

# Moving Towards Cashless Society – Literature Review

**Munni Agarwal<sup>1</sup>, Dr Monika Khatri<sup>2</sup>**  
Research Scholar<sup>1</sup>, Assistant Professor<sup>2</sup>  
mbam.agarwal@gmail.com<sup>1</sup>, monikaojhkh@gmail.com<sup>2</sup>  
School of Management & Commerce  
Poornima University, Jaipur (India)

## Abstract

In the era of technology, cashless modes of payment are getting high popularity, mainly among youth population living in urban areas. Still, the adoption of non-cash payment system is very low in disadvantaged group of the society. This paper is an attempt to get better understanding of various benefits and challenges associated with cashless payments, impact of various demographic factors on adoption of cashless payments and level of adoption of cashless modes for making and receiving payments at small trading counters. The various findings of this literature review will certainly help the policy makers and service providers in strengthening the cashless framework of the society and will provide a roadmap of further studies to the researchers.

**Key Words: Benefits, Cashless payment, Challenges, digital transactions, economy**

“The cashless society is being pushed to track and trace and control people and kill any underground markets.” -Alex Jones

## 1. Introduction

With a vision to transform India as a Digitally Empowered Society and knowledge economy, Govt of India started its flagship program that is ‘Digital India Program’ in 2015 under the Ministry of Electronics & Information Technology. India is moving towards cashless economy by significantly shifting to digital and electronic modes of payments like debit card, credit card, net banking, mobile wallets, UPI, Point of Sale swipe etc(Khurana, 2017)[1].

India is the 2nd largest telecom market in the world with 915 million wireless subscribers and world’s 3rd largest Internet market with almost 259 million broadband users (Manikanta, 2017) [2]. Jan Dhanyojana, BHIM App, check on leakages in Public distribution system, Direct Benefit Transfer (DBT), and UPI are some financial inclusion initiatives of the Govt(Mukhopadhyay, 2016) [3]. According to RozarpayFintech Reports, from FY 2019 to FY 2020, India saw a massive growth of 383% in cashless payment.

Cashless transactions reduce the cases of counterfeit currency and minimises crowd and work-burden in bank branches which is contextual need in global pandemic Covid 19. More uses of online modes of payments strengthens the banking system of a nation by leaving them with higher efficiency in handling, monitoring and controlling the fund transfers(Thilagavathy, 2017) [4].

How would a cashless economy be beneficial is question of many people. Being cashless not only increases the ease of living but also authenticates the money transfers and bring transparency. It reduces the chances of scams,

leakages and cheatings. Digital transactions put a check on corruption, black money and circulation of counterfeit currency(Pal et al., 2018) [5].

In India there is lot to travel in the path of being cashless. Main hurdles in this way are lack of financial infrastructure, low level of digital literacy, less availability of high-speed internet facility, perceived convenience in the use of cash, higher level of trust involvement in one-to-one dealing, hidden charges in digital transactions, several steps involved in refilling of e-wallets etc. (Kang, 2018) [6].

## 2. Rationale and scope of the study

A reasonable number of studies are carried out during the last decade in the area of cashless payments to better understand market participants' attitude towards digital modes and underlying motivations for its adoption. The main aim behind this study is to find out various themes of cashless economy, analyse the benefits and challenges of digital payments, changing attitude and awareness level in the people towards cashless payments and to find out various factors which are responsible for adoption or non-adoption of cashless payment system

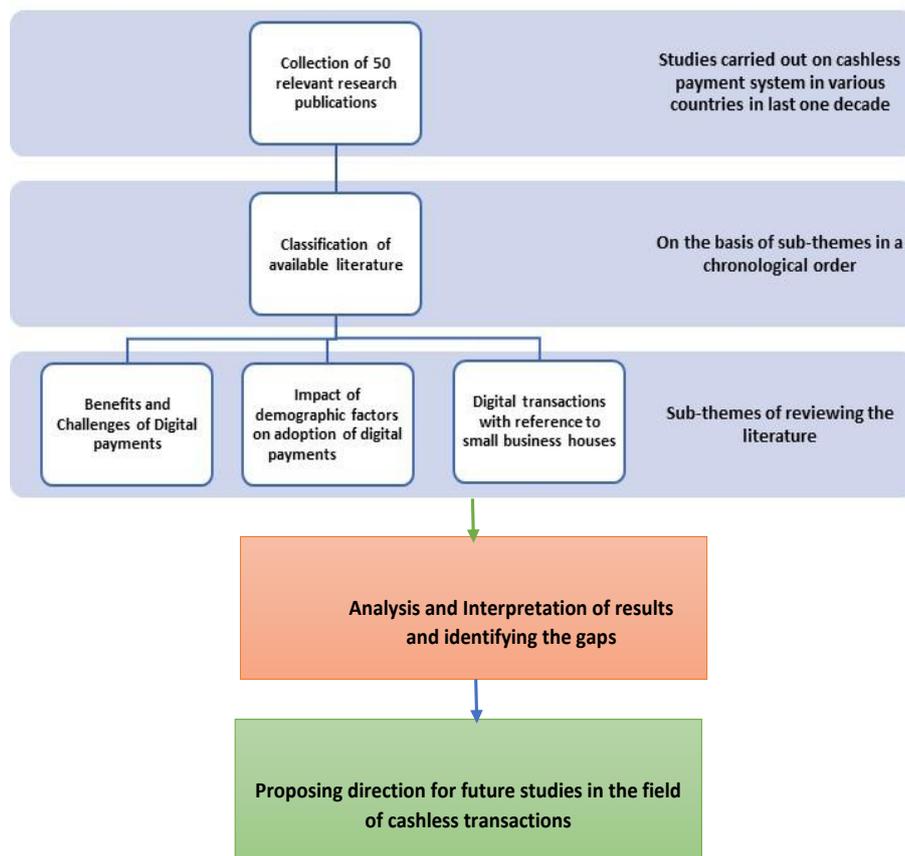


Figure 1. Flow chart of the study

by presenting an extensive literature review.

### Objectives of the study

- To arrange the various research articles on 'cashless payment system' in a logical manner.

- To classify the available literature on the basis of sub-themes.
- To analyse and interpret the findings and identifying the gaps.
- To propose direction for future studies in the field of cashless transactions.

### **3. Review of Literature**

To create better understanding of the subject, various research articles are arranged in a chronological order and classified in three broad sub themes i.e., benefits and challenges of digital payments, impact of demographic factors on adoption of digital payments and digital transactions with reference to small business houses.

#### **3.1 Benefits and Challenges of Digital payments**

(Ikpefan & Ehimare, 2012) Positive side of cashless payments are reduction in cost and risk associated with cash management etc. Hurdles in flawless digital payments are resistance to change, financial illiteracy, poor infrastructure, Insecure payments, Inefficient modes of payments, unstructured markets, accounts in several banks etc. [7]

(Emms, 2016) Author used practical demonstrations to show that these vulnerabilities can be exploited in the real-world with ease. [8]

(Mukhopadhyay, 2016) Several direct benefits of going cashless such as saving of high maintenance cost i.e., currency printing, storage, transportation, security, detection of counterfeits etc.; proper financial records, increase in tax collection, financial transparency etc. [3]

(Khurana, 2017) Benefits given by Govt on the use of digital modes of transactions such as discount of 0.75% on buying petrol through digital payments, two POS devices to each village with support of NABARD, RuPayKissan Card, discount on LIC premium paid online, exemption from service tax on card payments, insurance cover in online railway ticket booking, discount on toll tax paid through RFID card or Fastags etc. [1]

(Thilagavathy, 2017) Increase in tax collection, transparency and accountability in transactions, reduced red-tapism, bureaucracy, illegal activities and robbery, easy tracking and accounting are several benefits of cashless transactions. E-wallets are most preferred mode of online transactions in India. India is transforming from cash-centric to cashless economy at a faster speed. [4]

(M. A. Ali et al., 2017) The study gave input in undocumented vulnerabilities, identification of different weak spots in payment system CNP, and practical demo of at least three attack situations i.e., cardholder impersonation attack, distributed guessing attack, and betrayal attack. [9]

(Garg & Panchal, 2017) The biggest problem in cashless economy is cyber-crime and illegal access to primary data. [10]

(Singhraul & Garwal, 2018) Lack of Internet, financial literacy, non-operative bank accounts, lack of digital resources, perception of users, several restrictions on refill of digital wallets are some major challenges in adoption of digital payments. [11]

(Kang, 2018) Study discovered some requirements for mobile fintech service providers such as providing more convenience, lightening and simplification of procedure, strengthening infrastructure, stronger security, safety from malware attacks, better compatibility, supported by mobility of mobile services etc. [6]

(Ali & Gopalan, 2018) Strengths of E-wallets are financial inclusion, Easy to use, safety and security, easy to connect to other accounts, easy tracking etc. Weakness of E-wallets are cash preference, lack of infrastructure,

poor internet service, e-illiteracy etc. Opportunities with E-wallets are categorised as curb on black money and illegal activities, check on corruption, saving of currency maintenance cost etc. [12]

(Joshi, 2018) Various challenges involved in digital payments that are low level of digital literacy, lack of high-speed internet connectivity, risk of identity theft, habitual of using cash, low level of digital infrastructure in rural areas, attitude of scepticism in traders, high merchant discount rate charged by banks etc. [13]

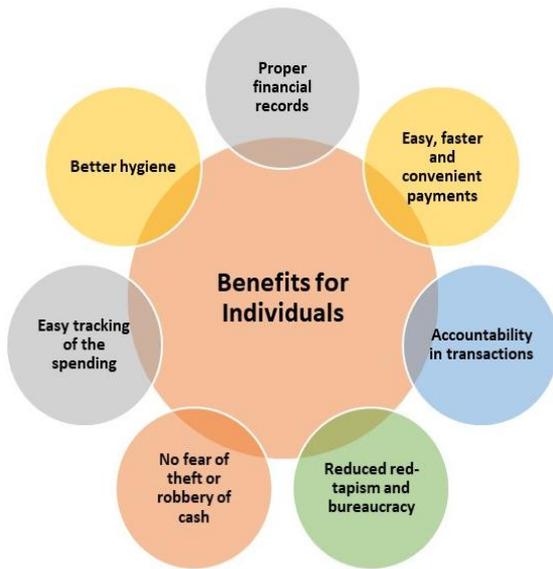
(Gulirano et al., 2019) Online payments is gaining higher level of trust among user in every area being it digital goods or services. Digitalisation in payment system is contributing towards the growth of the nation. Study made an attempt to explain the role of economic reforms in the development of cashless economy. This great beginning of transition is going to lead towards integration of the country in the world economy. [14]

(Chandrakala, 2019) Certain key benefits associated with cashless transactions are reduction in the cost of printing, storage, increased transparency, reduction in tax evasion, less availability of cash for illegal activities, hygiene, no delinquent of soiled notes or counterfeit currency etc. Challenges of digital transactions are costly swipe machines. [15]

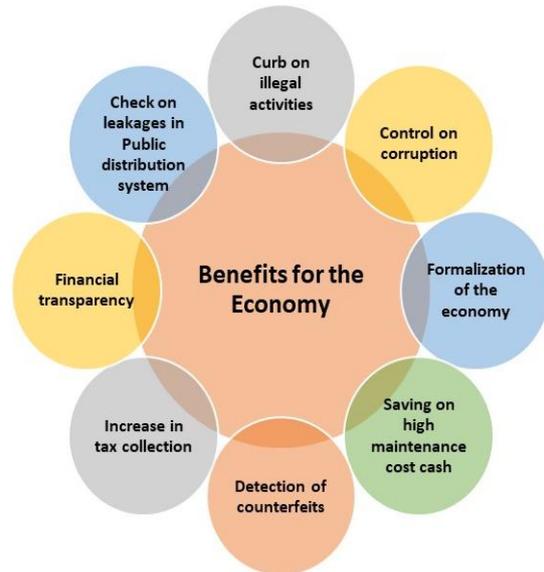
(C.E, 2019) Several benefits of using cashless mode such as increase in customer base, check on black money, pick pocketing, robbery, save in currency printing cost, increase in tax collection etc. De-merits are lack of bank accounts, financial illiteracy, habituality of using cash, non- acceptance of cashless payment by small traders, data loss, cyber-crime, hacking of account etc. [16]

(Hasan et al., 2020) Several challenges in the way of cashless economy are lack of education and knowledge, resistance to change, lack of grievance redressal body, leak of private information, not universal acceptability etc. Cashless schemes need to be marketed well, hidden and extra charges should be eliminated and educating the people in rural areas is highly needed. Adequate security measures and proper marketing of policies related to incentives for being cashless is a need for better transformation. [17]

(Charles, 2020) Various benefits of cashless India like, prompt settlement of transactions, ease of use, higher transparency, low risk of defaults etc. Some main challenges explored by author are cyber-crimes and digital illiteracy. [18]



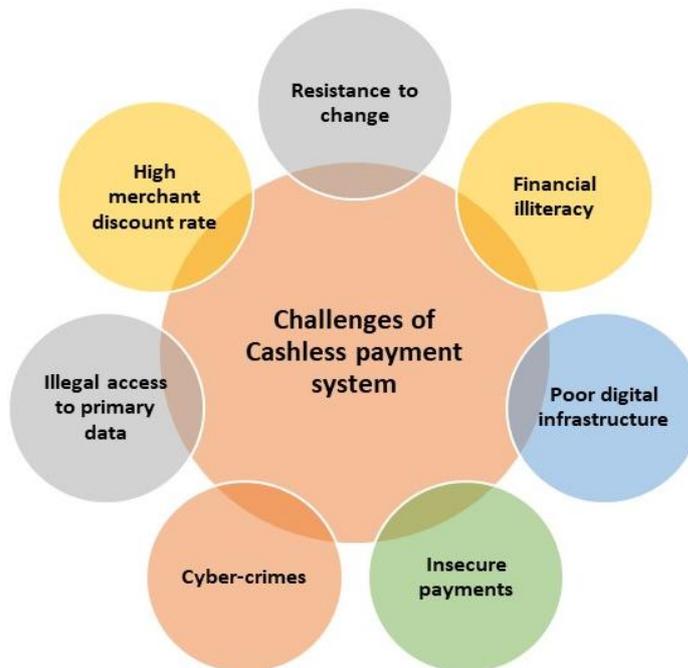
**Figure 2. Benefits of cashless payment system for Individuals**



**Figure 3. Benefits of cashless payment system for the Economy**

**Result Discussion**

People perceive cashless methods of payment safe, secure and convenient. Easy tracking of spending, hygiene, easy and faster payments, no fear of robbery and theft of cash are certain factors which motivates the users for



**Figure 4. Challenges of cashless payment system**

continuation of use of digital payments.

At the level of economy, financial transparency, curb on illegal activities, control on corruption, increase in tax collection, detection of counterfeits, saving in cost of printing and maintenance of currency, check on leakages in public distribution system etc. are some benefits of cashless society. Habit of using cash, lower financial

literacy, poor digital infrastructure, high cost involved, cybercrimes, high merchant discount rate are some main hurdles in the way of using digital payments.

Upliftment of disadvantaged group, nudging the behavioral change, strengthening of infrastructure, urbanization are some suggestive measures to develop a broad digital economy. Govt of India and Banking industry need to properly handle the issues related to safety and security to make the Indian economy cashless.

### **3.2 Impact of demographic factors on adoption of digital payments**

(Sumathy & KP, 2017) Both males and females are equally aware about online mode of payment. Education is also not a barrier in its adoption. People are preferring digital payments because of certain benefits involved but still there are some limitations in this way like frauds, hidden charges, habitual of using cash. [19]

(Rodriguez, 2018) Demographic factors such as age, gender, education no longer have any impact on adoption of digital payment in Switzerland. Convenience of use, secured payments, authenticity, easy storage of value, globalised payments are some advantages which motivate people to adopt cashless modes. Liquidity preference and minimum age to open bank account are certain barrier in adoption of digital payments. [20]

(Vally & Divya, 2018) Gender and Income of the user does not make any difference in adoption of technology in banking sector. Age and education play a significant role in adoption of technology. [21]

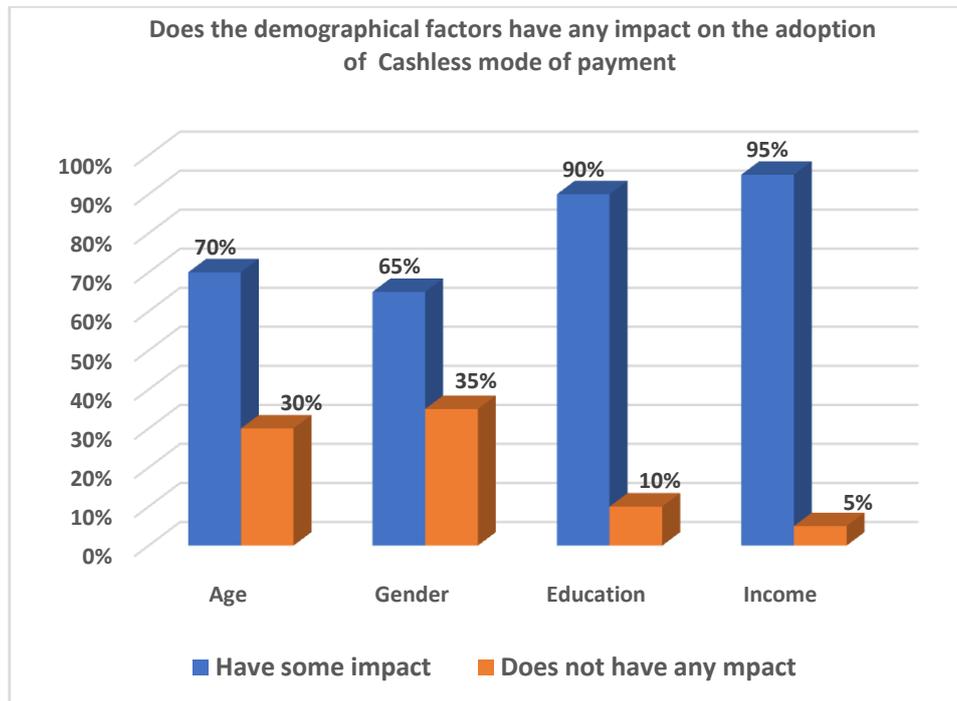
(Manda & Margana, 2019) Age, occupation and earnings of the user significantly impact the adoption of digital payments. People of the age group 25 to 50 are more comfortable in making online payments while Gender of the user doesn't impact the use of cashless modes of payments. Ease of transaction and security are major factors considered while using any mode of cashless payment. [22]

(Singh & Rana, 2019) Digital Banking is getting popular mainly in youth. The major factor affecting this adoption are Loyalty/ reward points (Monetary Incentives), Time, convenience, user friendly, security. Age, occupation, education qualification has no significant impact on its adoption. Most of the consumers prefer digital banking of SBI because of trust and reliability associated with the public sector bank. [23]

(Abidin et al., 2020) Social education (mainly focused on Muamalah Principles) plays an important role in anti-corruption activities and in upgrading awareness about social responsibility. Morality in individual behaviour and healthy human relations enhances social inclusion and promotes proper communication which ultimately puts a check on cybercrimes and corruption activities. [24]

(Shree et al., 2021) Males, persons of middle age group, persons living in metro cities, persons with higher qualification are more likely to use digital modes of transactions. People of lower income group, homemakers, unemployed and self-employed respondents prefer to use cash for payments. Past online frauds demotivate people from using cashless payment system and they rationally use a mix of cash and cashless modes. Trust involved in payment system drives the people to adopt them. [25]

## Result Discussion



**Figure 5. Does the demographical factors have any impact on the adoption of Cashless mode of payment**

Review of available literature reveal that in majority of the cases, males are more comfortable with the use of cashless payments. People of middle-age group, belonging to the higher income group and living in cities use cashless modes frequently when compared to others. Persons in service use more cashless modes for payment than businessman or homemakers. Education also has a positive and significant role in adoption of digital transactions.

### 3.3 Digital transactions with reference to small business houses

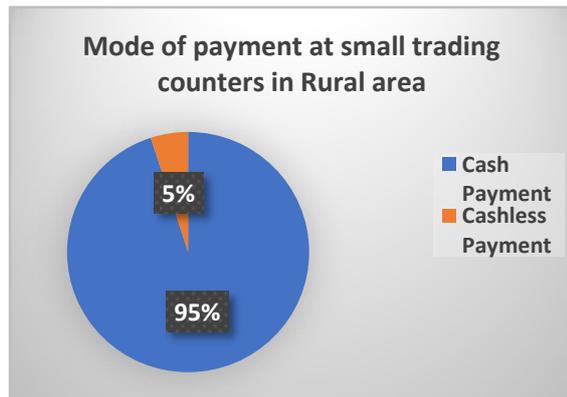
(J., 2014) Cashless modes are quite cost-efficient when compared to paper-based payment system. Challenges to the Policy implementation in Nigeria are Sustainable power supply, adequate infrastructure, proper identification of account holders, investment in technology and trainings, fraudulent activities, security breaches etc. Study gave some suggestions to Policy makers such as to infrastructure should be make easily available and affordable, small Business houses should be educated and empowered to adopt cashless modes, regulators should ensure the security of funds, Govt. incentives and motivations should be properly communicated etc. If the inclusion of small and micro business units is not considered in policy making then it will lead to a failure in development of cashless society. [26]

(Ligon et al., 2019) Reasons for adoption of cashless payments are demonetization, Customer Demand, Ease of use while reasons for non-Adoption are Lack of customer demand, Lack of awareness, Fear of being cheated etc. Present study concludes that the low rate of adoption of digital payment technologies is not because of

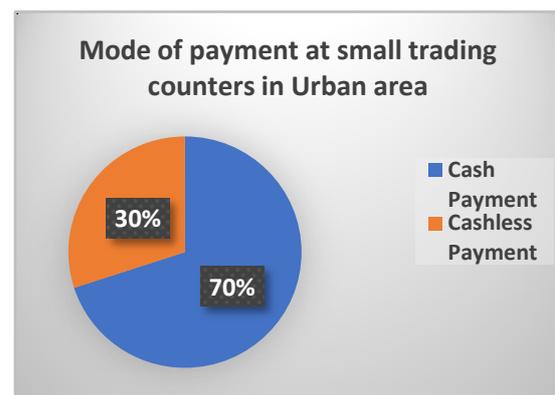
supply side barriers. It is rather due to demand side factors and taxes such as lack of customers wanting to pay digitally and concerns that records of mobile payments might increase tax liability. [27]

(Prokopenko et al., 2020) Generally companies take four criteria to judge their performance i.e., development of product and service, generation of new demand, customers' satisfaction and planning & management. This study proposed new parameters to evaluate performance of an enterprise in the era of digitalisation that are production planning, financial management, personnel management and overall Management system. [28]

## Result Discussion



**Figure 6. Cashless mode of payment adopted at small trading counters in Rural Area**



**Figure 7. Cashless mode of payment adopted at small trading counters in Urban Area**

Persons living in cities have started demanding for cashless modes for the payment of small payments at trading counters. But in rural and semi-urban areas, cash is still the most preferred mode of payment for both the trader and customers. Among all modes of cashless payments, E-wallets such as Google Pay, Phone Pay Paytm, Freecharge etc. are used at the highest to pay at offline business counters. Net-banking NEFT service is adopted for distant payment transfers to the suppliers. Use of Demand drafts and cheques is getting demotivated with the increasing awareness about modes of digital transaction.

## 4. Conclusion

This study concludes that India is rapidly growing towards a pretty promising scenario of cashless society. This will lead to increase in transparency in economic transactions which will further increase GDP of the economy. Future cashless Indian economy will help in increasing country's creditability and the level of investments. Digital wallets are playing a significant and responsible role in developing a virtual India. Mobile payment services are far convenient and simpler as that can be used with simple password or biometric authentication. India has a large potential for the growth and development with cashless society.

Though Govt. of India has taken many steps to facilitate cashless model of the economy and have launched many schemes but all this is not enough as the goal is very important to achieve and needs huge attention. Challenges associated with these fintech services related to the security of payments are yet to be met to be covered up. Every stake holder in cashless payment system being it Govt., regulators, service providers or users,

need to come forward to strengthen the system and to overcome the associated challenges.

## 5. Further Scope of Study

Further Scope of study exists in examining how cashless infrastructure can promote financial inclusion and up to what extent and the impact of cashless payments on volume of tax collection. Further Studies can be conducted to analyse the users' acceptance and their satisfaction-level with e-banking system. Study, using longitudinal designs, experimental designs and collecting data from different demographic conditions, comparison among various modes of online payments, analysing pre and post adoption behaviour will give more close idea of the situation.

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