

Impact of Mobile Wallets on Cashless Transaction

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Abstract: The advancement of technology and initiatives of government have contributed to the development of mobile payment. Due to technology, mobile users can nowadays use their smart phones to make money transaction or payment by using applications installed on the phone. The growth of mobile payment increased the usage of electronic payment where goods and services are transacted without the use of physical cash. After demonetization e-payment system especially mobile wallet has developed as the popular medium through which no physical presence of transactions was made. The growth of mobile applications and mobile wallets positively contributes to economic growth and cashless transaction. The paper aims to review the literature on the effect of mobile wallet on cashless transaction and usage of various kinds of mobile wallets at present.

Index terms: Mobile wallets, consumer, cashless transaction, India.

I. INTRODUCTION:

The Demonetization process in India has great impact on cashless transaction. It encourages usages of credit card, debit cards, online payment and mobile wallets for financial transaction among public. The demonetization has influenced the digital payment platforms in India. The Digital transaction e-wallets have significant impact on increasing usage of cashless transaction. The Usage of the mobile wallet and its application is trend among young population ranging the age group of 18-25 years. The mobile wallet provides services through companies and individuals can pay and receive payments via mobile applications.

India has the largest market in the global arena in terms of Smartphone and mobile phone apps for payment transactions. Payment gateways and banks are approaching toward cashless transaction. Meanwhile, mobile apps play a big part of the Government's initiative of "Cashless India". This will have an enormous impact on making India a digitalized cashless economy. This study focuses on the impact of mobile wallets on cashless transaction.

Picture: Cashless Transaction based on UPI and Debit & Credit Cards Usages in India

Month	UPI		Debit+Credit Cards	
	Volume (m)	Value (₹ cr)	Volume (m)	Value (₹ cr)
November 2016	0.3	90	205.5	35240
December	2	700	311	52220
January 2017	4.2	1660	265.5	48120
February	4.2	1900	212.3	39150
March	6.2	2390	229.7	41620
April	6.9	2200	231.1	43140
May	9.2	2770	233.4	45080
June	10.2	3070	232.4	46820
July	11.44	3381	237.6	43933
August	16.6	4130	243	45710

Revised Manuscript Received on December 22, 2018.

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The RBI Reported that mobile payment startup cashless transactions 13.5% growth in September 2017, Digital transaction has grown from Rs.109.82 trillion in August to Rs.124.69 trillion in September, and the maximum was in March at Rs.149.59 trillion.

Table1. Consumers using of Mobile Wallets and Number of Download the difference types of Mobile Wallets

Mobile Wallets	Number of Downloads
Paytm	50 Million
Freecharge	10 Million
Mobikwik	10 Million
PhonePe	10 Million
BHIM	10 Million
Google's Tez (googlepay)	10 Million
SBI Buddy	10 Million
ICICI Pockets	5 million
HDFC PayZapp	5 million
Oxigen	5 million

From the above table it is clear that the usage of paytm is most popular among public which contribute to 50 million.

II. PROCEDURE TO USE MOBILE WALLETS

Step: 1.Download the mobile wallet application (Ex. Paytm, Googlepay, Jiomaney, Phonepe, Mobikwik, PayUmoney, Citrus, Oxigen)

Step: 2.Add your debit card or credit card information to the mobile wallet applications.

Step: 3.While you check the available participating traders, choose your card and access to the mobile wallet. If you are making an in store consumption, just hold your mobile device at the terminal.

The mobile wallet are providing service through several transaction processing methods. This includes, but not limited to:

- ❖ **Mobile based billing** – The consumer mostly receive and send the payment through their mobile device providing the service (or same invoice).

- ❖ **SMS-based transactions** – The payment transaction is instructed by banks and they send a SMS with smart code. In this case of the payment transaction procedure, money can be credited or debited from the designed banks account, credit card or mobile service.

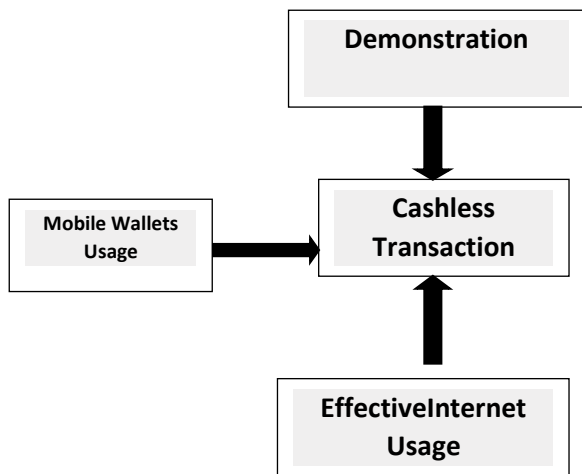


- ❖ **Mobile online payments** – Permits a consumer to send or receive the payment via the mobile application.
- ❖ **Near-field communications (NFC)** – Type of consumer adopt a mobile app and special hardware which is incorporated in to the mobile device to network with a payment-processing workstation.

**“My mobile...my bank...my wallet...”
- Narendra Modi, PM**

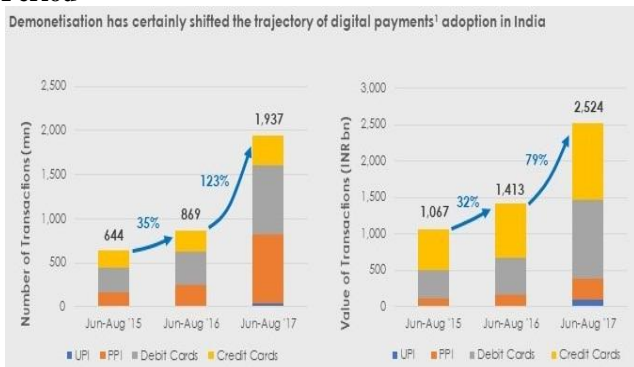
Total mobile wallet transactions in India are on track to reach INR800billion in 2017, a growth of 113% when compared to previous year. These figures are provided by Global Data, a data and analytics firm. The industry expected that market will remain to grow at a sharp pace and exceed the INR 1 trillion mark in the forthcoming years. Meanwhile the Indian government is vigorously promoting the use of e-payments. It is also giving a lot of importance on safety measures to safeguard the customer interests.

Objective of the study to review of literature on usage of mobile wallet and its impact on cashless transaction.

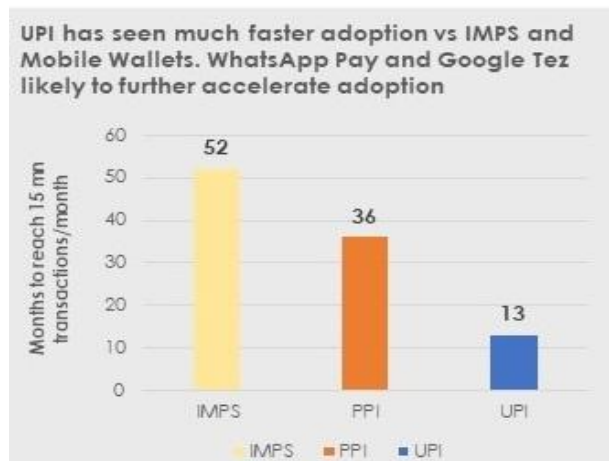
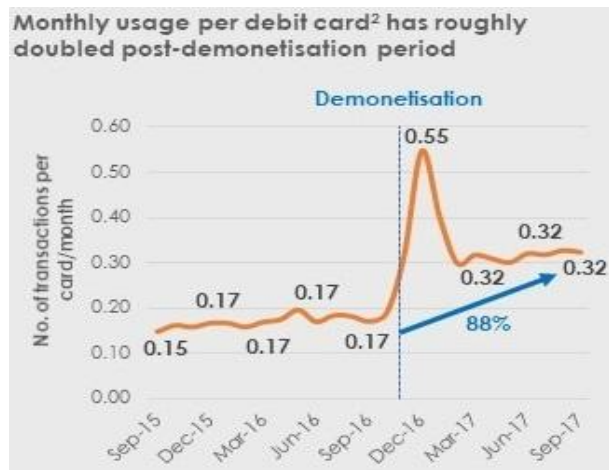
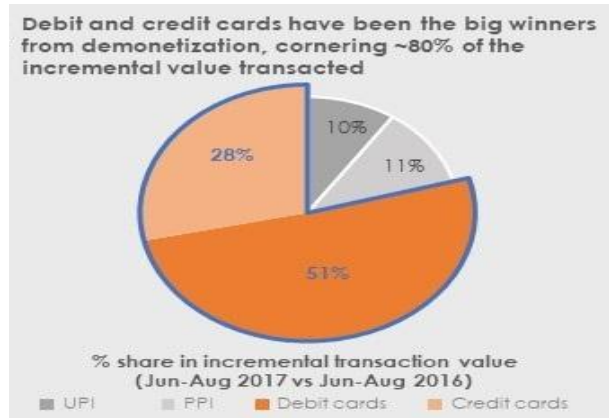
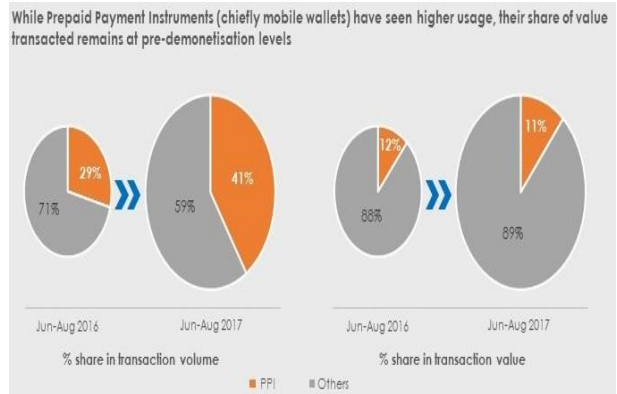


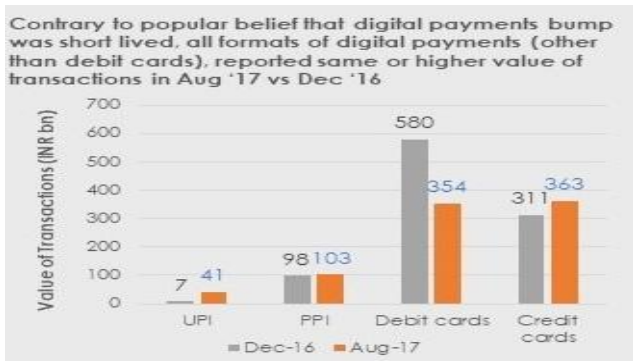
Source: Proposed Conceptual Model

Charts. Mobile wallets Adoption during Demonetization Period



Source: NPCI, RBI Report – The Economic Times Newspaper





Source: NPCI, RBI (1) Includes UPI, PPI, Debit and Credit Cards (2) Excluding ATM Transaction.

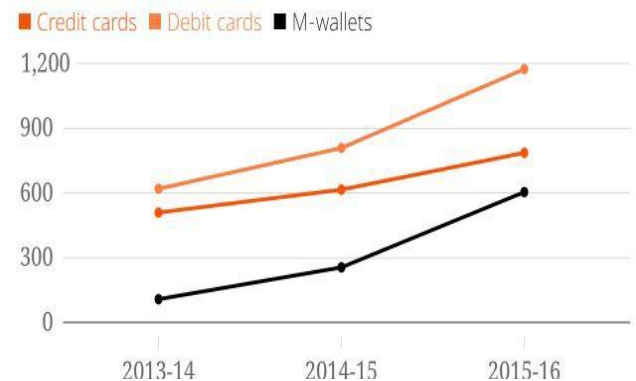
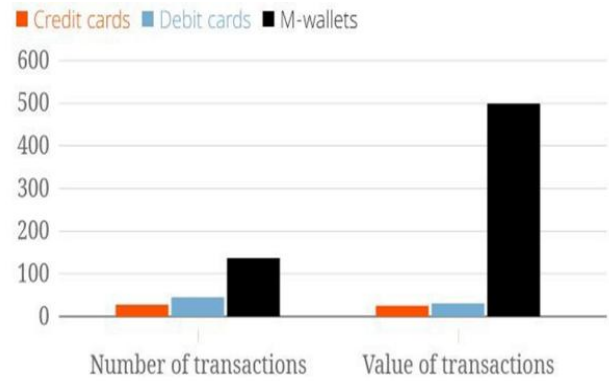
III. LIST OF DIGITAL PAYMENTS IN INDIA TO PROMOTE CASHLESS TRANSACTION



A. Banking cards In India, credit and debit cards are most popular modes used in online transaction for online shopping and payment transaction. As per RBI report (2018) in India the number of debit cards usage increased from 9247 million volume to 10962.36 million volume. The service charges for mobile wallet is comparatively low when compared to plastic cards[13].

B. Internet Banking is also supporting the urban population. People willingly use internet banking to transfer funds online either to the account holders of the same bank as theirs or different banks. It is considered to be safe by the online customers. Still, due to the difficulty faced during the transactions and lack of high-speed internet, the mobile wallet application adoption more famous than the internet banking[14].

C. Mobile Wallet application means carrying the cash in digital method. Mobile wallet providers specify the link to fill mobile wallet users' debit card or credit card information for money transaction. Digital wallet (mobile wallet) to load money from users' accounts. It is required for purchase of goods and online shopping. Many banks have an e-wallet application. Some of the e-wallets are Mobikwik, Paytm, Oxigen, Freecharge, Airtel Money, mRuppee, itz Cash, Jio Money, Citrus Pay, SBI Buddy, SpeedPay, Axis Bank Lime, ICICI Pockets, Vodafone M-Pesa, etc.

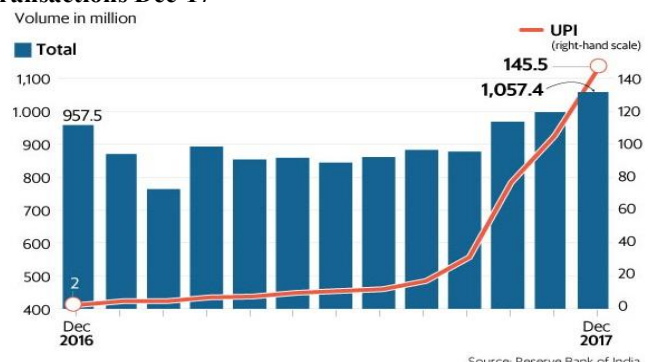


Other modes of the payments such as USSD, AEPS, UPI, Point of Sale etc. are recently introduced in the Indian Financial Ecosystem and are still in the nascent stage in the product adoption life-cycle.

IV. GROWTH INDICATOR ON CUSTOMERS USING OF THE MOBILE WALLETS

- Cash Back & Free Coupon Offers
- Public & Private Sector Tie-Ups
- Marketing/Attractive Advertisement
- Machine Learning & Analytics

Chart2. Demonetization exercise Nov'16 to Mobile transactions Dec'17



Digital transactions in December 2017 crossed the 1 Billion Mark, touching a new peak in terms of volume since the government's demonetization exercise in November 2016. Transactions through the Unified Payment Interface (UPI) also reached a new high, clocking 145.5 million transactions in December 2017.

The study has been conducted by Google and the Boston consulting group in September 2016. They said that past four years has seen an exponential growth. The report expected the digital wallet industries to grow by 10 times and revenue expected is around \$500 Billion by the year 2020. It contributes



around 15% to Gross Domestic Product (GDP). The number of Non-Banking institutions offering digital payment are also going up significantly. It is also expected that cashless transaction would exceed cash transactions by 2023. By 2020, 40% of the consumer payment segment would be based on cashless modes of payment like cheques and demand drafts, credit and debit cards and mobile wallets. The research has been concluded that last 5 years, due to the rise in the growth of startups has encouraged digitization of transactions in the country. Mobile wallets support increase financial presence in all forms across the sectors in the economy. Online electronic commerce also supports drastically fast growth business is conducted in day to day life. RBI data has shown that mobile wallets have at present exceeded mobile banking in measurement terms. The measurement of mobile wallet money transactions folded during April 2015 to Feb 2016 time to cross Rs.55 crores. This data shows that a mobile wallet consumer has grown 5 times to 150 million in 2 years. Mobile wallets are easy to access, are safety, and frequently a life saver.

V. REVIEW OF LITERATURE:

Have conducted a research to understand the factors that affect consumer's adoption of mobile wallet. Survey was conducted among 210 mobile phone consumers to understanding the mobile wallet adoption. The results show that the Perceived Risk, Performance Expectancy, Facilitating Conditions, Perceived Value, Social Influence, Perceived Regulatory Supports well as Promotional benefits are important aspects in predicting Behavioral Intention to accept mobile wallet adoption. It is also found the effort expectancy was insignificant [1].

A study has been conducted among different companies to understand different aspects that influence the user's decision to accept mobile wallets. Survey was conducted among 150 mobile phone consumers to understand the reason for mobile wallet adoption. He has analyzed the data by using ANOVA to interpret the results. He concluded that convenience of shopping and brand loyalty play important factors in acceptance of mobile wallets. He added safety of funds and security play a challenging aspect for continue usage of mobile wallets[4].

They have conducted a study on "Cash-less Society: Drives and Challenges in Nigeria" to analyze if it is possible for developing a cash-less society through more actual use. This research investigated the cash-less economic structure has to evaluate its possibility in Nigeria through concerns to save time, awareness and adequacy the environment of level and improvement both educationally and technologically[3].

Investigated the factors involved in adoption of a new innovation by consumers in the mobile payment. The research was conducted to find out the various factors affecting consumer intention to use mobile payment. The research findings stated that performance expectancy, effort expectancy, social influence, facilitating conditions have significant effort on mobile payment service adoption [2].

Investigated the users' satisfaction with cash-less policy in Ogun State, Nigeria. A questionnaire review has conducted among the bank customers in Abeokuta using structured

questionnaire and the result shows that the cashless policy caused important to users' satisfaction in Ogun State through adoption of electronic channels and emphasize that cashless policy is user friendly and progressive[10].

Has focused the study towards usage of mobile wallets in the urban population inhabitants of Jalgaon city. This study has analyzed that impact of demographic characteristic and their usage of mobile wallets. The survey was conducted among the 60 respondents in the urban area of Jalgaon city. The results show that 29% of the respondent use mobile wallets to transfer money for recharging phone and DTH payment. 50% of the consumers are apprehensive about the safety of Mobile Payment and 42% of the respondents prefer to use others cashless transaction as the payment choice. Nearly of 81.7 per cent respondents stated that safety is major important brought the goods through online.

Said that cash back on digital payment is an effective method of motivating the population to adopt cashless transaction. After the demonstration was successful, an effort to encourage cashless transactions began in semi-rural and rural India[7]. The government has decided to provide 20% cash back to the consumers who are using cashless transactions through following modes of digital payment namely Rupay debit card, BHIM app, Aadhaar, UPI or USSD transaction). The government expects the cash back will not only support promote the digital India action but also encourage in building the economics as a total country. She stated that GST council has declared to relook the procedures, Laws and rates to support the MSMEs (micro, smaller, medium enterprises). It also helps the smaller business to increase employment rates in the country. Indian population has the largest mobile users but there is a huge gap to be filled, overall 40% of the people are not using the bank account still now. Nearly 80% of payments are complete through cash only. Therefore Indian government and GST Council can be provided offers which can motivate this population to adopt of cashless transaction. It is expected that small impact on revenue becomes an effective way for the Government to improve the database containing the digital payment footprint of their taxpayers.

Have conducted a research to find out Security, trust, privacy issues and challenges of cashless transaction in India. This study has been conducted among 210 online consumers' using the facility of cashless transaction through mobile wallet. The findings of the study showed that majority of the consumers have downloaded and are using the "paytm" mobile wallet application. The research reveals that less than $\frac{3}{4}$ of the respondents were using cashless transaction system for shopping stationery, fruits & vegetables and less than $\frac{3}{4}$ majority of the consumers had faced problem in usage of e-payment application due to security issues and software applications[8].

Table3: Review Collection

S. No.	Author & Year	Title	Journal Details	Sample & Country	Main Finding
1	Dixit R, et.al. (2017)	A Study on Adoption of Mobile Wallet for Cashless Economy	IES Value Addition Through Education, Anvesha, Vol. 10 No. 1	170 Respondents, Mathura	Mobile wallet has become a major Platform of payments. It encouraging for cashless transaction. Leading to consumer's adoption of mobile wallet and the satisfaction level with the service.
2	Dr. Shilpa(2018)	Moving Towards Cashless India	SANSMARAN – Management Research Journal, ISSN No. 2278-7801, Vol.8 No. 1	Secondary data Collection. India	Various Cashless Transaction Instrument supporting to the people. Government norms encouraging to the Digital payment system through cashless Transaction.
3	Dr. Thomas (2016)	Driving Financial Inclusion in India: A Study on Mobile - Wallet Services Offered by Banks in Kerala	Splint International Journal of Professionals I ISSN : 2349-6045 I Vol.-III, Issue-7	150 questionnaires out of which 121 collecting data obtained from a bank in Kerala.	A study has been concluded 50% of Population doesn't have bank account. Banks take the most efficient way. Network through mobile analysis.
4	Yu (2012)	Factors affecting individuals to adopt Mobile Banking: empirical evidence from the UTAUT model	Journal of Electronic Commerce Research, VOL 13, NO 2, 2012	Survey from employ 441 respondents Collecting sample data from employee in Taiwan	Main Factors are social influence, perceived financial cost, performance expectancy, and perceived credibility, in their order of influencing strength. The behavior was considerably affected by individual intention and facilitating conditions. There are actual adoption behavior of mobile transaction.
5	Dong-Hee Shin (2009)	Towards an understanding of the consumer acceptance of mobile wallet	Computers in Human Behavior, journal homepage: www.elsevier.com/locate/comphumbeh- 25 (2009) 1343–1354 doi:10.1016/j.chb.2009.06.00	Total 296 respondents. Web-based Survey mobile payment users.	The result reveals that the models demonstrate good projecting powers and explain users' behavioral intentions toward the

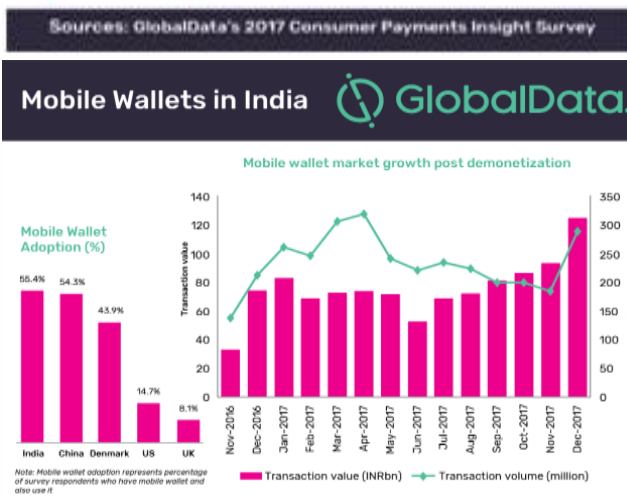
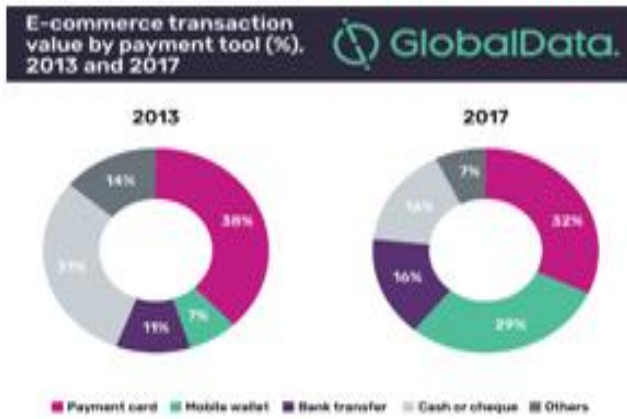
			1		adoption of mobile wallet.
6	Chattoptadhyaya et.al. (2018)	Awareness and Participation of Small Retail Businesses in Cashless Transaction: An Empirical Study	Management Dynamics in the Knowledge Economy Vol.6 (2018) no.2, pp.209-225; DOI 10.25019/MDKE/6.2.02 ISSN 2392-8042 (online) © Faculty of Management (SNSPA)	117 using retailers, Ultra Pradesh	The study found that cashless transaction instrument (UPI and Banking apps) used by most of retailers. They awarded cashless instrument. Retailers accept and engaged cashless transaction ways.
7	Chen (2008)	A model of consumer acceptance of mobile payment	Int. J. Mobile Communications, Vol. 6, No. 1, 2008	299 mobile payment users (web-based and email)	This research reveal that web-based survey on among consumer acceptance of m-payment with non-cash payment.

The research reveals that mobile wallet consumers are mostly avoiding the cash and cards payment transaction after demonetization. 55% of the consumers have adopted mobile wallet apps. India is trailed by China and Denmark. Indian consumer's mobile wallet adoption attitude is most advanced when compared to UK and the US. Last five years (2013 -2017) mobile wallet transaction developed has multiplied (eg. 2013-INR 24 Billion, 2017-INR 955 Billion). Last year 2018 Mobile wallet market was around INR 1 Trillion [16].

The survey has considered cash crunch in most of the ATMs in India after Demonetization November 2016. Thereafter, the government is recommending people to move to electronic mode payments for people.

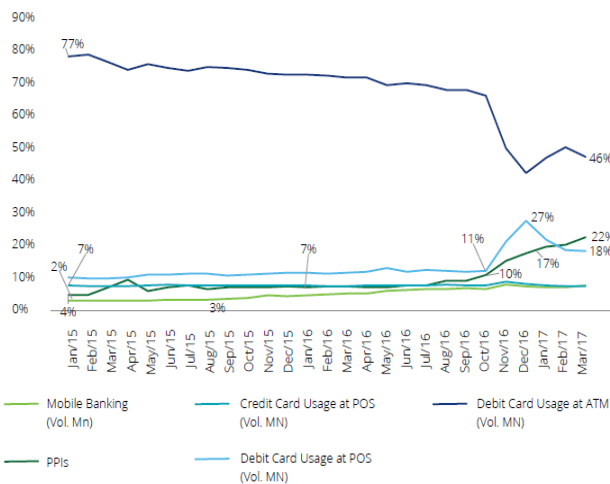
The whole worth of mobile wallet payment transaction developed in two to three times between 2016-2017. At first considered as post demonetization, electronic commerce payment device, these mobile wallets applications are now frequently utilized for day to day payment transactions at medical shops, grocery stores, street tea stalls, supermarkets, fuel station, taxis, auto-rickshaws and street vendors.





Sources: GlobalData's 2017 Consumer Payments Insight Survey & Reserve Bank of India

Figure 5: Effect of Demonetization: Share of monthly digital payment volumes (%)



source: Reserve Bank of India data; Deloitte Analysis

VI. DISCUSSION AND CONCLUSION:

Demonetization has triggered more usage of e-payment among public which increases the usage of cashless transaction. Transferring money through cashless modes would basically demand the usage of plastic money i.e. credit/debit cards, mobile wallets, net banking and more. This indicates a movement towards a cashless economy. The government initiative on Digital India to boost the adoption of digital payment system among the individuals.

The challenge is an implementation of policy on strengthening internet security from protection against online fraud and cyber fraud.

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