# "A Study on Digital Payment system and its Future Feasibility in India"

By

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#### <u>Abstract</u>

This paper describes the recent development taking place since last few year as India moving towards cashless economy which is 'Faceless, Paperless, and Cashless'. Digital payment system in which there is no need for the exchange of hard cash. The transactions are made through electronic or digital mode. Payment industry paves the new methods to do payment anywhere anytime. Digital payment ensures the transformations which mainly focus on convenience, Competition, and Cost-Effectiveness. Paper discuss about predominantly on the topics pertaining to internet banking, mobile banking, mobile wallets, card payments, electronic and mobile payment systems, etc. Demonetization and covid pandemic drives the sudden adoption of digital payment and consumer behavior towards digital payment is widely discussed. Government promotes single window mobile payment system developed by the National Payment Corporation o India (NPCI). But still area of concern needs more emphasis are security problem, lack of technological knowledge and higher transaction cost. Due to the availability of internet as well as smart phone pave the way for digitalization. The paper cover the literature review about the digital payment adoption, modes of payment and throw light on future feasibility also.

Keywords: digitalization, payment system, mobile banking, cost-effectiveness

#### Introduction

Digital empowered economy which is faceless, cashless and paperless as intended by the Government of India as part of their 'Digital India 'campaign generated various methods of the payment which are flexible and provide the access to do payment anytime, anywhere. The Reserve Bank of India (RBI) Ombudsman Scheme for Digital Transactions defined Digital Transactions as a seamless payment system in which there is no need for the exchange of hard cash. Electronic or digital transfer from both ends use digital medium to conduct the transaction. RBI vision of 2021 can be achieved by the 4Cs key - Competition, Cost-Effectiveness, Convenience and Confidence. In this context it was consider necessary to undertake a comprehensive review of the rules and procedure for levying charges in different payment system in the country with the objective of assessing their impact on the efficiency, growth and acceptance of payment system. (RBI, 2022) The digital payment system ensures the transformation through continuous innovations in the state of technology such as scanning of codes, ccontactless and wireless transfer just by clicking a button. It also involves new entrant and service provider like payment gateways. This revolution in the payment ecosystem offer the services at optimum cost to the users and also with the advent of mobile phone technology and data in affordable cost provides the wide reach results in effective utilization of digital payment ecosystem.

RBI launched ombudsman scheme for digital payments on 31st January 2019. Benchmarking India's Payment System- The Reserve Bank of India aspires to modernize the payment ecosystem in India by emboldening the digital payments usage similar to that of other developed countries. Benchmarking India's Payment System report was published by RBI on 4th of June 2019. The main aim of this exercise is to enhance the acceptance of digital payment systems and to amplify the value and volume of digital transactions by improving the cyber security standards, payment infrastructure, utility, retail and Government payments, consumer protection, payment gateway enhancement, grievances redressal and personal cross-border remittance.

Payment and Settlement Systems in India: Vision 2019 – 2021- The staple idea of Payment and Settlement Systems – Vision 2019-2021 is "Empowering Exceptional (E)payment Experience." The core objective of this vision is that every Indian should have access to numerous e-payment systems that are safe, secured, affordable, convenient, and quick. The vision also ensures that every payment and settlement systems operating in the country should be sound, efficient, accessible,

interoperable, and authorized. This vision also recognizes the need for persistent innovation, cyber security, financial inclusion, competition and customer protection.

Vision 2021 emphases the following approaches: Enhancing Customers Experience, includes dynamic redressal of grievances  $\leftarrow$  Empowering Service Providers and Payment Systems Operators  $\leftarrow$  Enabling the Payment Ecosystem and Infrastructure  $\leftarrow$  Putting in place a Forward-looking Regulations  $\leftarrow$  Supported by a Risk-Focused Supervision.  $\leftarrow$  Based on the information collected from various stakeholders (policy makers, investors, corporates, economists, trade association, customers, suppliers, government parties) and guidance from the Board for Payment and Settlement Systems (BPSS) the Payment and Settlement System envisions in accomplishing a 'highly digital' and 'cash-lite' economy.

#### **Importance of Digital Payments Systems**

• Transparency & accountability since there is a record for each and every transaction.

• Digital transaction moderates the cost of producing coins and printing currency notes.

• There is a track over the transactions performed digitally, which in-turn reduces corruption and redtapism.

• Cash are being deposited in the banks so there is no chance for unaccounted money or tax evasion. Hence, digital transaction leads to proper taxation.

• It has minimized the performance of illegal financial activities like Hawala transfers since less availability of hard cash in hand.

• It's easy to identify how much and where the amount was spent by tracking of expenses. Merits of Digital Payments Systems←

• Handy & Hassle-free payments can be made just by a click.

• digital payment ensures transaction anytime and even from anywhere also.

• Digital payments encourage users by giving discounts, rewards, cash-back offers.

• One stop solution for paying retail bills.

• There is a proof and record of all transactions that are made digitally.

• Digital Payment Systems helps to keep black money under control as every transaction is being recorded.

• Cost-effective and less transaction fee.

#### **Literature Review**

(Sharma & Kansal, 2012): Research paper titled "Mobile banking as Technology Adoption and Challenges, A Case of M Banking in India", Published in International Journal of Scientific & Research Publication, Page No. 1-5, They examines the consumer adoption of new electronic payment service such as Mobile Banking and also Factor affecting adoption of Mobile Banking. From traditional banking to modern banking which use digital payment are undergone in the whole change, customers are freely paying bills from anywhere so that more personal attention can be provided. Mobile Banking have greatest potential of conducting financial transaction therefore the all stakeholders like regulators, government, mobile manufacturer and telecom authorities need to make efforts to inclusion of rural people also.

(Deshmukh & Naware, 2014): Research paper titled "Mobile Money: M- Payment System for India", Published in International Journal of Computer Science and Information Technologies Page No. 2672-2675, they conclude about the system "Mobile Money: M-Payment System for India "proposes a new mobile payment system in which sender sends money to receiver using his mobile phone. M-commerce is evolved from E-commerce which includes all E-commerce transactions, carried out using a mobile (hand held) device. This paper discussed transformation of E-commerce into M-commerce, benefits and challenges of E-commerce and M-commerce. There is a need to secure the M-Payment systems as the system can be attacked to steal the information. The security to the username, password and mPIN should be given so that it cannot be beaked. Security to the information should be given when it is transferred from end to end in the system. Due to rapid growth of number of mobile phone subscribers in India, mobile phones are proved to be an alternative channel of delivery of banking services. The M-Payment systems should be developed compatible for not only high configurations mobile phones but also for low configuration mobile phones. In India people have different mother tongue language.

Thousands of people do know only their mother tongue language. So there should be an option to select language for transactions in M-Payment systems in India. Awareness programs for M-Payment systems should be conducted by bank servers.

(Pande, Deshmukh, & Tambakhe, 2014): Research paper titled "E-payment Gateway Model", Published in International Journal of Computer Science and Information Technologies, Page No. 2569-2573, They studied proposed model for electronic payment gateway, On the basis of requirement of electronic payment gateway. E-payment is now one of most central research areas in E-commerce. E-payment system is the automated process of exchanging monetary values among parties in business transactions. These new methods attain high level of security, speed, privacy, decentralization & internationalization. People need such a gateway that fulfill their all requirements and provide security, privacy etc. This addresses the requirements for an electronic payment gateway from both the customers and the merchants' point of view. The existing payment architecture was also lacking the security factor. Most people don't trust on online shopping or online transaction because of security. Security is the main issues behind designing of Gateway. That's why the proposed architecture is made secure by the implementation of secure electronic transaction methods. Thus, at first, it's checked if the customer is authorized one or not then the whole transaction takes place.

(Le, Le, & Dinh, 2015): Research paper titled "Measuring the Impacts of Internet Banking to Bank Performance: Evidence from Vietnam", Published in Journal of Internet Banking and Commerce, they evaluate the impact of internet banking to performance (profitability ratios, noninterest operating expenses and incomes) of banks in Vietnam. Internet banking has positive impacts on banks' income and in turn, banks' profitability. These effects are gradual, becoming significant three years after the adoption of Internet banking. In other words, this is the evidence to prove that, in developing countries, digital channels such as Internet banking still bring benefits to banks though these effects are observable after a longer period than in developed countries.

(Gannamaneni, Ondrus, & Lyytinen, 2015): Research paper titled "A Post - Failure Analysis of Mobile Payment Platform", published in 48th Hawaii International Conference on System Science, Page No.1159-1168, they examine the past failure of mobile payment platforms which is the main objective and results shows that no technology standard, lack of collaboration, and low value added

for consumers are some reasons for the repeated failure of transactions in past cases under study. Sponsor level, Platform level, User level are the various level which are majorly discussed in the light of transaction failure. Therefore, alignment of mobile payment platform in their context needs further research.

(Joshi, 2017): Research paper titled "Digital Payment System: A Feat Forward of India", published in National Multidisciplinary Conference on Digital Payment System and Rural India, Page No.3-12, In his study he found that there are many different techniques through which payment can be possible such as UPI, NACH, IMPS, BHIM etc. were promoted to develop cashless economy and especially since last little year remarkable growth in digital payment with respect to volume and value has been seen.

(Bhatnagar, 2017): Research paper titled "Demonetization to Digitalization: A Step toward Progress", Published in Management and Economics Research Journal, Page No.11-15, he find that digitalization compelled many people to use electronic mode of payment such as credit card, debit cards, Rupay cards, UPI, mobile wallets like Paytm POS and so on popular mode of payment but concern like hacking, cybercrime and safety of personal details still there and we have to develop user friendly websites, use of OTP & Local language to trained people about these technology. For the encouragement government start campaign like DigiDhan Abhiyan and vittiya Sakharata Abhiyan. Overall Demonetization is accelerating the pace of digital India.

(kakade & Veshne, 2017): Research paper titled "UNIFIED PAYMENT INTERFACE (UPI)- A WAY TOWARDS CASHLESS ECONOMY", published in International Research Journal of Engineering and Technology, Page No.762-766, they conclude that UPI has advantage over RTGS or NEFT as digital transaction service is available any time in case of UPI where NEFT or RTGS does not work in holidays or during out of banking hours.UPI facilitates the transfer of fund between two bank account over mobile platform. Mobile number need to be register with the bank account and requires Internet connection but rural area still big challenge as well as server error is also a problem in this area. UPI does not require any bank detail leads to transparent system and cashless economy.

(ALI, AKHTAR, & SAFIUDDIN, 2017): Research paper titled "DIGITAL PAYMENT FOR RURAL INDIA- CHALLANGES AND OPPOURTUNITIES", Published in International Journal

of Management and Applied Science, Page No.35-40. They analyze digital payment model in rural India as important development taking place like launch of many digital wallets empowering the parallel economy and ensure transformation towards digital payment along with the benefits such as transparency and ease of business. However certain issues like limited access to featured phones, issue of awareness towards digital transaction still there and transaction based on Aadhar number could be a game changer if executed effectively. IT infrastructure in rural area and high transaction charge further more challenge towards creating payment solutions to the rural sector.

(Podle & Rajesh, 2017): Research paper titled "Public Perception on Cashless Transaction in India", Published in Asian Journal of Research in Banking and Finance, Page No. 63-77, they conclude that Demonetizations pave the way to electronic payment in India. People use digital payment solution, where all transactions are in records make the transparency in the society. It reduces cost and risk associated with carrying cash, attempts also made to identify the challenges during the transaction. Many people having negative mindset while adopting new system, security problem, lack of knowledge on technology, high transaction cost however concludes that banking system and government need to set up perception of the general public.

(Sumathy & KP, 2017): Research paper titled "Digital payment systems: Perception and concerns among urban consumers", Published in International Journal of Applied Research, Page No. 1118-1122, They study focused on perception and concern among urban consumer as the vision of transforming India into digitally empowered society to realize ultimate goal of "Faceless, Paperless, and Cashless". The current study is descriptive. People should move towards cashless system so that cost efficiency, transaction status, and fraud can be traced etc. Mobile wallets are app-based stored value accounts, funded through credit or debit cards or via net banking. Paytm, Mobi Kwik, Free charge and Citrus Pay are some well-known mobile wallet examples. These wallets are primarily used for mobile recharges and bill payments. Mobile wallets usage crosses the boundaries of big cities and gains popularity in villages' also. The development in digital payments system makes a new spending behavior of persons in these areas. It is very clear that people feel habit to Use cash is the main barrier to trying digital payments, safety perception, the attitude, awareness are the determinants towards digital payment.

(Garg & Panchal, 2017): Research paper titled "Study on Introduction of Cashless Economy in India 2016: Benefits & Challenge's", Published in IOSR Journal of Business and Management

(IOSR-JBM), Page No. 116-120, They focus on the Study on Introduction of Cashless Economy in India 2016: Benefits & Challenge's with the help of structured questionnaire and analyzed using simple percentage method. The major benefits include curbing black money, counterfeit's fake currency, fighting against terrorism, reduce cash related robbery, helps in improving economic growth of our country. Major challenges that can hinder the implementation of the policy are cyber fraud, High illiteracy rate, attitude of people, lack of transparency & efficiency in digital payment system. The government has implemented a major change in economic environment by demonetizing the high value currency notes of – Rs 500 and Rs 1000 from 8th November 2016 and push India towards cashless future. The study shows that the introduction of cashless economy in India can be seen as a step in right direction. It helps in growth and development of economy in India.

(Omarini, 2018): Research paper titled "Fintech's and the Future of the Payment Landscape: The Mobile Wallet Ecosystem- A Challenge for Retail Bank", Published in International Journal of Financial Research, Page No. 97-116, he examines about the mobile wallet Ecosystem where the potential of growth is high in the consumer to business segment. Bank which represents traditional function of payment service provider as it is one of the profitable segments for retail banking are now facing challenges 'from high tech firm & start-ups but also mobile network operator is indeed challenge, thus quickly reshaping the payment sector and paving the way for more open environment where non-banking entity also participate in this mechanism. Mobile wallet can be a powerful tool to cope with the customer centric approach. This paper projected the new players and evolution of payment market as well as outlines the bank role in the new mobile payment environment.

(Sivathanu, 2018): Research paper titled "Adoption of digital payment systems in the era of demonetization in India", Published in Journal of Science and Technology policy Management, he deals with digital payment and future adoption specially after demonetization which empirically study the actual use of digital payment based on the some existing theories like unified theory of acceptance and use of technology and innovation resistance theory. The result of the study shows behavioral intension to use and innovation resistance affects the usage of digital payment system. Thus, actual usage influence by stickiness to cash payment system is fund to be moderate. The result of the study shall be useful for designing and optimizing the policy regarding the electronic

payment framework for digital payment system. A paradigm shift in the mindset of the Citizen is required regarding the usage of digital payment system apart from awareness and training, so the policymaker can consider the outcome of this study and develop policies accordingly.

(Sangeetha, Ramesh, & B, 2018): Research paper titled "A STUDY ON USAGE BEHAVIOUR RUPAY CARD BY THE RURALCUSTOMERS IN INDIA", Published in SYNDICATE- The Journal of Management, Page No. 48-58, They paper examines the Rupay card usage preference and effectiveness by rural consumers as government initiate scheme like PMJDY for the poor section of society with main objective of ensuring access to various financial services. ATM card does not allow multiple transaction free of cost and this become a major challenge when they are not aware about internet banking. As people mainly doing agriculture and their income are low, that's why people do not prefer high technologies and mobile solutions.

(Timilsina & Rao, 2019): Research paper titled "A Comparative Study of NEFT and IMPS as Retail Payments instrument in India", Published in THINK INDIA JOURNAL, Page No. 9672-9681,They makes a comparative study of NEFT and IMPS payments instrument in India. As larger volume of retail payment with smaller transaction size done with these two options and IMPS has an edge above NEFT while NACH is mostly preferred amongst the corporate and institutions mainly for bulk fund transfers, if transaction cost decreases people would prefer IMPS rather than NEFT which needs protection.

(singh, 2019): Research paper titled "A Review of Factors Affecting Digital Payments and Adoption Behaviour for Mobile e-Wallets", Published in International Journal of Research in Management & Business Studies, Page No. 89-96, He reviews the development of Mobile ewallets as a new technology for digital payment which leads to cashless country. Digital wallets are the most easier and simple way to bring the changes in daily payment and transactions. Major analysis shows that people using the e wallets for the mobile& DTH recharge, booking movie tickets, bill payments, money transfer etc. E wallet is the fastest, secured and convenient method of digital payment that's the main reason to adopt these kinds of technologies and digital India programme launched by the government acting as catalyst which leads to growth in this sector.

(Balasubramanian & K.M., 2019): Research paper titled "Mobile Banking and its Evaluation in the UPI Era", Published in A Journal of Composition Theory, Page No. 1204-1210, He examines

the Introduction of the various UPI based apps leads to mobile based transaction now days.UPI based transactions in India and its impact on the paperless transaction are the main focus to this paper, so that problem can be identified associate with this Unified Payment Interface is application that involves single window mobile payment system developed by the National Payment Corporation o India (NPCI). It is very easy to use when you set up a virtual UPI account in your mobile phone. UPI is the fastest payments gateway and Trending now a days. The study excluded the wallet based payment system that's also a mobile based payment platform. The Government has to strictly over look them to protect the customer's rights and proper systems to dispute the UPI related complaints especially the money debited from account and not received the benefits. It's a common error occurred sometimes due to various reasons. The money doesn't loss but it took 3 to 7working days. Study concluded that UPI is ideal for smaller fund transfer, when an amount is high than other modes of online transfer are preferable.

(SIBY, 2021): Research paper titled "A Study on Consumer Perception of Digital Payment Methods in times of Covid Pandemic", Published in International Journal of Scientific Research in Engineering and Management, Page No. 1-12, he concludes that people using digital payment method in the covid time period irrespective of their age, gender education, monthly income and profession. It also reveals that digital payment is positively related to age, education, profession, and monthly income. Profession and Monthly income have a relatively higher correlation with digital payment than other variables like age and education.

(Agrawal, Malik, Mishra, & Paul, 2021): Research paper titled "Moving from Cash to Cashless economy: towards Digital India", Published in Journal of Asian Finance and Economics, Page No. 43-54, They study examines the various opportunities creates in the payment space results into advancement of technology, descriptive statistics and ANOVA technique taken to analyze the result. Cash to cashless economy is the main purpose to be attained and measure the extent it is done. Recent government also support cashless system, want to reduce the corruption and there is no significant difference based on Age, Gender, Profession, Education and Income. Everyone begins to accept digital payment in the country however proper execution possible only when the education provided to the people before implementation.

(Ghosh, 2021): Research paper titled Adoption of Digital Payment System by Consumer: A review of Literature, Published in International Journal of Creative Research Thoughts (IJCRT) Page No.

412-418,He concludes that there is shift in cashless transaction after the demonetization, people can easily perform the transaction on the timely manner due to reminder facility offered in the system .Core reason behind this huge success is easily availability of smartphone and internet facility at cheaper rate and as well as in every hand. The entire paper is based on literature review of various authors which talks about various methods of digital payments why they are being adopted, how frequently it's being used, what is the future of digital payment in the coming years, etc. Post demonetization there has been and hike in digital payment which opened the gate for multiple digital wallet to enter India. Digital payments not only helps individual to payments or receive money it also performs multiple functions such as giving reminder about dues of any kind of payments to be made, it gives various offers to the user and its saves a lot of time, as per the initiative taken by the government of India to make a digital India and due to the increase in Smartphone selling and availability of internet at a high speed and at an affordable price this is one of the core factors for consumers to adopt the digital payment system as everything can be done at our finger tips.

#### **Research Gap**

There is necessity to emphasize on current gap which undertakes in the context of review of charges related to digital payment system as cost is the important element which impact the use of digit payment system. Therefore, a comprehensive review which compare the transaction charges to that of previously prevailed in the offline system would be beneficial to the existing player in the market and also accelerate the growth of digital payment system in near future.

#### Novelty of the study

Digital payment system will be one of the key factors which will decide the success of government's vision of making digital empowered economy. From being the management professional in finance sector we can contribute to fulfill the government's vision by performing the research related to payment charges in the relevant field which will be beneficial to whole ecosystem and pave the way of future digital India in the context of feasibility related to cost effectiveness.

#### Conclusion

The author concluded that the previous studies focused on the adoption of digital payment systems; some have studied factors affecting usage of digital payment systems. Similarly, earlier studies focused on dimensions of security, past researchers focused on measuring the impact of digital payment systems on customer satisfaction. Thus, most of the studies were limited to either one or two aspects of digital payment systems.

On scrutinizing various published national and international literatures, research articles and studies, the researcher found that numerous researches were carried out predominantly on the topics pertaining to internet banking, mobile banking, mobile wallets, card payments, electronic and mobile payment systems, etc., Most of these studies conducted earlier have taken the factors available in the Technology Acceptance Model (TAM) model and Unified Theory of Technology Acceptance and Usage Theory (UTAUT) model and tested them accordingly with their sample of respondents. Overall remarkable growth in digital payment system in terms of value and volume are seen.

#### **Bibliography**

- Agrawal, K., Malik, S., Mishra, D. K., & Paul, D. (2021). Moving from Cash to Caseless economy: Towards Digital India. *Journal of Asian Finance and Economics*, 43-54.
- ALI, S., AKHTAR, M., & SAFIUDDIN, S. (2017). DIGITAL PAYMENT FOR RURAL INDIA- CHALLANGES AND OPPOURTUNITIES. International Journal of Management and Applied Science, 35-40.
- Balasubramanian, M., & K.M., A. (2019). Mobile Banking and its Evoluation in the UPI Era. *A Journal of Composition Theory*, 1204-1210.
- Bhatnagar, H. (2017). Demonetization to Digitalization: A Step Toward Progress. *Management* and Economics Research Journal, Pages 11–15.

- Gannamaneni, A., Ondrus, J., & Lyytinen, K. (2015). A Post Failure Analysis Of Mobile Payment Plattform. 48 th Hawaii International Conference On System Sience, (pp. 1159-1168).
- Garg, P., & Panchal, M. (2017). Study on Introduction of Cashless Economy in India 2016:. IOSR Journal of Business and Management (IOSR-JBM), 116-120.
- Ghosh, G. (2021). Adoption of Digital Payment System by Consumer: A review of Literature, . International Journal of Creative Research Thoughts (IJCRT), 412-418.
- Joshi, M. C. (2017). Digital Payment System: A Feat Forward of India. National Multidisciplinary Confrence On Digital Payment System And Rural India, (pp. 3-12). Shendurni.
- kakade, R. B., & Veshne, N. A. (2017). UNIFIED PAYMENT INTERFACE (UPI)- A WAY TOWARDS CASHLESS ECONOMY. Inernational Research Journal of Enginnering and Technology, 762-766.
- Le, U., Le, P., & Dinh, V. (2015). Measuring the Impacts of Internet Banking to Bank Performance: Evidence from Vietnam. *Journal of Internet Banking and Commerce*.
- Omarini, A. E. (2018). Fintech and the Future of the Payment Landscape: The Mobile Wallet Ecosystem- A Challange For Retail Bank? *International Journal of Financial Research*, 97-116.
- Pande, A., Deshmukh, A., & Tambakhe, M. D. (2014). E-payment Gateway Model. International Journal of Computer Science and Information Technologies, 2569-2573.
- Podle, V., & Rajesh, P. (2017). Public Perception on Cashless Transaction in India. Asian Journal of Research in Banking and Finance, 63-77.

RBI. (2022). Discussion paper on charges in digital payment system. 1-25.

Sangeetha, s., Ramesh, S., & B, V. (2018). A STUDY ON USAGE BEHAVIOUR RUPAY CARD BY THE RURALCUSTOMERS IN INDIA. SYNDICATE- The Journal of Management, 48-58.

- Sharma, A., & Kansal, D. (2012). Mobile banking as Technology Adoption and Challanges, A Case of M Banking in India. *International Journal of Sciencetific & Research Publication*, 1-5.
- SIBY, K. M. (2021, march 1). A Study on Consumer Perception of Digital Payment Methods in times of Covid Pandemic. *International Journal of Scientific Research in Engineering* and Management ,, 05(03), 1-12.
- singh, G. (2019). A Review of Factors Affecting Digital Payments and Adoption Behaviour for Mobile e-Wallets. International Journal of Research in Management & Business Studies, 89-96.
- Sivathanu, B. (2018). Adoption of digital payment systems in the era of demonetization in India An empirical study. *Journal of Science and Technology Policy Management*.
- Sumathy, M., & KP, V. (2017). Digital payment systems: Perception and concerns among urban consumers. *International Journal of Applied Research*, 1118-1122.
- Timilsina, S., & Rao, C. A. (2019). A Comparative Study of NEFT and IMPS as Retail Payments instrument in India. *THINK INDIA JOURNAL*, 9672-9681.