



# CASH-FREE TRANSACTIONS AND SECURITY OF INFORMATION IN DIGITAL ERA: A STUDY OF CONSUMERS' PERCEPTION

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## ABSTRACT

Money is often said to be the lifeblood of any economy. Cash transactions are now easier because of the internet, cell phones, and other digital technology. The majority of activities in the current environment are cashless, and physical currency will lose its dominance in the future. Different platforms have been developed to conduct transactions without cash. Despite the expansion of digital payments, security worries have also grown. Digital payments will undoubtedly experience security problems, which could impede their expansion. As a result, this study aids in determining how consumers perceive cashless transactions, the factors that influence them, as well as how knowledgeable they are about information security. According to the research, mobile wallets and credit/debit cards are the two most popular payment methods among consumers. Consumers were influenced to use cashless transactions by ease, privacy, and security, and it was discovered that they are sufficiently aware of the protection of their information. So, it may require time for digital payments to become a popular method of payment, but this could have positive effects on the economy soon.

**Keywords:** Mobile wallet; privacy; security of information; users' perception; cashless economy.

## 1.0 INTRODUCTION

In the recent times digital payments to become a popular method of payment, but this could have positive effects on the economy soon. Because digital technologies are now a part of every industry, the information and communication technology sector are crucial to the growth of the nation's economy. Nowadays, markets have become more centred on technological innovations. The economy is often referred to as the internet economy or the economy that is digital. According to Tapscott D., 1996, the internet revolves around how individuals utilise technology in concert with their creativity and expertise to promote social growth, not technology itself. The online and social media worlds are a part of the lives of the younger generations. According to Gada, 2017, number of social media consumers has increased since their introduction, which has increased the value of a nation's digital economy today. Technology and digitalization rule over us. Everything has gone digital, from payments to purchasing to manufacturing. By implementing digital programmes to transform India into a society with higher digital capabilities, even India is moving towards

an economy based on technology. India's population has recently shifted away from traditional cash transactions in favour of cashless ones. Financial transactions that are conducted digitally without the use of actual cash are known as cashless transactions. With the development of the internet, consumers now have more convenience to conduct their financial activities anywhere and at any time thanks to online banking services and other mobile applications. However, with advances in technology like big data, the IoT, etc. Along with that they have a negative impact on customer privacy and security, which is now at greater danger. Therefore, the purpose of this study is to determine how customers feel about information security in the digital economy as well as cashless transactions.

## 2.0 EMERGENCE OF A CASHLESS SOCIETY

Cloud computing, QR code scanners, biometrics, big data, etc. have all started digitalisation and cashless payment easier with the widespread use of smartphones. One of the nations with a significant smartphone and mobile app user base is India. The main forces behind a cashless society are these cell phones, internet capabilities, and mobile applications. With the stroke of a button, whatever from a purchase to a financial payment to a transfer may be accomplished thanks to mobile devices. The Nielsen survey from 2016 found that generation X and millennials are active consumers of mobile banking. The Indian government supports a cashless, paperless, and faceless economy. Digital payments are getting quicker and more convenient as 4G and 5G networks become more widespread across the nation.

According to Shah, A. et al. (2016), rural India was given access to the National Optical Fibre Network (NOFN) broadband service as part of India's digitalization initiative. It links 250000 Grampanchayats nationwide. This makes it easier for rural India to have access to internet services. Additionally, the National Payment Corporation of India is increasing the number of availability of services to users of mobile banking, according to a 2014 report by BNY Mellon. Additionally, it was discovered that India has now caught up to China in terms of the utilisation of mobile payment methods. Digital payments can be made using a variety of techniques, including mobile wallets, online banking, banking cards, and mobile banking. UPI (Unified Payment Interface) programmes and mobile wallets have recently gained popularity. Paytm, Tez, Paypal, PhonePe, Freecharge, Rupay, BHIM, Aadhaar Pay, and even each bank has created their own banking applications are just a some of the widely utilised transaction apps. Amazon, Facebook, and other social media businesses, as well as virtual currencies like Bitcoin, are all attempting to get into the payments market.

Customers think a cashless world is easier and more transparent. Reduced black money benefits the government as much as consumers in a cashless economy. Geer quotes J. D. from the World Economic Forum as saying that various parties, including the consumers, start-ups, banks, business owners, and government, may have different reasons to discourage cash payments. Digital payments provide benefits, but there are also drawbacks, including technological difficulties, a lack of clarity, consumer acceptance, a need for sufficient bank balance, etc.

## 2.1 Growth of Cashless Economy

Numerous factors influence customers' attitudes towards a cashless society. The influence of the government on people's attitudes towards cashless transactions in India is one of the main causes. By providing mobile banking and internet banking services, both public and private banks encourage and assist their consumers in moving towards cashless transactions. With the use of mobile wallets, customers may monitor, transact, make payments, recharge, make bookings, etc. Consumers are drawn to cashless purchases in addition to all of these discounts, offers, and cash-back opportunities. According to the findings of the KPMG study, user-friendly navigation, easy payment processing, and tracking of payments are some of the elements that promote the usage of digital payments. According to Mahor, N. 2017, whether a transaction made using cash or without, users are influenced by IT, their level of willingness like to pay, social pressure, and their comfort level with payments.

## 2.2 Security and Privacy issues

Despite the fact that cashless transactions have many advantages, privacy concerns still exist. The number of dangers has also increased as a result of increasing technical development. due to the fact that technology has also been abused. The majority of mobile payment systems gather personal data from users in order to target offers and other incentives at them based on the data provided. Hackers may take advantage of this data to steal the personal information about the buyers. Malware apps can potentially lead to other issues. According to Sidi, F. et al. (2013), the level of awareness changes with education level. For instance, while customers with low education levels are unaware of technical precautions like screening attachments in emails and accessing privacy and policy information, users with higher educational backgrounds routinely update their passwords and generate unique passwords. In addition, Dean, D. et al. (2013) found that just 10% of respondents to a survey conducted by Liberty Global and Boston Consulting Group (BCG) engage in typical privacy protection practises such modifying privacy settings or choosing to opt in or out of data use. Every person's level of concern with their personal information is different. The millennial age is less worried about confidentiality than previous consumer generations, according to Rose, J. et al. (2014). Additionally, it was shown that wealthier countries care more about privacy than underdeveloped countries do. It is acknowledged that consumers' concerns about security grow as they become more diverse. According to Simon S.M. Ho and Victor T.F. Ng (1994), in order to allay customers' doubts and concerns regarding transactions, sufficient information about money-back guarantees, live demonstrations, and free trials should be made available. Therefore, customers must be more cautious when using digital transactions in order to eliminate privacy concerns, and regulatory authorities must offer consumers a clear, secure, and efficient payment system.

## 3.0 RESEARCH PROBLEM

The growth of cashless economy brings a huge change in the society. It helps in the smoother transactions at a lesser time and cost. It brings comfort and convenience to its users but the major concern is the safety and security of transactions as well as information. These concerns are the hindrances in the path of modern

cashless economy. The consumer fears about their cashless transaction and safety of information ensured by the service providers. These two issues are the primary concern in the present research problem. To address these problems the objectives are formulated for a meaningful conclusion and suggestion.

#### 4.0 OBJECTIVES OF THE STUDY

The research is limited to the following goals:

- i. In order to determine how consumers, feel about cashless transactions in the digital economy.
- ii. To determine what characteristics, lead consumers to choose cashless transactions
- iii. To evaluate consumer awareness regarding information security in cashless transactions.

#### 5.0 RESEARCH METHODOLOGY

Distributing structured questionnaires to consumers facilitated the collection of the study's main data. There can only be 260 responses in the sample. The investigation was carried out using a practical sampling technique. Using SPSS 23.0, percentage analysis and Chi-Square analysis were used to analyse the gathered data.

#### 6.0 DATA ANALYSIS AND INTERPRETATION

**Table 1: Demographic profile of respondents**

PROFILE	FREQUENCY	PERCENTAGE
<b>GENDER</b>		
MALE	108	41.53%
FEMALE	152	58.46%
TOTAL	260	100
<b>AGE</b>		
UPTO 25 YEARS	75	28.84
26- 35 YEARS	80	30.76
36- 45 YEARS	29	11.15
ABOVE 45 YEARS	25	9.61
TOTAL	260	100
<b>MARITAL STATUS</b>		
UNMARRIED	157	60.38
MARRIED	103	39.61
TOTAL	260	100
<b>EDUCATIONAL QUALIFICATION</b>		
MATRICULATION	14	5.38
INTERMEDIATE	20	7.69
UNDER GRADUATION	55	21.14
POST GRADUATION	71	27.30
OTHER HIGHER EDUCATION	100	38.46
TOTAL	260	100
<b>OCCUPATIONAL STATUS</b>		
STUDENT	56	21.53
EMPLOYED	153	58.84
HOMEMAKER	35	13.46
RETIRED	16	6.15
TOTAL	260	100
<b>ANNUAL INCOME</b>		
BELOW 2.5 LAKHS	66	25.38
2.5- 5 LAKHS	89	34.23
ABOVE 5 LAKHS	105	40.38
TOTAL	260	100

\*Source: Compiled from collected data

Table 1 shows the demographics of the respondents, showing that approximately 58.64% of them were female and the remaining 41.36% were male; the majority of respondents (30.76%) fall into the category of

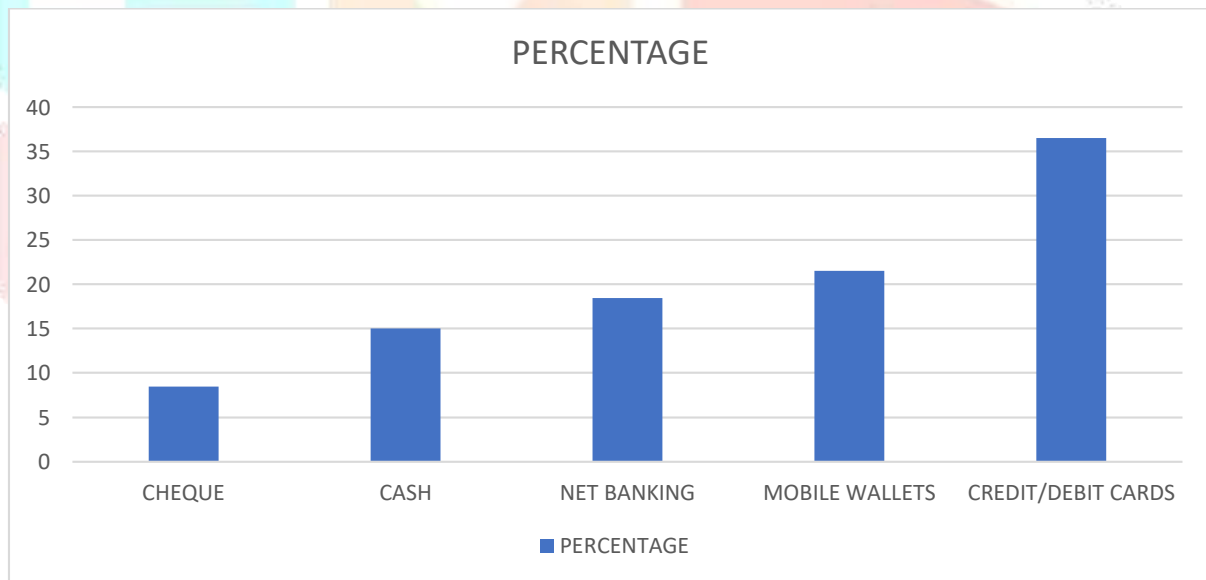
people who are between the ages of 26 and 35; 28.84% were under the age of 25; 11.15% were between the ages of 36 and 45; and 9.61% were over the age of 45; majority (58.84%) of respondents were found to be employed, 21.53% of respondents were found to be students, 13.46% were homemakers, and only 6.15% of respondents were retired employees. Of those who responded, 38.46% had higher education degrees, around 27.30% had postgraduate degrees, 21.14% had undergraduate degrees, 7.69% had intermediate degrees, and 5.38% had matriculated.

**Table 2: Mostly used payment method**

PAYMENT METHOD	FREQUENCIES	PERCENTAGE(%)
CHEQUE	22	8.46
CASH	39	15
NET BANKING	48	18.46
MOBILE WALLETS	56	21.53
CREDIT/DEBIT CARDS	95	36.53
TOTAL	260	100

\*Source: Compiled from collected data

**Figure 1: Most used payment methods**



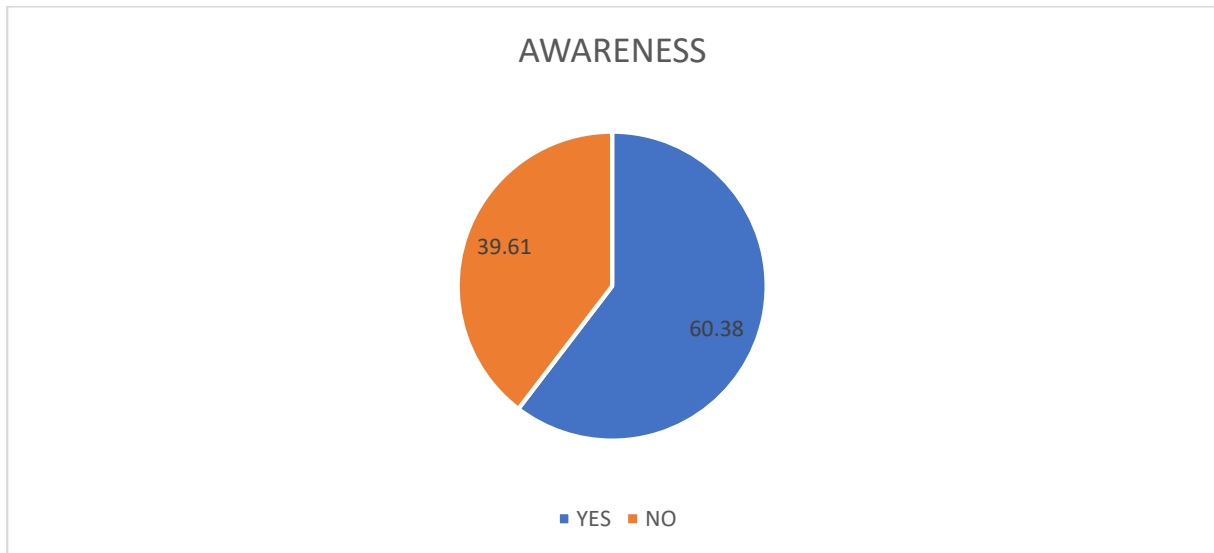
\*Source: Compiled from collected data

According to Table 2 and Figure 1, the greatest number of respondents —around 36.53%—choose debit/credit cards as the most convenient method of doing payment, followed by about 21.53% who prefer mobile wallets, 18.46% who choose net banking, 15% who choose cash, and only 8% who choose checks.

**Table 3: Awareness regarding “Digi-shala”**

AWARENESS	FREQUENCY	PERCENTAGE
YES	157	60.38
NO	103	39.61
TOTAL	260	100

\*Source: Compiled from collected data

**Figure 2: Awareness on Digi-Shala**

*\*Source: Compiled from collected data*

According to Table 3 and Figure 2, approximately 66% of respondents are aware of Digi-shala, which is a government manual for those who are using payment digitalised, while 39% were not.

**Table 4: Influential factors towards cashless transactions**

INFLUENTIAL FACTORS	FREQUENCY	PERCENTAGE
COMPULSION	15	5.76
DISCOUNTS AND OFFERS	17	6.53
CONVENIENCE	82	31.53
LOWER TRANSACTION FEES	8	3.07
PRIVACY AND SECURITY	98	37.69
SHORTAGE OF CURRENCY NOTES	29	11.15
OTHER	1	0.38
TOTAL	260	100

*\*Source: Compiled from collected data*

According to, Figure 3 and Table 4 indicate that most responders —about 38%— feel that one of the elements influencing the use of cashless transactions is privacy and security, followed by—around 32%— were based on convenience,—around 11%—were based on shortage of currency notes,—5%—were based on pressure and also discount and offers,—6%—were based on other factors, and—only 3%—were based on other factors.

## 7.0 HYPOTHESES TESTING

H<sub>01</sub>: There is no correlation between respondents' demographics and their knowledge of information security in cashless transactions.

**TABLE 5: ANALYSIS OF CHI-SQUARE TEST**

<b>PARTICULARS</b>	<b>AGE</b>	<b>GENDER</b>	<b>ANNUAL INCOME</b>	<b>EDUCATIONAL QUALIFICATION</b>
Before making an online purchase, review the terms and conditions.	0.153	0.028	0.562	0.051
Understanding of risks and threats	0.265	0.076	0.022	0.000
Before installing mobile applications, review the terms and conditions.	0.419	0.000	0.027	0.001
Determining whether the website's address starts with "https://"	0.521	0.096	0.400	0.026
Knowledge of security and privacy software	0.037	0.000	0.025	0.015
Understanding how to do business when utilising public WiFi	0.319	0.029	0.178	0.260
The use of an OTP as a secure payment method	0.947	0.027	0.049	0.014

*\*Source: Compiled from collected data*

The following is implied by Table 5 to have p less than 0.05. Consumers' gender is associated with their reading terms and conditions before engaging in online transactions and their knowledge that if using Wi-Fi which is publicly available, such kind of transactions at most should not be conducted. Consumers' educational background and annual income are also associated with their knowledge of the dangers and risks involved in such transactions. Before installing mobile applications, reading the terms and conditions is associated with gender, educational attainment, and annual income; only educational attainment is associated with determining whether a website which begin with "https://" for maintaining security purposes. Age, educational level, gender, and annual income are all related to knowledge of firewalls, spy detection software, and ad blocking software for privacy and security. One Time Password (OTP), a secure payment method, is also related to gender, educational level, and annual income. However, there is no correlation between marital status and work status and any of the factors.

## **8.0 CONCLUSION**

The changes that occur in the world of technology have an impact on every aspect of human existence. With the push of a button, smartphones and internet capabilities had made life easier. In the end, this raises consumers' requirements and expectations. Cash transactions have practically been replaced by cashless

payments in the contemporary environment due to their growing use. Although there aren't many restrictions when it involves privacy and security issues, how customers, banks, and other organisations utilise and manage data is what matters. Thus, the goal of the present research was to determine how customers felt about information security and cashless transactions in the age of digital commerce. According to the research, the majority of customers find that using a credit or debit card is the most convenient form of settlement, followed by using a wallet on their smartphones. It was also shown that the most significant elements influencing consumers' decision to engage in cashless transactions are privacy and security, followed by convenience. Additionally, users are aware of the government's Digi-shala instruction to make electronic payments. The study also suggested that consumers are sufficiently aware of the need for information security in cashless transactions. Therefore, customers must be able to adjust to these changes and go on despite the new innovations that occur in a cashless world.

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