



## **ROLE OF AI TOOLS IN DIGITAL PAYMENTS IN INDIA**

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### **Abstract:**

India is going to become cashless. Indian government launched digital India campaign to reduce dependency of Indian economy on cash and prevent from money laundering. To making cashless India and increasing trends in using digital payment system various Payment's method is emerging and developing. Digital India is increased use of mobile and internet are means to exponential growth in use of digital payments. This transformation towards digital payments benefits in more transparency in transactions which empowers the country's economy.

In recent days many changes took place in the payment system like digital system like wallets, UPI and BHIM apps for smooth shift to digital payments. The objective of this research paper is to study the positive impact that digitization of the payments system. Their search is paper also trying to explain the future scope of the Digital payments system.

**Key Words:** Emerging Development, UPI, BHIM Apps, Digitalization

### **Introduction:**

The 'Digital India' is the Indian government's flagship programme with a vision to convert India in a digitally empowered country. "Faceless, paperless" is one of supposed function of digital India.

Cashless society describes an economic state where financial transactions are not conducted with money in the form of physical banknotes or coins, but rather than digital currency, crypto currency is used. The Digital payments system is now became the essential part of banking transactions. Digitalization is need of a country because it is important to develop the financial sector as per the modern age requirements and to face the competitors with developing countries. The PPM Narendra Modi started a mission Digital India in 2017 for removing hidden money and black money from the country. The digital payment system is a part of the mission from this cashless transaction will made all over the India and the progress black money from the country. The digital payment system is a part of the mission from this cashless transaction will made all over the India and the progress black money or money laundering can be reduce. It is also important that development of techniques influences the traditional system and there also have to face some problems while newly adaption. In India ICICI bank stated the online banking services and Digital banking is also ahead in digitalization of transaction digital services provides to customer. SBI is a public sector bank which is enriched of digitalization. In 2011 SBI launched green channel to promote digital systems and save environment.

The traditional system is replacing by the digital system. The traditional payments systems are cheques, withdrawals, drafts, money orders, letters of credit, travels cheques etc. Why payment systems also turning into electronic payment systems using computer and internet there are several of adoption. The most common reason is that traditional system has some leakages and inefficiency and that's overcome by the digital payments systems is in emerging trend and not so popular and generalized. Today India is using most common electronic payments system include Debit cards, Credit cards, but the use of electronic Fund Transfer, Internet banking, Unified payment system (UPI), e-commerce payment system, Internet banking and \*99# USSD based payment system etc. are not in popular use. Therefore, it is important to know the problems of digital payment system and its progress in India.

### **Objectives:**

- To study the concepts of Digital payments system and cashless transactions.
- To know the Impact of Digital payments system.
- To know the advantages of cashless transactions.
- To know the opportunities and challenges of e-payment system in India.
- To know the problems of digital payment systems.

### **Research Methodology:**

The methodology is assess for the paper is secondary data base research papers of Digital Payment system.

### **Digital Payment Methods:**

**Unified Payment Interface:** Unified payment Interface (UPI) is a system that powers multiple bank accounts into a single mobile application, merging several banking features, seamless fund routing & merchant payment into one hood. It is also caters to the "Peer to Peer" (P2P) collect request which can be scheduled and paid as per requirements and convenience.

**Bharat Inter Face for Money (BHIM):** Bharat Interface for money (BHIM) is a mobile app for easy and quick payment transactions using Unified payments Interface(UPI). User can make instant bank-to-bank payment send pay and collect money using Mobile number , Banka/c and IFSC code, Aadhar number or virtual payment Address(VPA). BHIM has the facility to scan & pay through QR code. User can check transaction history and can also raise complaint for the declined transactions by clicking on report issue in transactions.

**UPI123PAY:** UPI123PAY is an instant payment system for future phone users who can use Unified Payment interface (UPI) payment service in a safe and secure manner. Feature phone users will now be able to undertake host of transactions based on four technology alternatives. The include calling an IVR (interactive voice response) number, app functionally in feature phones, missed call- based approach and proximately sound-based payments.

**UPI Lite:** "UPI LITE" offers a wallet in BHIM- UPI app for an amount of upto rs2,000 on a smart phone , eliminating the need to the user first obtain electronic authorization from his/her bank while making the payment , offering the user better experience in term of improved speed and transaction success rate.

**Banking Card:** Banking sector provides various cards to avoid the time spend over the banking transaction. It offers consumers more security, convenience and control then another payment method. There re many types of cards Rupay, master card, visa etc. They provides more security to the consumer while using it' Payment cards give people the power to purchase items in store, on the Internet through mail-orders uses and over the telephone. More security to the consumer while using it' Payment cards give people the power to purchase items in store, on the Internet through mail-orders uses and over the telephone. They save both customers while using it. Payments cards give people the power to purchase items in stores on the Internet, through mail-orders catalogues and over the telephone. They save both customers and merchants time an money, and thus enable them for ease of transactions.

**USSD:** The innovative payment service \*99#works on unstructured supplementary service data (USSD) channel. This service allow to user mobile banking without internet. \*99# facility available to make money transfer from one person to another without using internet and smart phone. \*99# service has been launched to talk the banking services to every common on across the country. The common unbracross all Telecom service providers on their mobile phone and can make transaction using the interactive menu on the mobile screen. Using this customer can check balance, transfer money, can get mini statement etc.

**Aadhar Enabled Payments System:** AEPS is a banked model which allows online interoperable financial transactions at POS (Point of Sale or Micro ATM) through the Business correspondent or and Mitra of any bank using the Aadhar authentication.

**Mobile Wallets:** There are several mobile wallets available and each bank have their own application. The customer can carry digital cash trough mobile wallet. By use of wallet customer can link credit card or debit card in mobile device to make transactions. An individuals account is required to be linked to the digital wallet odds the money. The pay TM, Free charge, Mobikwik, Airtel Money , Jio Money, SBI Buddy, its cash, Vodafone M-Pesa, Axis Bank Lime, ICICI Pockets, speed pay etc. Are the mobile wallets use in India.

**Point of Sales:** A point of sale (PoS) is where sales are made. It allow to pos holder to collect money from their customer by the way of swap also and no need to go bank for making transaction of purchase and selling. On a micro level, retailers consider a pos to be the area where a customer completes a transaction, such as a check out counter. But it require GPS system internet and bank account of merchant.

**Internet Banking:** Internet banking also known as online banking, e-banking or virtual banking, is electronic banking system that allow customers of a bank to make transaction using website of the bank using ID and password.

**National Electronic Fund Transfer:** National electronic fund transfer is a nation-Wide payment system which provides fund transfer from any bank any branch to any bank. Using the system individual firms and corporate can electronically transfer funds from any bank branch to any individual, firm or corporate having an account with any other bank branch in the country. Not only account holders but also with out having account people can sent money to others account by depositing money from anywhere. However, such cash transaction have limit of Rs. 50000/- and this facility can use in working day only.

**Real Time Gross Settlement:** RTGS is settlement of funds transfers individually on an order by order basis. 'Real Time' means the processing of instructions at the time they are received rather then at some later time. Considering that the funds settlement takes place in the books of reserve bank of India, the payment are final and irrevocable. Transferring large amount RTGS is used. Customers can send minimum 2 lakhs and maximum have no limit. RTGS can use in banking hours.

**Electronic Clearing System:** ECS is an alternative method for the payment transactions like utility-bill - payments such as telephone bills, electricity bills, insurance premium, card payments, loan re payments, etc.,

**Immediate Payment Service:** IMPS offers an instant, 24X7X365, interbank electronic fund transfer service through mobile phones. IMPS are too to transfer money instantly cross India using mobile, internet and ATM it is safe and cost effective.

**Mobile Banking:** Mobile banking is a portable system provided by banks to customer on their mobile phones, smartphones with a special applications using software. It provided by the banks or financial institution for the purpose. Each bank provides its own mobile banking app for android, windows.

**Micro ATM:** Micro ATM meant to be a device that is seed by the million Business Correspondents to deliver basic banking services. The micro ATM enables business correspondents to make instant transactions. It helps to withdrawals, transfer's transaction instantly.

**Progress of Digital Payment Services in India:**

Money the digital system get mention able progress after 2019.

Payment system indicator -transactions (All value in lakh)

Method	2019-20	2020-21	2021-22
RTGS	1,507	1,592	2,078
IMPS	25,792	32,683	46,625
NEFT	27,445	30,928	40,407
UPI	1,25,186	2,23,307	4,59,561
CARD PAYMENT	72,384	57,787	61,786
Total	2,52,314	3,46,297	6,10,457

**Source of RBI Reports:**

As table shown above its indicates that the number of electronic transactions are in increase trends as compare to the 2019-20 to 2021-2022 RTGS, IMPS, Card payments and NEFT and UPI are increased by near about 75%. RBI allowed in May 2014 to access the mobile banking above age 10 minor. They can open and use the mobile banking services. They can open fixed and saving accounts using mobile banking, SBI and ICICI are the banks who providing these services to minor.

According to Wikipedia - National Financial switch (NFS) is the largest network of shared automated teller machines (ATMs) in India. It was designed, developed and deployed by the Institute for Development and Research in Banking Technology (IDRBT) in 2004, with the goal of inter-connecting the ATMs in the country and facilitating connivance banking. It is run by the National Payments Corporation of India (NCPI). As on 31<sup>st</sup> January 22, there were 1, 203 members that include 111 Direct, 1,045 sub members,43 RRBs and 4 WLAOs using NFS network connected to more than 2.55 lac ATM (including cash deposit machines /recycle.

**Development of ATM, POS and Transaction:**

Year	ATMs			POS		
	On-site 1	Off-site 2	Total	On-line 3	Off-line 4	Total
2022	120727	96365	217092	7550065	0	7550065
2021	116001	97036	213037	5498311	0	5498311
2020	114045	94435	208480	5784631	0	5784631
2019	112458	97181	209639	4248777	0	4248777

**Source of RBI:**

The ATM and Numbers of POS machine are increases from the emerged and now in 2022 there are 2,17,092 ATM are working and numbers of POS machines are also increases from the 2019 it was 4248777 and now it increases near to 75500665. The changes show that the India moving to paperless banking and presently Indian adapted the paperless banking tools to make the transaction. 92% of them are using ATM cards and 8% of them are nourishing ATM cards.

**Use of Credit Cards:**

Year	Credit cards No. of outstanding cards as at the End of the month	Number of Transactions (Actual)		Amount of transactions (rs. Millions)	
		ATM	POS	ATM	POS
	1	2	3	4	5
2022	81186874	812830	140578775	3920545	486110772
2021	68948699	590456	211258456	29523	9390721
2020	60397171	502048	174207947	24669	6360057
2019	55332847	892582	204968027	42264	6618640

**Source RBI:**

The number of transaction in compare to 2019, 46.72% are increases in 2022.

Debit Card Use and Transaction

Year	Debit cards no of Outstanding cards as at the end of the month	No of transactions (Actual)		Amount of transactions (Rs. Millions)	
		ATM	POS	ATM	POS
2022	939465892	585003806	185932815	2789233526	39573764
2021	937741694	589655460	349550742	27967659	6594856
2020	885659754	580060844	382247547	27050570	6509267
2019	805324206	646212550	451159082	29042372	6199781

**Source RBI:**

The number of transactions in compare to 2019, 16% are increase in 2022 while use of Pos machines is increases by 316%. It shows that the people are using the paperless tool to shopping as well as for cash withdrawal. Us of credit card is also in progressive trend as compare to 2019. Digital technology helps to make paperless transactions. For the development paperless banking system there should be strong network on banking and India a huge banking network is available, and it is rapidly increasing also.

It is observed that mobile banking is appreciated by the customer due to easy use any time anywhere.

**Advantages of Digital Payment System:**

- Time Saver: Using digital payment system customers can pay to merchant transfer money quickly and no need to make payment by cheque and waiting for clearing. Because digital payment system takes less time than traditional payment system.
- Availabilities: Digital payments system can use by customer form any where and any time thereos no need to go banks for every transactions.
- Easy purchasing: The Digital payment system provides facility to user or purchasing by using ATM card credit cards and POS therefore i is easy for making transaction and no hard cash required to travel with us.
- Use of Wallet: The Digital payment system includes digital wallets which make payment easy and with that wallet customer can discount as well as cash back.
- Written record: You often forget note down your cash spending. Or even if you note, it takes a lot of time. But you do not need to note your spending every tin with digital payments. Theses are automatically recorded in your passbook or inside your E-wallet app. This helps to maintain your record, track your spending and budget planning.
- Less Risk: In digital payment system it provides us securities for every transaction it require MPIN or OTP which can be avoid frauds in the system.

**Barriers to used Digital Payment:**

- People use of currency note money: In India people are using currency in high level. People in Rural area in India nearly made transaction 80% in cash. Because it is became traditional and habitual to the people.
- Computer illiteracy: There is only 6% people in India are computer literate and near about 90% Indian people don't understand the computer and internet that's why they cannot use the digital payment system.
- Use of ATM card: There are many digital payments system but Indian peoples still using ATM cards for withdraw and give money too other. They didn't use. Wallet and digital payment for money transfer.
- Limited Availability of POS: According to the report of RBI there are 1.44 Million POS terminals installed by banks cross lo cations at the end of July 2016 and it increased by 24% IN 2018. There should be involving every trader.
- Mobile Internet penetrations Rate: The use of mobile remains weak in rural India. For setting transaction digitally interne connection is requires but the connectivity are not available in the rural area.
- Risk and security: The Indian people still don't believe in online transaction. And they feel that the traditional system is good and faithful. And also not believe in security of the transaction.
- Training: There is a communication gap between bank and heir customer. It requires giving training about to use of online nonpayment system but banks do not provides any training program to increase the digitalization.
- Public Sector banks: There are 80% share of finance sector is occupied by public sector banks started the digitalization from 1996. That's why it is in progressive trend. Private sector banks.

**Prospect:**

- The Indian banking sectors one of the best sector in India and it changes answer the requirements of the India country.
- There are large scope of digital payment system in India because of it is increasing trend. The growth in volume and value of transactions using payment issued banks entities as been significant.

- There are several bank and near about all bank's are in a adoption of Digital banking and NPCI also promoted Aadhar enable d payments system to involve all Indian in digital transactions.
- UPI system the best system to make digital transaction and its expected to give a progressive in digital payment transactions.
- Debit and credit card are shows asusual to make transaction built is increasing trend from demonetization of money in 2019.
- With increasing mobile banking services, growth in commerce and use of mobile payment applications, the use of cash will decrease.
- RTGS and NEFT volumes increase almost three fold between 2019 and 2022 reflecting the great eradiation of the system.
- The government of India is focus on digital infrastructure and it can encourage digital transactions culture in India thee are almost every persons have jandhan yojana account and Aadhar card.
- 92% of the more using ATM cards and 8% of the more not using ATM cards.
- 46% of them are aware and using digital payment, 46% of them are aware about digital payment system but not using the same and 08% of them are not aware about digital payment system.

#### **Conclusion:**

Digital Payment system is easy to use to the customer as well as bank officer and there are several option are available in the financial system in India, but there are large amount of people in India don't know how to use the system. But after a lockdown many of the people and student are using a digital gateways and up I apps to transfer money and shopping, The digital literacy of Indian people is ;ow level, therefore digital payment system is not developed and spread all over the India. The social and infrastructure barriers are there influences to use of digital payment system. But now a days mobile banking are becoming famous in the India because it is easy to use and anytime cause. It is also required to improve the digital literacy among the people. There are also issues relating to the risk and security.

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