th Factors is 1.721.

Table 10: Rotated Component Matrix of Items referring Barriers that affect Digital Financial Inclusion.

Rotated Component Matrix				
	Component			
	1	2	3	4
BDFI2	.878	.163		
BDFI1	.854	.167		

BDFI4	.802	.247		.135
BDFI9	.647	.327	.405	.159
BDFI5		.766	.284	
BDFI6	.329	.716	-.142	.386
BDFI10	.424	.700	-.257	.149
BDFI7	.277	.647	.342	.132
BDFI13	.229	.625	.139	.261
BDFI3	.263	.590		-.316
BDFI11			.873	.137
BDFI12			.851	.134
BDFI8	.204	.131	.676	.228
BDFI15		.166	.259	.844
BDFI14	.185	.125	.438	.718
Extraction Method: Principal Component Analysis.				
Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 6 iterations.				

The rotated component matrix shows variables grouped under one factor based on their regression weight and degree of correlation. For extraction, the Principal Component Analysis method has been used and for Rotation – Varimax with Kaiser Normalization had been used. The table helps to understand the variable grouped to formulate a factor. There is some variable falling on 2 factors in that case the variable having more weight is taken in the particular factor.

Table 11: Principal component analysis of Items referring to Barriers that affect Digital Financial Inclusion.

Name of Factor	Eigen Value	% Variance	Items	Item Loading
Digital Financial Literacy	3.140	20.935	2. Don't know how to use a computer or the internet.	0.878
			1. Lack of awareness/ knowledge about digital financial services.	0.854
			4. Not able to understand the financial terminology related to various digital financial products.	0.802
			9. Not able to understand terms and conditions related to digital financial services.	0.647
Risk & Trust	3.038	20.252	3. Connectivity issues involving while performing online banking transactions.	0.590
			5. I don't trust the internet as a channel for banking services as it is not safe.	0.766
			6. Digital financial service is riskier than traditional banking.	0.716
			7. Lack of privacy in online transactions.	0.647
			10. There are chances of fraud and forged transactions in digital banking services.	0.700
			13. I like meeting people and preferred face to face banking.	0.625
Cost & Technology	2.683	17.886	8. Technology use by the bank is too complex to understand.	0.676
			12. Hidden charges involve accessing digital financial services.	0.851
			11. Fees to access digital financial services are very high.	0.873
Unsatisfaction	1.721	11.472	14. I am not satisfied with online banking services.	0.718

			15. Customer care support for digital banking is not solve my problems in time.	0.844

Association of demographic factors with Level of Digital Financial Inclusion:

Apart from the question related to Digital Financial Inclusion, divided into three categories i.e., Access, Uptake, and Usage heading Indicators. The level of Digital Financial Inclusion is classified into two parts, High Level and Low Level. The level of Digital Financial Inclusion is determined by using Discriminate Analysis.

Table 12: Crosstab between the demographic variables with digital inclusion level.

	Level of Digital Financial Inclusion		Total
	Low	High	
Gender			
Male	38	46	84
Female	40	25	65
Total	*78*	*71*	*149*
Age			
Between 15 to 24 Year	29	14	43
Between 25 to 30 Year	24	23	47
Between 31 to 31 Year	25	34	59
Total	*78*	*71*	*149*
City of living			
Ahmedabad	24	15	39
Surat	26	4	30
Vadodara	16	8	24
Rajkot	12	44	56
Total	*78*	*71*	*149*
Marital Status			
Unmarried	44	44	88
Married	34	27	61
Total	*78*	*71*	*149*
Education Qualification			
Below SSC	16	2	18
SSC	26	1	27
HSC	12	3	15
Graduate	8	21	29
Post Graduate	16	44	60
Total	*78*	*71*	*149*
Profession			
Salaried	15	52	67
Businessman	22	4	26
Self Employed	21	12	33
Daily Wager (Worker)	20	3	23
Total	*78*	*71*	*149*

Monthly Income			
Below 10000	20	13	33
10000 to 25000	17	25	42
25000 to 50000	21	13	34
More than 50000	20	20	40
Total	*78*	*71*	*149*

Table 13: Pearson Chi-square Test

Demographic Variables	Pearson Chi-square Value	Df	Significance Value	Null Hypothesis is
Gender	3.903[a]	1	.048	Not Accepted
Age	6.312[a]	2	.043	Not Accepted
City of Living	38.920[a]	3	.000	Not Accepted
Marital Status	0.475[a]	1	.490	Accepted
Education Qualification	58.131[a]	4	.000	Not Accepted
Profession	47.691[a]	3	.000	Not Accepted
Monthly Income	4.572[a]	3	.206	Accepted

Chi-square test was applied to test the significant level between various demographic factors gender, age, city of the living, marital status, education qualification, profession, monthly income of respondents, and their digital financial inclusion level. The significant level of the test is 5%.

• The Person's chi-square value is 3.903 with a significance value of 0.048 at the degree of freedom 1. Therefore, the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, there is a significant association between the gender of respondents and their digital financial inclusion level.

• The Person's chi-square value is 6.312 with a significance value of 0.043 at the degree of freedom 2. Therefore, the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, there is a significant association between the age of respondents and their digital financial inclusion level.

• The Person's chi-square value is 38.920 with a significance value of 0.000 at the degree of freedom 3. Therefore, the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, there is a significant association between the city of living of respondents and their digital financial inclusion level.

• The Person's chi-square value is 0.475 with a significance value of 0.490 at the degree of freedom 1. Therefore, the null hypothesis is accepted and the alternative hypothesis is not accepted. That means, there is no significant association between the marital status of respondents and their digital financial inclusion level.

• The Person's chi-square value is 58.131 with a significance value of 0.000 at the degree of freedom 4. Therefore, the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, there is a significant association between the education qualification of respondents and their digital financial inclusion level.

• The Person's chi-square value is 47.691 with a significance value of 0.000 at the degree of freedom 3. Therefore, the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, there is a significant association between the profession of respondents and their digital financial inclusion level.

• The Person's chi-square value is 4.572 with a significance value of 0.206 at the degree of freedom 3. Therefore, the null hypothesis is accepted and the alternative hypothesis is not accepted. That means, there is a significant no association between the monthly income of respondents and their digital financial inclusion level.

V. CONCLUSION

From the study, it can be concluded that the level of Digital Financial Inclusion of urban youth in Gujarat state is moderate. The outcomes of the study show that there are 71 respondents found a lower level of Digital Financial Inclusion and 74 found a high level of Digital Financial Inclusion using the discriminant score. There is a significant relationship between demographic factors gender, age, education qualification, profession, and level of digital financial inclusion. While there is no significant relationship between demographic factors marital status and monthly income and level of digital financial inclusion. The exploratory factor analysis of various barriers are Digital Financial Literacy, Risk and Trust, Cost and Technology and Unsatisfaction are barriers analysed for digital financial inclusion using principal component analysis.

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