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# **Technology's Contribution to Financial Inclusion in the Indian Banking Sector**

**Shweta Bharati**

Ph.D. Research Scholar, Dept. of Economics

Saurashtra University, Rajkot



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## ABSTRACT:

*“Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities. It is the process of moving to a digital business.” - Gartner Glossary*

Integrating digital technology into social and corporate processes with the intention of making them better is known as "digitalization."

"Digital" is the latest mantra in every industry. Along with other industries, banking is becoming more digitalized worldwide. Financial institutions, regardless of their size or location, are heavily investing in digital efforts to stay competitive and provide optimal client service.

Digitalization adoption is crucial for the banking industry. Digitalization allows banks to offer better customer service. Customers will find this convenient, and it also saves time. Manual procedures, transactions, and activities have been replaced by digital services as a result of digitalization. Customer requirements have been satisfied in completely novel ways across all verticals, upending established company value chains. Because digitalization decreases human error, it increases consumer loyalty.

The Unified Payments Interface (UPI), which has seen remarkable acceptance. The government's platform approach to UPI development has led to the development of supreme payments products on top of it, redefining the way that money is transferred between individuals by enabling payments to be made with a single click on a mobile device, not only at retail locations but also peer-to-peer. Before the introduction of UPI, the banking sector's ability to support reasonable financial growth was mostly dependent on many card systems, the Real Time Gross Settlement (RTGS) system, and transactions made via the National Electronic Funds Transfer (NEFT) system.

This research study highlights the technological advancements in payment infrastructure, tools, and methodologies that the Indian banking sector has embraced. It also acknowledges the obstacles that the Indian banking system has in achieving digital financial inclusion in the nation.



## INTRODUCTION

The idea of financial inclusion presents a problem for the Indian economy since the vast majority of the rural population is still excluded from inclusive growth. The Reserve Bank of India and the Government of India has launched several coordinated initiatives in support of financial inclusion since 2005, but the impact of these did not produce adequate outcomes. With the help of current resources like cell phones, banking technologies, the India Post Office, fair price stores, and business correspondents (BCs), enhanced efficiency and user friendliness of digital channel benefited both the formal and rural sectors public.

As the Indian economy develops, it is essential to priorities the achievement of sustainable development and endeavor to involve the broadest possible participation from all societal segments. However, since most rural residents lack access to formal credit, their lack of knowledge and financial literacy is impeding the nation's economy's ability to grow. This poses a significant threat to the nation's economic development. The banking industry developed a number of technological innovations, including automated teller machines (ATMs), credit and debit cards, online banking, UPI etc., to get around these obstacles. Even though the introduction of these banking technologies changed urban and semi urban society, most people living in rural areas are still ignorant of these developments and are not allowed to use banking services.

## LITERATURE REVIEW

### Sharma Kukreja (2013)

In his survey report from the World Bank was reviewed by them. They also compared India's financial inclusion to the other nations to reach the majority of the poor. India has a long way to go based on the comparative study of the banking sector by the country. They also examine the role of financial inclusion in the development of country.

### Gurpreet Kaur (2015)

The paper discusses the connection between digital India and financial inclusion. In order to increase the number of people who can use banking services, financial inclusion involves providing banking services to the less fortunate and underprivileged members of society. The Indian government launched the "Digital India" initiative to offer all citizens electronic access to government services. The impact of the digital India initiative on the idea of financial inclusion is examined in this paper. Through digital banking, the digital



India initiative can facilitate connections between disparate segments of society and

Contribute to the attainment of financial inclusion. The information is gathered from various secondary sources, including websites, journals, newspapers, and published reports from SBI and RBI.

### **Suri and Bhardwaj (2020)**

This study looks at the impact of promotions on boosting digital banking usage and enhancing financial inclusion. The most well-known digital banking platform in Kenya, M-Shwari, held a campaign from mid-April to early-June 2016 called Stawisha Na M-Shwari. People were encouraged to save money and pay back loans by the promotion. The promotion has a significant and long-lasting impact on loan-taking behavior. Savings do not continue to rise after the promotion ends, even though they do during the promotional period.

### **Sharma and Barik (2019)**

This paper attempts to examine the developments that have occurred and the possibilities for financial inclusion in India going on, using data from the Financial Access Survey, Global Index, and Reserve Bank of India bulletin. According to this analysis, financial inclusion has advanced quickly in India. While there is still much work to be done to realize the goal of universal financial inclusion, significant progress has undoubtedly been made recently. In particular, there has been a noticeable improvement in the process of opening bank deposit accounts since the Pradhan Mantri Jan Dhan Yojana was put into effect in August 2014. In India, digital finance has grown rapidly in the post-demonization era as well. Even though digital transactions and payments have increased significantly, women, people living in rural area.

### **OBJECTIVE**

1. To provide an overview of the digitalization of the Indian banking industry.
2. To evaluate the various digital financial inclusion instruments that used by the banks in India.
3. Researching the obstacles and effects of digitalization on the accessibility of finance.



## METHDOLOGY

The present study is descriptive in nature. It is explore the major facts which are related banking sectors initiative in the direction of financial inclusion through technology. For this study data collected from various research papers Article and the annual reports of RBI. The time period of this study is from financial year 2018-19 to 2022-23.

## OBSERVATIONS AND FINDINGS

During research we have gone through the data published by Indian banking regulator Reserve Bank of India for FY 2018-19 to 2022-23. In the data we have gone through various digital mode of banking transactions which are RTGS, NEFT, ATM, AePS, IMPS, UPI, BHIM etc. We have compared the data in volume as well as in value of the transactions during the years to find the growth and acceptability of the technology by mass public.

**Table:1 Volume of Digital Transactions through various digital channels.**

Volume (In Lakh)					
ITEM	2018-19	2019-20	2020-21	2021-22	2022-23
RTGS	1366	1507	1592	2078	2426
NEFT	23189	27445	30928	40407	52847
CARD PAYMENTS	61769	72384	57841	61783	63345
IMPS	17529	25792	32783	46625	56533
UPI	53915	125186	223307	459561	837144
BHIM	68	91	161	228	214
CCIL OS	36	36	28	33	41
AePS	11	10	11	10	6
<b>TOTAL</b>	<b>157883</b>	<b>252451</b>	<b>346651</b>	<b>610725</b>	<b>1012556</b>

Source- RBI Annual Reports.



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**Table:2 Value of Digital Transactions through various digital channels.**

Value (INR In Lakh Crore)					
ITEM	2018-19	2019-20	2020-21	2021-22	2022-23
RTGS	1356.88	1311.56	1056.00	1286.58	1499.46
NEFT	227.93	229.46	251.31	287.25	337.20
CARD PAYMENTS	11.97	14.35	12.92	17.02	21.52
IMPS	15.90	23.37	29.41	41.71	55.85
UPI	8.77	21.32	41.04	84.16	139.15
BHIM	0.01	0.01	0.03	0.06	0.07
CCIL OS	1165.51	1341.50	1619.43	2068.73	2587.97
AePS	0.01	0.00	0.01	0.01	0.00
<b>TOTAL</b>	<b>2786.98</b>	<b>2941.57</b>	<b>3010.15</b>	<b>3785.52</b>	<b>4641.22</b>

Source- RBI Annual Reports.

## **RTGS (Real-Time Gross Settlement):**

RTGS is primarily used for high-value transactions which are processed on 'real-time' basis. The minimum amount to be remitted through RTGS is Rupees Two Lakhs and without any upper limit. It is the real-time settlement of funds transfers individually on an order-by-order basis.

RTGS					
F.Y.	2018-19	2019-20	2020-21	2021-22	2022-23
Volume (In Lakh)	1366	1507	1592	2078	2426
Value (INR In Lakh Crore)	1356.88	1311.56	1056.00	1286.58	1499.46



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In FY 2018-19 to FY 2022-23 total number of RTGS transactions was 1366, 1507, 1592, 2078 and 2426 Lakhs respectively. The number of transaction increasing year on year. Value of the transactions in FY 2018-19 to 2022-23 was Rs. 1356.88, 1311.56, 1056, 1286.58 and 1499.46 Lakh Crore.

If we observe the data total number of transactions increased in 05 years is 177%. However, comparatively the total value of transaction has not been increased much.

### **NEFT (National Electronic Funds Transfer):**

NEFT is that the most common used electronic payment method for transferring money from any bank to another bank in India. It operates in half-hourly batches settlements. There is no minimum and maximum limit for the transactions under NEFT.

NEFT					
F.Y.	2018-19	2019-20	2020-21	2021-22	2022-23
Volume (In Lakh)	23189	27445	30928	40407	52847
Value (INR In Lakh Crore)	227.93	229.46	251.31	287.25	337.20

In FY 2018-19 to FY 2022-23 total number of NEFT transactions was 23189, 27445, 30928, 40407 & 52847 Lakhs respectively. The number of transactions is in increasing trend year on year basis. Value of the transactions in FY 2018-19 to 2022-23 was Rs. 227.93, 229.46, 251.31, 287.25 & 337.20 Lakh Crore.

If we observe the data total number of transactions increased in 05 years is 228%. Total value of transaction has also increased by 148% in 5 years.



## **CARD PAYMENT (Debit Card and Credit Card Payment):**

Card payments are also called as plastic payment system which is directly linked with the customer's bank account. It eliminates the carrying of physical money or cheques. Cards can be used for withdrawals and make payment for various purchases subject to a limit to the balance exist in the account. There are five key parties the buyer, the merchant, the acquirer, the issuer, and the network.

<b>CARD PAYMENTS</b>					
<b>F.Y.</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>
<b>Volume</b> (In Lakh)	61769	72384	57841	61783	63345
<b>Value</b> (INR In Lakh Crore)	11.97	14.35	12.92	17.02	21.52

In FY 2018-19 to FY 2022-23 total number of card payment transactions was 61769, 72384, 57841, 61783, 63345 Lakhs respectively. The number of transactions is in increasing trend year on year basis but in FY 2020-21 the number of transactions decreased as compared to previous year due to COVID -19 and lockdowns where people avoided physical contacts/movements at POS terminals. Value of the transactions in FY 2018-19 to 2022-23 was Rs. 11.97, 14.35, 12.92, 17.02 & 21.52 Lakh Crore. The Value of the transactions also affected the same ways due to COVID pandemic.

## **IMPS (Immediate payment service):**

IMPS is a payment service for instant money transfer. It is facilitated by National Payment Corporation of India (NPCI). Through IMPS one sent and receives funds instantly and does interbank transactions using mobile or online banking.





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## CARD PAYMENTS

F.Y.	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Volume</b> (In Lakh)	17529	25792	32783	46625	56533
<b>Value</b> (INR In Lakh Crore)	15.90	23.37	29.41	41.71	55.85

In FY 2018-19 to FY 2022-23 total numbers of IMPS transactions was 17529, 25792, 32783, 46625 & 56533 Lakhs respectively. The number of transactions is in increasing trend year on year basis. Value of the transactions in FY 2018-19 to 2022-23 was Rs. 15.90, 23.37, 29.41, 41.71 & 55.85 Lakh Crore. As per data total number of transactions increased in 05 years is 323%. Due to ease of operation/transaction through mobile total number transaction through IMPS increased multifold 5 years only.

### UPI & BHIM (Unified Payment Interface and Bharat Interface for Money):

UPI & BHIM is the most trending form of digital banking in present time. UPI makes use of a virtual payment address (VPA) so the user can transfer funds without entering bank account details or IFSC code.

BHIM is an UPI based payment system. BHIM application, in addition to the transfer of funds to other virtual addresses and bank accounts, also lets the user transfer funds to another Aadhaar number. UPI based payments are free of cost.

## UPI + BHIM

F.Y.	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Volume</b> (In Lakh)	53983	125277	223468	459789	837358
<b>Value</b> (INR In Lakh Crore)	8.78	21.33	41.07	84.22	139.22



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In FY 2018-19 to FY 2022-23 total numbers of UPI and BHIM transactions was 53983, 125277, 223468, 459789, & 37358 Lakhs respectively. The number of transactions is in increasing trend year on year basis. Value of the transactions in FY 2018-19 to 2022-23 was Rs. 8.78, 21.33, 41.07, 84.22 & 139.22 Lakh Crore. As per data total number of transactions increased in 05 years is 1551%. Due to ease of transaction through mobile apps without any charge total number transaction through UPI increased drastically in last 5 years only. The amount of total transactions also increased by 1585% in last 5 years.

## CCIL (Clearing Corporation of India Limited):

The goals of CCIL are to support the growth of the Indian financial markets and to offer clearing and settlement services that are efficient, dependable, secure, and safe for players in the Indian financial system.

CCIL OS					
F.Y.	2018-19	2019-20	2020-21	2021-22	2022-23
Volume (In Lakh)	36	36	28	33	41
Value (INR In Lakh Crore)	1165.51	1341.50	1619.43	2068.73	2587.97

In FY 2018-19 to FY 2022-23 total number of CCIL transactions was 36, 36, 28,33 & 41 Lakhs respectively. The number of transactions is in increasing trend year on year basis. Value of the transactions in FY 2018-19 to 2022-23 was Rs. 1165.51, 1341.50, 1619.43, 2068.73, 2587.97 Lakh Crore. The total numbers of transaction through CCIL increased by 222% in 5 years.

## CONCLUSION:

The world has changed from being a data centre to a techno data centre today. Since technology is already inherited in every aspect of the economy, digital banking applications are necessary to achieve financial inclusion. Everyone should be aware of a completely different revolution, such as the Indian banking sector's initiative to transition from a cash-based to a cashless economy through digital mode. According to



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the reports, people all over the nation are starting to use technology like RTGS, NEFT, and other online modes.

They are removing every obstacle in the way of financial inclusion. Since cybercrimes, service costs, and a general sense of insecurity are all rising daily as a result of these technological advancements. To reduce cyber terrorism, the government and RBI should improve technology regulations and stop the growth of unauthorized access, because people's trust in digitalization is eroding in the last few years.

Technology has completely transformed the banking industry and altered the way bank transfers are carried out. It also speeds up the process for customers, enabling them to find account information, pay bills online, and move money between accounts more quickly. This has made it easier for the end user to enjoy hassle-free online banking and have an organized financial life.



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