

Consumers' Perception Towards Cashless Transactions and Information Security in the Digital Economy

Basukinath Jha and Gupta Nisha Lalji

The Byramjee Jeejeebhoy College of Commerce, Mumbai, Maharashtra
bacchunadkarni@rediffmail.com

Abstract: *In every economy, money is said to be the life blood. With the advent of internet, smartphones and other digital technologies has made cash transactions simpler. In the current scenario most of the transactions were made cashless and in future physical form of currencies will no longer be a king. There are different medium introduced to carry out cashless transactions. Despite the rise of digital payments there is also an increase in the security concerns. Digital payments are bound to have security issues which might hinder the growth of digital payments. Hence, this paper helps to identify the consumers' perception on cashless transactions, factors influencing cashless transactions and also identify the level of awareness of the consumers concerning the information securities. The findings reveal that the majority of the consumers prefer credit/debit card has the most comfortable mode of payment followed by mobile wallets. Privacy and security, convenience were the factors which influences consumers towards cashless transactions and it was also found that consumers has enough awareness on the information security in cashless transactions. Therefore, digital payments will takes a long time to become key payment option but this might benefit the economy in the near future*

Keywords: Cash less transactions, digital economy, digital payments, digital technology, information security

I. INTRODUCTION

Since the origin of the internet and other technological transformations has brought a massive changes in the day today life of every individuals. In the current scenario, Information and Communication Technology sector plays an important role in the development of the country's economy because every sector depends on digital technologies. Markets are now more focused on digital technologies. The economy is also called as digital economy or internet economy. Don Tapscott introduced the term digital economy in his book called "The Digital Economy: Promise and peril in the age of networked intelligence". According to Tapscott, D. (1996) says that networking is not about technology it is all about how human uses technology and also their creativity and knowledge to create social development. The current generations are living with the world of social media and e-commerce. According to Gada (2017) says that since the launch of internet and social media users there is online population which ultimately today increases the worth of digital economy of a country. We are controlled by technology and digitalisation. Digitalisation is found everywhere from manufacturing, purchase to payments. Even India is moving towards digital economy by launching digital programmes in order to transform India to a digitally enhanced society. In recent times, the people of India are moving towards cashless transactions than physical cash transactions. Cashless transactions are those financial transactions which takes place electronically without the presence of physical cash. With the advancement of internet, online banking facilities and other mobile applications has made consumers more convenient to do their transactions anywhere and at any time. Although with the developments in technology in the form of big data, internet of things, etc. They also have a dark sided effect in terms of security and privacy of the consumers is now in greater risks. Therefore, this study is an attempt to identify the consumers' perception towards cashless transactions and also about information security in the digital economy.

II. DEVELOPMENT OF CASHLESS SOCIETY

With the penetration of smartphone, cloud computing, big data, biometric, QR code scanner, etc., has made digital or cashless payment simpler. India is one of the countries which consist of major user of smartphones and mobile applications. These smartphones, internet facilities, mobile applications are the key drivers for cashless society. Mobile devices have transformed the entire world by a click of a button anything from purchase, payment or transfer can take place. In a survey conducted by Nielsen in 2016 identified that millennial and generation X are engaged mobile banking users. Government of India promotes faceless, cashless and paperless economy. With the increase in the availability of 3G and 4G networks across the country, the digital payments becoming faster without any inconvenience. According to Shah,

A. et al. (2016) as part of digitalisation programme in India, National Optical Fibre Network (NOFN) broadband facility was provided to rural India. It connects 250000 Grampanchayats in the country. Thereby, also helps the rural India to access internet facilities. And also according to the study made by BNY Mellon (2014) found that the National Payment Corporation of India (NPCI) is expanding the range of services available to mobile banking users. It was also found that recent use of mobile payments mode has brought India in line with China. There are various methods for digital payments such as mobile banking, internet banking, banking cards, mobile wallets, etc. In recent time mobile wallets, UPI (Unified Payment Interface) applications are being popularized. Some of the popularly used transaction apps are Paytm, Tez, Paypal, PhonePe, freecharge, rupay, BHIM, Aadhaar pay, and even every bank has developed their own banking apps. There are social media companies such as amazon, facebook and electronic currencies like Bitcoins seeking to enter the payment market. Consumers believe that the cashless society is more transparent and convenient

Cashless economy benefits both the consumers as well as the government by reducing the black money. According to Geer, J. D. in world economic forum says that government, business owners, banks, start-ups and consumers may have different motives to knock down cash payment. Despite advantages, there are also barriers in digital payments such as technical issues, lack of clarity, consumers' acceptance level, enough bank balance, etc.

FACTORS INFLUENCING TOWARDS CASHLESS ECONOMY

There are various factors which influence consumers towards cashless society. In India, one of the primary factors is the impact of government on consumers towards cashless transactions. Both private and public banks also promote and help their customers towards cashless transactions by offering mobile banking and net banking facilities. Consumers can monitor, transact, make payments, recharge, booking etc., done with the help of mobile wallets. Apart from all these discounts, deals, cash-back, 24x7 access and other facilities also attract consumers towards cashless transactions. From the result of the study made by KPMG, some of the factors which enhance the use of digital payments are ease of doing payment, tracking of payment, and friendly user navigation. According to Mahor, N. (2017) identified that whether it is cash or a cashless transactions individuals are influenced by information technology, willingness to pay, social influence, and comfort zone of payments.

INFORMATION SECURITY AND PRIVACY IN CASHLESS TRANSACTIONS

Despite of many benefits in cashless transactions there is a question about the privacy concern. Increasing technological advancement has also increases the level of risks. Because technologies were also begin used for negative purposes. Most of the mobile payments systems collect the personal information about the users to provide them with offers and other benefits based on the information given. This information can be misused by hackers to steal the personal details of the consumers. There are also malware apps which causes other problems. Sidi, F. et al. (2013) found that with the education qualification the awareness level changes for example consumers with high education background change their password often and create unique password whereas, consumers with low education qualification are not aware of technical measures such as scanning e-mail attachments, reading privacy and policy information. And also Dean, D. et al. (2013) identified in the survey by Boston Consulting Group (BCG) and Liberty Global that only 10% of the respondents undertake common privacy protection activities such as changing privacy settings or opting into or out of data use. Concern about their personal information differs with every individual. According to Rose, J. et al. (2014) says that millennial generations are less concerned about their privacy than other generation of consumers. It was also found that developed countries are more concerned about

privacy than that of developing countries. It is understood that depending on the nature of the consumer the concern for security increases. Simon S.M. Ho and Victor T.F. Ng (1994) says that there should be proper awareness in terms of money back guarantee, live demonstration, free trials in order to reduce fears and worries about transactions. Thus, to reduce the privacy issues consumers has to be more aware about using the digital transactions and also regulatory authorities has to provide the consumers with transparent, secured and effective payment system.

OBJECTIVES OF THE STUDY

The study is confined to the following objectives

To identify the consumers perception on cashless transactions in digital economy

To identify the factors influencing consumers towards cashless transactions

To analyse the awareness of the consumers concerning the information security in cashless transaction

III. RESEARCH METHODOLOGY

The primary data for the study was collected through distributing structured questionnaires among the consumers. The sample size is limited to 160 respondents. The study was conducted based on the convenient sampling technique. The data collected was analyzed by Percentage analysis and Chi-Square analysis using SPSS 23.0.

IV. ANALYSIS AND DISCUSSION

Table 1 Demographic profile of the respondents

PROFILE	FREQUENCY	PERCENTAGE
Gender:		
Male	58	36.3
Female	102	63.7
TOTAL	160	100
Age:		
Below 30 years	63	39.4
31-40 years	67	41.9
41-50 years	17	10.6
Above 50 years	13	8.1
TOTAL	160	100
Marital status:		
Married	107	66.9
Unmarried	53	33.1
TOTAL	160	100
Educational qualification:		
HSC	24	15
Diploma	50	31.3
Under Graduate	35	21.9
Post Graduate	41	25.6
Doctorates	9	5.6
Others	1	0.6
TOTAL	160	100
Status:		
Employed	138	86.3
Homemaker	10	6.3

Students	11	6.9
Retired	1	0.6
TOTAL	160	100
Monthly income:		
Below15000	64	40
15000-30000	48	30
30001-45000	23	14.4
45001-60000	15	9.4
Above60000	10	6.3
TOTAL	160	100

Source: Primary Data

Table 1 illustrates the demographic profile of the respondents in which around 64% of the respondents were female and remaining 36% of the respondents were male; majority(42%)of respondents falls under the category of 31-40 years of age, 39% were below 30 years of age, around11%werebetween41-50 years of age and 8% were above 50 years; majority (67%) of the respondents were married; 31% of the respondents holds diploma, around 26% of the respondents were post graduates, 22% of the respondent were under graduate degree, 15% respondents holds HSC, 6% of the respondents were doctorates and 1% of the respondent falls under other educational qualification;majORITY(86%)ofrespondentswereemployed,7% of the respondents were students, 6% were homemaker and only 1% of the respondent was retired employee; majority (40%) of respondents monthly income in the category of below 15000 and only 6% of the respondents monthly income was above 60000.

Table2 Most comfortable mode of payment

MODEOF PAYMENTS	FREQUENCY	PERCENTAGE
Credit/debitcards	75	46.9
Mobile Wallets	36	22.5
Net Banking	28	17.5
Cash	19	11.9
Cheque	2	1.3
Total	160	100

Source: Primary Data

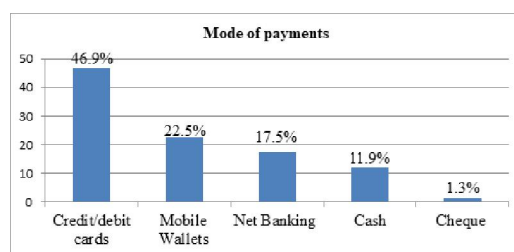


Figure1 Most comfortable mode of payment

Table 2 and Figure 1 show that the majority of the respondents around 47% uses credit/debit card has the most comfortable mode of the payment, around 23% prefers mobile wallets, around 18% prefers net banking, around 12%prefers cash and only1%prefer cheque has the most comfortable mode of payment.

Table 3 Awareness on “Digishala”

AWARENESS	FREQUENCY	PERCENTAGE
Yes	107	66.9
No	53	33.1
Total	160	100

Source: Primary Data

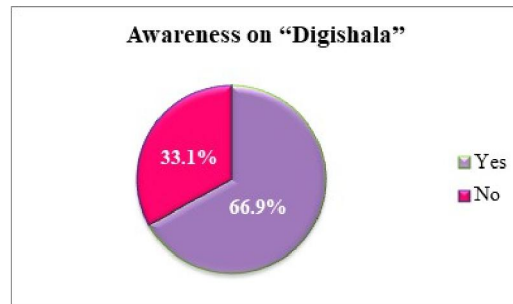


Figure 2 Awareness on "Digishala"

Table 3 and Figure 2 shows that around 67% of the respondents were aware of digishala a government guide for using digital payment and 33% of the respondents were not aware of digishala

Table 4 Factor influencing towards cashless transactions

FACTORS	FREQUENCY	PERCENTAGE
Privacy and security	78	48.8
Convenience	60	37.5
Compulsion	5	3.1
Discounts and offers	5	3.1
Lower transaction fees	1	0.6
Shortage of currency notes	9	5.6
Others	2	1.3
Total	160	100

Source: Primary Data

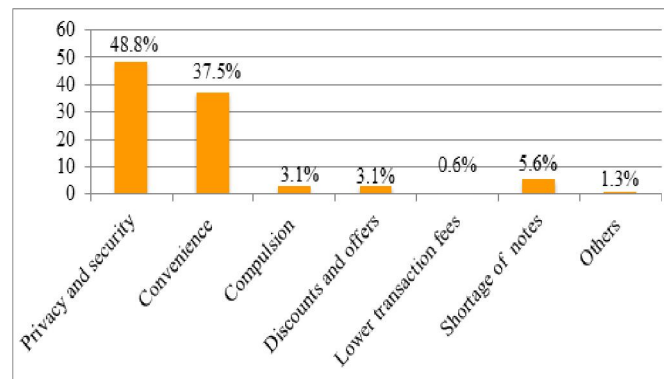


Figure 3 Factor influencing towards cashless transactions

Table 4 and figure 3 shows that the majority of around 49% of the respondents feels that privacy and security is one the factor which influences towards cashless transactions followed by around 36% were based on the convenience, around 6% were based on shortage of currency notes, 3% were based on compulsion and also discount and offers, 1% based on other factors and only 0.6% prefer lower transaction fees.

Chi-square analysis

H01: There is no association between demographic profile of the respondents and consumers awareness on information security in cashless transaction

Ha1: There is an association between demographic profile of the respondents and consumers awareness on information security in cashless transaction

Table 5 Chi-square analysis based on consumer awareness on information security in cashless transaction

Statements	Gender	Age	Educational Qualification	Monthly Income
Read terms and conditions Before online transactions	0.038*	0.163	0.061	0.572
Awareness on threats and risks	0.066	0.255	0.001*	0.026*
Read terms and conditions before installation of mobile Applications	0.000*	0.429	0.004*	0.025*
Checking the website whether it Begins with“https://”	0.086	0.511	0.028*	0.410
Awareness of privacy and Security softwares	0.000*	0.047*	0.014*	0.026*
Awareness on transactions on Using publicWi-Fi	0.030*	0.309	0.280	0.188
Usage of OTP a secure Mechanism in digital payment	0.026*	0.957	0.015*	0.039*

*Source: Primary Data, *significant at 5% level*

Table 5 infers that the following has $p < 0.05$ Gender of the consumers has an association with they read terms and conditions before proceeding to online transactions and also they were aware that online transactions should not be done using public Wi-Fi facilities; educational qualification and monthly income of the consumers has an association that they are fully aware of the threats and risks associated in online transactions; gender, educational qualification and monthly income has association with they read the terms and conditions before installation of mobile applications; only educational qualification has an association with checking the website whether it begins with “https://” for security purpose; gender, age, educational qualification, monthly income has association with the awareness on ad blocking software program, spydetection program, firewalls for privacy and security purposes; gender, educational qualification and monthly income has association with the usage of One Time Password (OTP) is a secure mechanism in digital payment. However, marital status and employment status does not have association with any of the variables.

V. CONCLUSION

Transformations that take place in the digital world have impacted in every phrase of human life. Smartphones and internet facilities had made life simpler by a click of a button. This ultimately increases the needs and expectations of the consumers. In the current scenario with the increasing use cashless payments has almost substituted the physical cash transactions. Though there are few limitations, when it comes to the privacy and security concern but it depends on how consumers, banks and other agencies use and handle the information. Therefore, the purpose of this study was to identify the consumers’ perception towards cashless transactions and information security in digital economy. The findings reveals that majority of the consumers prefers credit/debit card has the most comfortable mode of payment followed by mobile wallets. It was also found that privacy and security, followed by convenience are the most important factors which influence consumers towards cashless transactions. Consumers are also aware of Digishala a government guide for using digital payments. It was also inferred from the study that consumer has enough awareness on the information security in cashless transactions. Thus, in spite of the new innovations that takes place in cashless society consumers must able to adapt with these changes and move forward.

REFERENCES

- [1] Tapscott, D., The digital economy: Promise and peril in the age of networked intelligence, Vol. 1, New York: McGraw-Hill, 1996.
- [2] Gada, K., The Digital Economy In 5 Minutes, Forbes Magazine, 2017, retrieved on April 14, 2018 from <https://www.forbes.com/sites/koshagada/2016/06/16/what-is-the-digital-economy/>

- [3] Nielsen., Mobile Money: From shopping to banking to payments, how mobile is transforming commerce around the world, Global Mobile Money Report, 2016, retrieved on April 26, 2018, from <http://www.nielsen.com/be/en/insights/reports/2016/mobile-money.html>
- [4] Shah, A., Roongta, P., Jain, C., Kaushik, V., and Awadhiya, A., Digital Payments 2020: The Making of a \$500 Billion Ecosystem in India, The Boston Consulting Group, 2016.
- [5] Mellon, B. N. Y., Global payments 2020: transformation and convergence, New York, NY, 2014, retrieved on April 26, 2018, from https://www.bnymellon.com/_global-assets/pdf/business-insights/global-payments-2020-transformation-and-convergence.pdf
- [6] Geer, J. D., Who will be king in a cashless world? Retrieved May 19, 2018, from <https://www.weforum.org/agenda/2015/08/who-will-be-king-in-a-cashless-world/>
- [7] Digital payments-Analysing the cyber landscape-KPMG US, retrieved on April 14, 2018, from <https://home.kpmg.com/in/en/home/insights/2017/04/digital-payments.html>
- [8] Mahor. N, A Study of the Customer Perception of the Risk of cash and cashless transaction, Kaav International Journal of Economics, Commerce & Business Management, 4(4), 2017, 103-119.
- [9] Sidi, F., Jabar, M. A., Mustapha, A., Sani, N. F., Ishak, I., & Supian, S. R., Measuring Computer Security Awareness on Internet Banking and Shopping for Internet Users, Journal of Theoretical & Applied Information Technology, 53(2), 2013, 210-216.
- [10] Dean, D., Kalapesi, C., and Rose, J., Unleashing the Value of Consumer Data, The Boston Consulting Group, 2013, retrieved on April 26, 2018, from <https://www.bcg.com/publications/2013/big-data-advanced-analytics-marketing-sales-unleashing-the-value-of-consumer-data.aspx>
- [11] Rose, J., Barton, C., and Platt, J., Data Privacy by the Numbers, Boston Consulting Group, 2014, retrieved on April 14, 2018 from <https://www.bcg.com/en-in/publications/2014/data-privacy-numbers.aspx>
- [12] Simon S.M. Ho and Victor T.F. Ng, Customers' Risk Perceptions of Electronic Payment Systems, International Journal of Bank Marketing, 12(8), 1994, 26-38.
- [13] Upasna Saluja and Norbik Bashah Idris, Relative Risk Benchmarking Enabling Better Decision Making For Managing Information Security Risks, International Journal of Computer Engineering and Technology (IJCET), Volume 5, Issue 10, October (2014), pp. 11-20.
- [14] N.K. Senthil Kumar, M. Uvaneshwari, M. Viswanathan and K. Amsavalli, One-Tier Cache System Applied to Data Mining Techniques to Enhance the Information Security in the Cloud. International Journal of Civil Engineering and Technology, 8(10), 2017, pp. 1709-1717.
- [15] Satish Kumar Garg, Arun Gaur and S. P. Gupta. Information Security Using Modulation Technique. International Journal of Electronics and Communication Engineering & Technology, 7(1), 2016, pp. 107-114.