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A STUDY ON DIGITAL FINANCE AS A TOOL FOR FINANCIAL INCLUSION: WITH SPECIAL REFERENCE TO MYSORE TALUK

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ABSTRACT

Financial inclusion is emerging as one of the most important accelerators of poverty eradication, hunger eradication, gender equality, economic growth, and secondary sector assistance, among other things. The effectiveness of digital finance in attaining more financial inclusion in developing nations has prompted a move toward greater financial inclusion via digital finance. As a result, digital financial inclusion has gained traction in the wake of digital finance. As a result, it's crucial to figure out what characteristics encourage digital financial inclusion. This research aims to better understand people's attitudes regarding digital financial inclusion and to determine the elements that contribute to digital financial inclusion in Mysore taluk region.

Keywords: *Inclusion, Digital, Gender Equality, Economic Growth, Services.*

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Introduction

The Government of India formed a committee on financial inclusion which was headed by Dr. C. Rangarajan, the committee defined financial inclusion as ‘the mechanism of ensuring access to financial services and timely & adequate credit whenever needed by the vulnerable groups such as the weaker sections and low-income groups at an affordable cost’. In the words of Vittaldas Leeladhar ‘Financial inclusion is the delivery of banking services at an affordable cost to the vast sections of disadvantaged and low-income groups. Unrestrained access to public goods and services is the sine qua non of an open and efficient society. As banking services are like public good, availability of banking and payment services to the entire population without discrimination must be the prime objective of the public policy. There is no universally accepted definition of financial inclusion; some of the definitions of financial inclusions are given in table.

Financial inclusion is important as it is linked to different socio-economic factors. For instance, financial inclusion through cooperative banks has a direct and significant impact on poverty alleviation (Lal, 2018), financial inclusion not only helps in reducing poverty it also reduces the gap between the rich and poor by reducing the income inequality in the economy (Park & Mercado, 2015), it also helps in inclusive development of the economy besides 4 tackling poverty (Chibba, 2009).

Review of Literature

N K Maini (2010) concluded that financial inclusion in its narrow sense can be achieved by providing any of these services but to achieve "comprehensive financial inclusion" we have to provide a holistic set of financial services. The study suggested that for accelerating the process of financial inclusion, ICT should be used for delivering the financial services instead of the branch-based delivery mechanism, which will reduce the transaction cost.

Radhika Dixit and Munmun Ghosh (2013) stated that India is one of the fastest-growing economies in the world but its growth is uneven and discrete. The growth is uneven because there is no uniformity in its growth performance while it is discrete because of growth benefits to only certain sectors

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of the economy. Thus there is a need for inclusive growth in India. Prachi Jain (2013) found that private sector banks are performing much better than the private sector banks towards the attainment of financial inclusion. Though, the study suffers from a major limitation, as the author had only taken two private banks and two public sector banks in the analysis.

Paramjeet Kaur (2014) identified several challenges and concerns about financial inclusion, these challenges include the high working cost in providing financial services to the remote areas, high maintenance cost and small ticket size of the transaction. They suggested that the problem of high transaction costs and outreach can be dealt with by the use of IT-based solutions.

Laxmi Mehar (2014) concluded that financial inclusion in India had picked up the pace owing to the adoption of mobile banking. Still, it is far from adequate, covering only 2.5% of the total population. In India, mobile phones are found with poor people as well, but they are not aware of mobile banking. Thus, measures must be taken to create awareness about mobile banking

K. Sukumaran (2015) concluded that financial literacy should go hand-in-hand with improving access to financial products and services. Financial literacy aids the financial inclusion initiative by creating demand for various financial products and services through consumer awareness.

In India, the term cashless-economy gained importance after the announcement of demonetization in November 2016. Thereafter several studies were conducted studying the status of digital finance in India. According to Reddy & **Jayalaxmi (2017)**, people in urban areas got used to digital transactions post demonetization and **Lele & Jain (2017)** said that there is a reduction in the resistance towards digital payments post demonetization. According to **Mankar & Kishor (2017)** usage of internet banking was lower before demonetization which increased after the implementation of demonetization and **Vasantha & Meena (2018)** concluded that demonetization has a positive influence on the cashless transaction.

Objectives of the Study

õ To study and evaluate the measures taken by Government of India with regard to digital finance.

õ To explore the trend of various modes of digital finance.

õ To identify the awareness of people towards digital finance.

õ To recommend measures for promoting financial inclusion through digital finance

Methodology

The study is based on the primary and secondary data collected from the websites, published research papers, conference proceedings, journals, magazines, government publications, semi-government publications, reports of committees and commissions, and publications of Reserve bank of India, Economic Survey of India, to find out the Digital Finance as a Tool for Financial Inclusion, reference to Mysore taluk. Present study is on empirical investigation based on sample interview of bank account holders in Mysore taluk, of Mysore district. The present study is based on both primary and secondary data and a systematic random sampling method has been adopted for survey. The primary data has collected from bank account holder in study area. The survey has been conducted by taking 60 account holders of case study on random basis. Simple table percentage method used to analyse the results and the results have been depicted by simple bar graph and pie chart.

Data Analysis and Interpretation in Study Area

Table 1: Age Composition

Age group	Respondents	Percentage
18-28	16	26.66
29-39	15	25
40-60	12	20
Above 60	11	18.34
Total	**60**	**100**

Above table and below chart show that out of 60 respondents, 16 respondents (26.66 percent) belong to 18 – 28 age groups. 15 respondents (25 percent) are come under 29-39 age group, 12 respondents (20 percent) and 11 respondents (18.34 percent) belongs to above 60 age group respectively.

Chart 1: Age Compostion

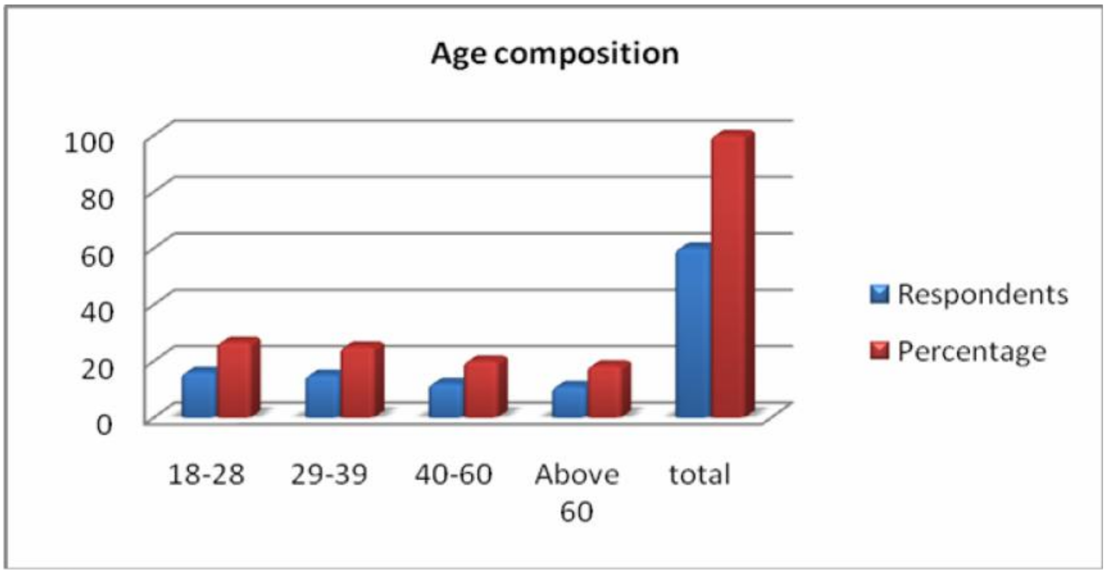


Table 2: Digital Finance Plays a Significant Role towards Financial Inclusion

Reason	Respondents	Percentage
RTGS, NEFT, and Internet banking	24	40
Debit card and Credit Card	15	25
UPI	21	35
Total	60	100

Above table and below chart depicts that, Out of 60 respondents, 24 respondents (40 percent) expressed RTGS, NEFT and Internet banking , play a significant role towards financial inclusion, 15 respondents (25 percent) opined debit and credit cards favours them in financial inclusion and 21 respondents (35 percent) expressed UPI facility helps more to access as a part of digital finance.

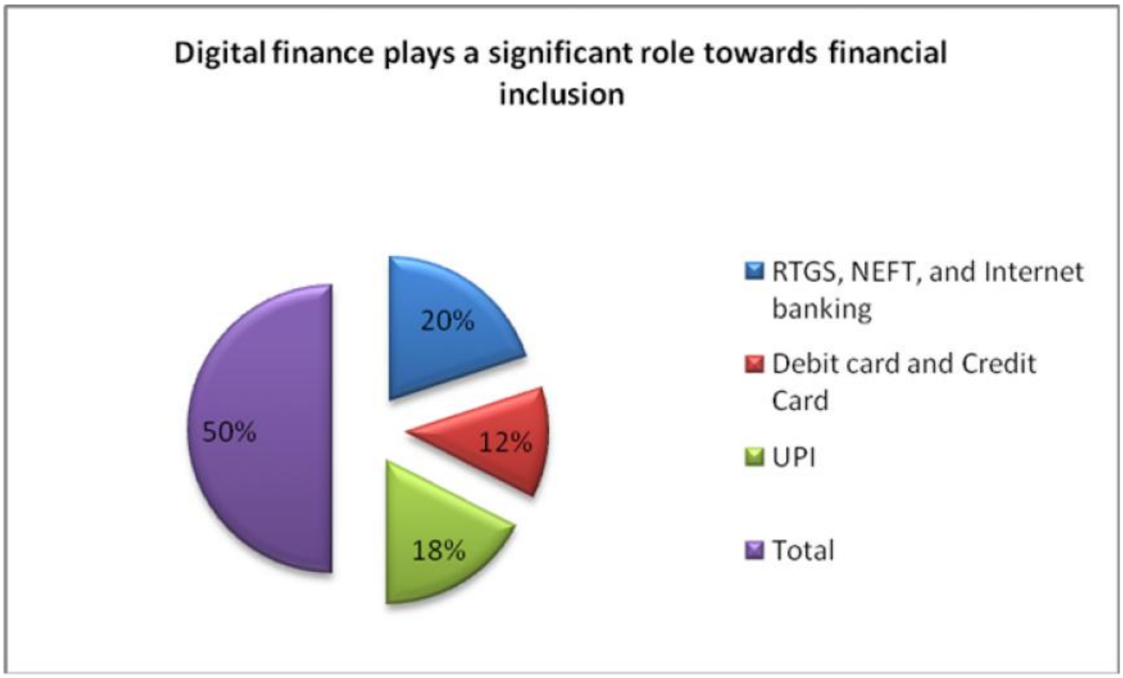
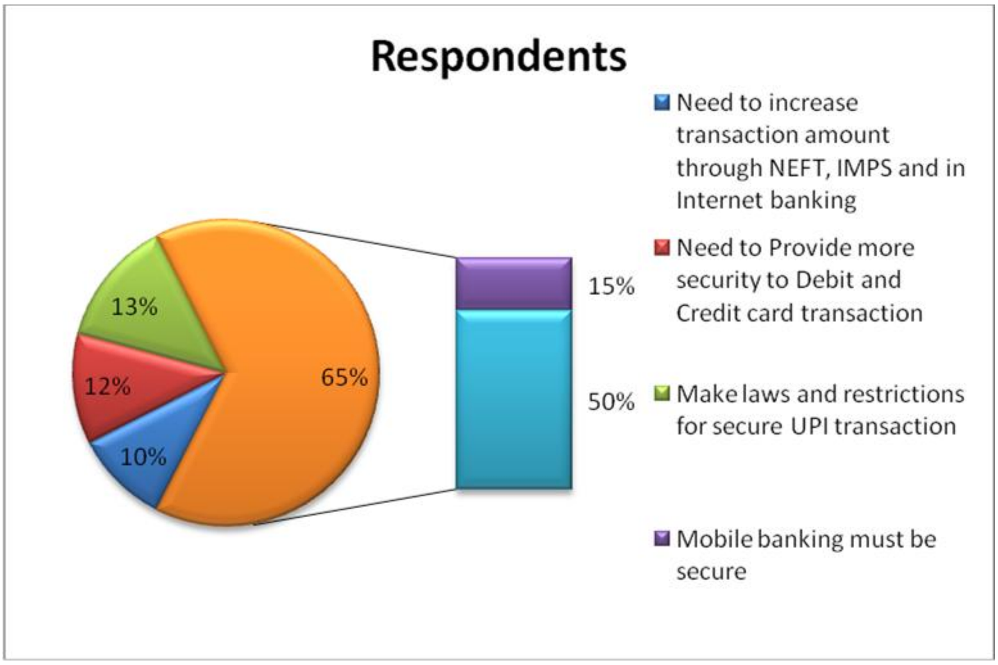


Table 3: Changes in Digital Finance are Required for Effective Implementation of Financial Inclusion

Objectives	Respondents	Percentage
Need to increase transaction amount through NEFT, IMPS and in Internet banking	12	20
Need to Provide more security to Debit and Credit card transaction	14	23.33
Make laws and restrictions for secure UPI transaction	16	26.66
Mobile banking must be secure	18	30
Total	**60**	**100**

Chart III: Changes in Digital Finance are Required for Effective Implementation of Financial Inclusion



Above table and chart shows that, customers reviews on Changes in digital finance are required for effective implementation of financial inclusion Out of 60 respondents, 12 respondents (20 percent) has opined Need to increase transaction amount through NEFT, IMPS and in Internet banking, 14 respondents (23.33 percent) expressed Need to Provide more as well. 16 respondents (26.66 Percent) opined Make laws and restrictions for secure UPI transaction. And finally 18 respondents (30 Percent) said, Mobile banking must be secure regarding effective implementation of financial inclusion

Digital Financial Inclusion

Digital financial inclusion as "digital access to and use of formal financial services by excluded and underserved populations. Such services should be suited to the customers' needs and delivered responsibly, at a cost both affordable to customers and sustainable for providers". There are three key components of a digital financial inclusion model:

- **Digital Transactional Platform:** A platform that is used to send or receive money and to store the value digitally. The process involves the transmission of the data from a customer to the bank or non-bank permitted to store the value digitally, using a device.
- **Retail Agents**: The data is transmitted from customers to banks or non-bank through a digital device and these devices are handled by the retail agents which make it easier to send or receive the money digitally. Depending on the regulations of the respective country these retail agents can perform other functions as well.

- **Device:** A device can be an instrument; whether mobile phone or payment cards (e.g. OS Terminals); with the help of which data can be transmitted from customer to bank or nonbank or vice-versa.

Present Status of Digital Finance in India

Analyzing the present status helps us in understanding the future it is because analyzing helps us to provide the advantage of overcoming the shortcomings. Thus, we will now analyse the present status of various digital financial services, particularly: debit card, credit card, mobile banking, RTGS, NEFT, IMPS & UPI in this study.

Debit Card

These are those plastic cards that are directly linked to a bank account and it is issued by the authorized banks in India. It can be used to make online payments, purchasing goods & services at the point of sales (POS), withdrawing cash from ATMs (Automated Teller Machines) & transferring domestic funds. They are generally used domestically; international usage of a debit card is allowed only on the receipt of the request from the card-holder.

It can be observed from table 5.1 that number of outstanding debit cards has started falling since 2018 & it increases slightly in the year 2020, while before that it was continuously increasing. The numbers of outstanding cards have a direct bearing on the access dimension of digital financial inclusion. A higher number of debit cards in an economy implies higher connectivity of the public with the formal banking system.

Table 5.1: Debit Card Statistics*

Year	**No. of Outstanding Cards** (million)	**No. of transactions** (million)		**Amount of transaction** (INR billion)	
		At ATM	**At POS**	**At ATM**	**At POS**
2012	3504.70	5287.71	426.91	15987.83	675.72
2013	4218.54	5837.72	588.74	18995.97	917.56
2014	5075.15	6821.53	750.05	21749.62	1157.49
2015	6999.56	7736.64	1064.36	24369.47	1483.85
2016	8417.70	8581.02	1875.57	24467.15	2503.95
2017	9614.63	8482.49	3292.66	27003.30	4606.21
2018	11210.39	9504.58	4188.98	32650.94	5643.82
2019	10189.64	9600.03	4964.96	34537.24	6819.94
2020	10208.31	6336.99	4195.86	31778.11	6351.03

*Source: RBI. (Data obtained from https://www.rbi.org.in/Scripts/ATMView.aspx)

From table 5.1 it can be observed that the growth in the number of transactions conducted via ATM is fluctuating. It increases from 2012 to 2016, while it falls in the year 2017 & thereafter it further increases till 2019 & in the year 2020 it witnessed a sharp fall by nearly 40%, this was due to the Covid-19 pandemic. Thus, it can be said that covid-19 has affected the number of transactions done via ATM. Figure 5.1 also depicts the trend of the number of transactions done via POS (Point of Sales), it can be seen from the diagram that there is a continuous rise in the number of transactions done via POS. Though it had witnessed a sharp fall of 15.5% in the year 2020, which happened because of the Covid-19 pandemic. Thus, it can be said that the covid-19 pandemic had affected the number of debit card transactions done via ATM & POS.

Credit Card

A Credit card is a card which is issued by a financial company that enables the cardholder to borrow funds. The funds can be used for making purchases, with a condition that the borrowed amount must be repaid by the cardholder along with the charges if any applicable. If the credit cardholder fails to repay the borrowed amount in the given time, an interest rate has to be paid on the amount of borrowed funds. The limit is set based on the credit rating of the holder. While in the case of a debit card, a user can't go into debt unless they have an overdraft facility and they have a daily purchase limit thus one can't exceed the daily limits thereby limits its use only for small purchases.

Table 5.2: Credit Card Statistics

Year	No. of Outstanding Cards (million)	No. of transactions (million)		Amount of transaction (INR billion)	
		At ATM	At POS	At ATM	At POS
2012	217.43	2.47	376.30	13.92	1162.99
2013	227.87	2.77	482.13	16.19	1451.99
2014	235.29	3.87	584.96	21.26	1808.17
2015	261.89	5.49	739.31	28.53	2268.58
2016	310.59	6.74	980.76	30.81	2980.85
2017	382.66	6.94	1348.47	32.10	4303.63
2018	479.53	9.47	1671.30	44.02	5657.07
2019	602.61	10.15	2094.35	48.01	7131.80
2020	696.94	5.96	1799.07	28.91	6137.97

*Source: RBI. (Data obtained from https://www.rbi.org.in/Scripts/ATMView.aspx)

From figure 5.2 it can be observed that the number of credit card transactions done via ATM & POS has shown a continuous increase since 2012. It was only in the year 2020 when they witnessed a sharp fall, the number of transactions done via ATM falls by 41.3% while the number of transactions done via POS falls by 14.1%. Thus it can be said that the covid-19 pandemic has affected the number of debit card transactions done via ATM & POS.

It can be observed from figure 5.2 that the amount of credit card transactions done via ATM & POS has shown an upward trend till 2019, while in the year 2020 there was a sharp fall by nearly 40% (in case of ATM) & 14% (in case of POS). Thus, it can be said that the covid-19 pandemic has affected the amount of credit card transactions done via ATM & POS.

RTGS

It is an electronic form of transferring funds where the transmission takes place on a real- time basis. 'Real Time' means the processing of instructions at the time they are received rather than at some later time; 'Gross Settlement' means the settlement of funds transfer instructions occurs individually (on an instruction by instruction basis). In India, RTGS can only be done for high-value transfer; the minimum amount of fund which can be transferred through RTGS is INR 2 lakh. On inward transactions, RTGS doesn't attract any charges while on outward transactions it attracts INR 24.50 on an amount which is varying between INR 2,00,000 to INR 5,00,000 & while INR 49.50 is attracted on the amount exceeding INR 5,00,000. On July 1st, 2019, RBI waived off the processing charges from the RTGS transactions, and from 14th December 2020, services of RTGS were made available round the clock. (RBI, 2021)

Table 5.3 depicts the volume & value of RTGS (Real Time Gross Settlement). It can be observed from the figure that there is an upward trend in the volume & value of RTGS till 2019. In the year 2020, there is a sharp decline in the volume & value of RTGS by 1.2 % & 24.1% respectively. This happened because of the covid-19 pandemic. Thus it can be said that the covid-19 pandemic has affected the volume & value of RTGS.

NEFT

It is an Indian system of electronic transfer of money in which an individual, firm, and companies can transfer funds from one bank or bank branch to any individual, firm, or corporate having an account with any other bank branch in the country participating in the scheme. It can be used for transferring funds 24/7 on real-time basis, payment of credit card dues, payment of loan EMI, inward foreign exchange remittances, etc. On 16th December 2020, RBI waived off the charges of fund transfer done via NEFT from a saving account through digital mode, this acts as a catalyst to digital retail payments (RBI, 2020). Maximum charges that can be levied for outward transactions at originating banks for other transactions- On amount less than INR 10,000 (maximum INR 2.50), between INR 10,000 to INR 1,00,000 (maximum INR 5.00), between INR 1,00,000 to INR 2,00,000 (maximum INR 15.00) and for the amount exceeding INR 2,00,000 (maximum INR 25). (RBI, 2020)

Figure 5.3 depicts the volume & value of NEFT. It can be observed from the figure that the volume & value of NEFT has shown a continuous rise. It must also be noted that despite the covid-19 pandemic, volume & value of NEFT kept on increasing, though the growth rate of volume & value was found to be least in the year 2020 i.e. 12.4% & 2.4% respectively.

Mobile Banking

It is a service that is provided by a bank or other financial institution that allows its customers to conduct financial transactions remotely using a mobile device such as a smart- phone or tablet. The connectivity with the internet is an essential requisite for mobile banking. It can be used conveniently at any place, at any time and customers can make payments and receipts, transfer funds, make utility bill payments, gain access to their account statements, place a request for issuing the debit card, cheque books, etc. Thus, mobile banking makes banking convenient for the customers and it also helps the bank to reduce the transaction cost. It can be observed from table 5.3 that the volume & value of mobile banking has shown an upward trend since 2009. The growth rate of volume & value is phenomenal; almost every year it is above 50%. It is only in the years 2018 & 2020 that the growth rate of the value of mobile banking is less than 50% but still closer to 50%. Even the covid-19 pandemic couldn't hamper the growth rate of mobile banking in India. Hence it can be said that mobile banking in India is gaining prominence in this digital era.

Table 5.3: RTGS/NEFT/Mobile Banking Statistics

Year	RTGS		NEFT		Mobile Banking	
	Volume	Value	Volume	Value	Volume	Value
2009	--	--	--	--	0.76	0.53
2010	--	--	--	--	5.04	4.53
2011	51.11	519375.18	199.48	15377.44	19.26	14.1
2012	65.47	644714.08	339.62	25887.74	44.68	41.85
2013	78.09	725983.13	571.86	39919.76	83	161.93
2014	89.9	743993.62	873.03	55339.52	144.61	666.25
2015	97.27	794160.63	1161.92	75985.8	308.46	2862.59
2016	103.17	943727.94	1480.77	106103.79	798.58	10288.9
2017	120.94	1107988.74	1897.65	157997.26	1509.3	15466.7
2018	134.57	1284601.66	2218.09	216347.85	4555.08	22840.5
2019	148.23	1388669.60	2621.74	232966.47	11997.8	52549.5
2020	146.46	1053160.28	2946.35	238494.89	21443.5	75371.25

Source: RBI. (Data obtained from https://www.rbi.org.in/scripts/NEFTUserView.aspx?Id=148

IMPS

It is an instant payment inter-bank electronic funds transfer system in India. IMPS offer an inter-bank electronic fund transfer service through mobile phone; the service is available 24/7 throughout the year including bank holidays while in the case of NEFT/RTGS transfer is only possible through the bank. It is offered by the only sole retail payment organisation

'National Payments Corporation of India (NPCI)'. Before 2010, during banking hours only two sources were available for transferring funds: NEFT & RTGS. On 22nd November 2010 IMPS was launched by Smt. Shyamala Gopinath. As of 23rd January 2021, there were 618 members associated with IMPS. (NPCI, n.d.)

Figure 5.4 depicts the trend of volume & value of IMPS. It can be observed from the figure that both volume & value of IMPS has shown an upward trend. Volume & value of IMPS has shown a tremendous growth rate of over 50% in every year except in the financial year 2019-20, as the growth rate of volume & value was 47.1% & 47% respectively. As the data for IMPS was obtained for the financial year 1st April-31st March, thus impact of covid- 19 on IMPS can't be assessed in this study.

Table 5.4: IMPS Transaction Volume & Value

Year	Volume (million)	Value (INR billion)
2014-15	78.44	581.89
2015-16	220.81	1622.29
2016-17	506.84	4116.24
2017-18	1009.84	8924.98
2018-19	1752.91	15902.57
2019-20	2579.17	23,375.41

Source: NPCI. (Data obtained from https://www.npci.org.in/statistics)

UPI

It is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood. It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience. The pilot launch of UPI took place on 11th April 2016 at Mumbai by Dr. Raghuram G Rajan, Governor, and RBI. Initially, it was launched with only 21 banks while this figure increases to 158 as of 22nd January 2021, besides an increase in PSP (Payment Service Provider) to 49 (NPCI, 2021). The services of UPI are available round the clock and throughout the year. This method is much more convenient compared to IMPS, NEFT, and RTGS as the account holder doesn't have to fill in the details like account number, IFSC code, etc. during the transfer of funds. They just have to write the UPI id of the recipient to initiate the transfer of funds. (NPCI, n.d.)

As per the data on retail payment statistics obtained from NPCI, under the head of UPI there are three sub-categories in it; BHIM, USSD 2.0 & UPI excluding BHIM & USSD. Thus, we will study them independently.

Table 5.6: Transaction Value Of Upi*

Year	BHIM	USSD 2.0	UPI excluding BHIM & USSD	UPI
2016-17	18.04	1.09	48.48	69.47
2017-18	300.18	3.58	794.55	1098.32
2018-19	796.34	2.67	7970.69	8769.70
2019-20	752.85	1.79	20562.66	21317.30

Source: NPCI. (Data obtained from https://www.npci.org.in/statistics) Note: Value in INR billion.

Table 5.6 depicts the value of UPI. It can be observed from the figure that the growth rate of value of UPI is exponential, as it has registered a growth rate of over 140% in every financial year. While there is a fall in the value of BHIM in the financial year 2019-20 & USSD 2.0 since the financial year 2018-19. As the data for UPI was obtained for the financial year 1st April-31st March, thus impact of covid-19 on UPI can't be assessed in this study.

Findings of the Study

õ Above table and below chart show that out of 60 respondents, 16 respondents (26.66 percent) belong to 18 – 28 age groups. 15 respondents (25 percent) are come under 29-39 age group, 12 respondents (20 percent) and 11 respondents (18.34 percent) belongs to above 60 age group respectively.

õ Above table and below chart depicts that, Out of 60 respondents, 24 respondents (40 percent) expressed RTGS, NEFT and Internet banking , play a significant role towards financial inclusion, 15 respondents (25 percent) opined debit and credit cards favours them in financial inclusion and 21 respondents (35 percent) expressed UPI facility helps more to access as a part of digital finance.

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Suggestions of the Study

õ The bank must provide a complete guide to their customers on the usage of the DFS, before delivering that service to their customer it is because the mean score of the item 'Bank provided me the complete guide to use digital financial service' was found lower. Thus measures must be taken to further enhance the access dimension.

õ It was also found in the present study that voluntary exclusion from using DFS is quite high, followed by high risk & difficulty in operating. Thus, to cater to the non-DFS users with a bank account, the government & RBI shall concentrate on addressing the issues like voluntary exclusion, high risk & difficulty in operating.

õ This study also indicates that the perceived risk of people towards DFS negatively influences digital financial inclusion. Also, all the items of perceived risk are not equally significant towards digital financial inclusion. This study suggests that there is no significant difference in terms of privacy risk, while significant differences existed in the case of performance risk & financial risk. To reduce the impact of perceived risk on digital financial inclusion measures must be taken to reduce the significant difference in case of performance risk & financial risk.

Conclusion

This study confirms that access, usage & quality of digital finance are significant predictors of digital financial inclusion. Thus, it can be said that digital financial inclusion is affected by three factors: 'Access', 'Usage' & 'Quality'. It must also be noted that amongst the three factors, 'Quality' has a higher impact on digital financial inclusion followed by 'Usage' & 'Access'. This indicates that people will use more & more digital finance if the bank provides high-quality services to their customers. Thus, measures must be taken to improve the quality of digital financial services (DFS), as improved quality will further improve the access & usage dimension of digital financial inclusion. This will help the economy in attaining higher digital financial inclusion.

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