



DEMONETIZATION-AN EFFORT TO TAKE INDIA FROM CASH FULL TO LESS CASH SOCIETY

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ABSTRACT

With population of more than 1.2 billion the country requires new and modern financial services. The rapid economic growth, modernization and information technology becoming an essential partner in everyday life; the demand further accentuates. Therefore, the payments business is also on the verge of revolution where the recent bout of demonetization has played the much needed role.

The demonetization of high value notes by the erstwhile government has impacted all the stakeholders of the economy of India. It has forced the people to go for digital methods of payments, where the affinity for cash payments is high.

The fear of unknown and lack of awareness among people can be attributed to as major impediment in this process of cashless country. In this context The Central Bank of the country has taken number of steps to ensure that this endeavour of cashless society is on right track.

This research paper discusses all these aspects. It presents the current scenario of digital payments across the globe and the position of India in this respect. It also identifies the major roadblocks which may reduce the speed of digitization in the country. It also discusses what measures can be adopted to boost the digitization process to make India a cash less Society.

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INTRODUCTION

A modern and specialized economy is increasingly dependent on the effective functioning of large networks like communications networks (landline and mobile phone networks, internet network), transport networks (roads, railways, aviation), energy networks (electricity, gas) and last but not the least payment networks. It's been nearly 300¹ years since paper money became accepted as legal tender. While much has changed about how we make, sell and buy goods, cash has stuck around. For many users, cash equates to a sense of security and for many it is a sense of independence from government oversight

India is a cash-based economy in which 68% of the transaction² by volume and 65% by value are made using cash. The reason could vary from lack of infrastructure in the form of point of sale (POS) penetration, internet and broadband access, lack of financial literacy and inclusion and a general high propensity to save cash. India has one of the lowest card swiping machine numbers per capita, worldwide.

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Data indicates it has some 690-odd terminals per ten lakh people. Moreover of these 690-odd terminals³, over 70 per cent are located across 14-15 cities in the country. Unfortunately it was this obsession for cash that gave rise to black money, corruption and parallel economy which was slowly but steadily making Indian economy hollow from inside. In a major step to check undeclared black money, the Modi government on the 8th of November 2016⁴ announced demonetization of Rs 500 and Rs1000 banknotes with effect from the same day's midnight, thus rendering 86 percent⁵ of the total note in circulation, from being a legal tender anymore. Apart from combating black money, the stated purpose was also to check fake currency, terrorism and corruption. A new redesigned series of Rs500 banknote, in addition to a new denomination of Rs 2000 was introduced in circulation and a redesigned series is also expected to be introduced to the banknote denominations of Rs1000, Rs100 and Rs50 in the coming months.

RESEARCH METHODOLOGY

The paper relies heavily on secondary sources of data. It draws its contents from newspaper, articles and reports published

³ <http://www.dailyo.in/business/demonetisation-black-money-cashless-economy-/story/1/14091.html>

⁴ Anil Bokil of think-tank ArthaKranti Pratishtan, the man who suggested the idea of demonetisation to Prime Minister Narendra Modi

⁵ Desai, Meghnad. (13th, March 2016). Cash pullback had 'little impact' on India's growth. Retrieved from

http://www.business-standard.com/article/economy-policy/cash-pullback-had-little-impact-on-india-s-growth-meghnad-desai-117031200173_1.html

¹ <https://hbr.org/2016/05/the-countries-that-would-profit-most-from-a-cashless-world>

² http://www.business-standard.com/article/economy-policy/infographic-68-of-transactions-in-india-are-cash-based-116111400495_1.html

online and in print. The paper has been divided in three main sections containing sub-sections. The first section throws light on the current scenario of cashless world; the second section is about the challenges in India for going cashless; and the final section contains the recommendations or possible solutions to counter the challenges.

Objectives

1. To study the need and analyse the rationality behind the current demonetization drive.
2. To study the current scenario of cash less economy of India and compare it with the economies across the globe.
3. Analyse the roadblocks in India's dream of becoming a cashless economy and suggest remedies for the same.

History of Demonitization

8th of November 2016 will always be imprinted in the history of India as a day when a sweeping change was incorporated in its economic world. But it was not the first time demonetization was attempted in India. Prior to this, two more governments had taken this bold step to stop circulation of popular currency due to varying reasons. First, on the 12th of January 1946 the government announced demonetization of denominations above Rs.1000⁶. However, as notes then accounted only to 3% of the India's population, the demonization drive didn't affect normal life much. Once again on 16th January 1978, the coalition government of Janta Party demonetised banknotes of 1000, 5000 and 10000 rupees as a means to curb black money. What made this current drive special was unlike earlier effort which affected a few segment of population, this decision of Mr Modi made 86 percent of running currency useless thus affection each and every segment of society. From rich to poor, from old to young, from men to women and persons from lower cast to upper cast were forced to stand in queues outside bank to convert their old currency to new one. However everyone from RBI to bank officials to government machinery and general people made an earnest effort to make this drive a success irrespective of the hardships they had to face during the entire process.

In fact, India is not the only country who has experimented with demonetization. United States of America in 1969⁷, Ghana in 1982, Nigeria in 1984, Soviet Union in 1991 are just to name a few other countries who have demonetized some or the other currency note in their economic history. Recently even Venezuela attempted a similar drive recently but failed miserably due to lack of proper planning and public support.

Demonitization 2016- the Necessity

Corruption was the main plank which voted the current government to power and corruption was the main reason cited by Mr. Modi in his speech to the nation on 8th November 2016 when he announced the demonetization of 86% of the total currency of the country. Besides corruption a number of other reasons were cited to bring about this sweeping change. They included:

Eradication of Fake Currency- Fake Indian Currency Notes (FICN) are usually circulated in bigger denominations as

compared to in other denominations to maximize the profits. It is estimated that the total number of bank notes in circulation between 2011- 2016 rose by 40%. However, the increase in number of notes of Rs.500/- denomination was 76% and of Rs.1, 000/- denomination was 109% during the same time period. These Fake Indian Currency Notes (once they come into circulation) are then used to finance terrorism and drug trafficking (Ministry of Finance, 2016)

Eradication of Black Money-The World Bank in 2007 estimated that the size of shadow economy of India was approximately 23.2% and was steadily increasing. The high denomination notes are known to facilitate the generation of black money (MOF 2016). The high denomination notes make easy the storage of unaccounted wealth has been evident from cash recoveries made by law enforcement agencies from time to time. According to estimates from ICICI Securities Primary Dealership, Rs 500 and Rs 1000 currency notes contribute 4.6 lakh crore⁸ in black economy which is about 15% of the total black economy in 2016. By scrapping them government aimed to eradicate this chunk from black economy.

Discouraging Hoarding: The Indian population on an average holds 13 percent cash for their day to day operations. (Parida, 2017). For such hoarders demonetization has come as a huge shock. It is infact expected that demonization is likely to have a habit changing impact on such hoarders of cash. It is now hoped that there could be increased belief of keeping cash in the banks rather than stashing at home. With a large part of the cash moving through the banking channels, the banking sector is likely to be flush with funds in the near term and this would help them reduce cost of funds for such period. It is estimated that if the cash with public gets reduced by one percent, this will increase deposit base by INR 1.05 lakh crore which in turn will increase credit by INR 4.12 lac crore through the credit multiplier. (Parida, 2017). These benefit promises long term gain not just to economy but even to our political, security and governance system.

Boosting Bank Deposits- Another the major benefit of 'demonetization' is that it expands the liquidity in the banking system, which in turn helps lower the lending rates and lift the economic activity of the country (World Bank⁹ Report 2017). Between October 28, 2016 and December 23 2016, banks' deposits have shot up from around Rs. 107 lakh crore to 112.6 lakh crore---an increase of about Rs. 5.5 lakh crore in two months. This is nearly twice the amount of deposits that flowed into banks between April and October 2016.¹⁰(Mervin, 2016). In December last year, just a month after demonetisation, the bank had declared that its saving accounts had swollen up by Rs 1 lakh crore.(BT online)¹¹

Encouraging Digital Payments- Government believes that scarcity of cash (post demonetization) would force the public to go digital thus increasing the usage of debit/credit cards, e-wallets, net banking which is a cleaner form of money transaction. The increased transparency and record of transactions will make it considerably difficult to hold black

⁶ <http://qz.com/831674/rupee-currency-demonetization-a-brief-history-of-india-pulling-bank-notes-from-circulation/>

⁷ <https://www.quora.com/Has-any-country-other-than-India-ever-had-Demonetization-of-their-currency-notes-1>

⁸ <http://indianexpress.com/article/business/economy/demonetisation-rs-14-lakh-crore-cash-value-out-only-1-5-lakh-crore-in-says-report-4397409/>

⁹ <http://www.dnaindia.com/money/report-demonetization-may-take-india-s-growth-rate-to-still-robust-7-world-bank-2291327>

¹⁰ Merwin, Radhika. (2016). What has changed for banks post demonetization retrieved on 15th March 2017 from <http://www.thehindubusinessline.com/portfolio/whats-changed-for-banks-post-demonetisation/article9481534.ece>

¹¹ <http://www.businesstoday.in/sectors/banks/worried-about-sbis-minimum-rs-5000-balance-rule-heres-all-you-need-to-know/story/247548.html>

money and carry out under-the-table deals. According to a report by Asschom and PWC, post demonetization the value of transaction through e wallets witnessed 301% growth during the period 8th November to 27th of December 2016. The PWC Report 2017 that the number of transactions thru Rupay card has increased by 425 % and that of by POS machines by 95 %.

Table 1 Comparative analysis of digital payments during demonetization phase (8 November 2016 to 27 December 2016)

Platform	Number of transactions per day		Value of transactions per day (in INR)	
	08 Nov 2016	27 Dec 2016	08 Nov 2016	27 Dec 2016
RuPay Cards	3.8 lacs	20 lacs	39.17 crore	274 crore
E-wallets	22 lacs	79 lacs	88 crore	353 crore
UPI	3.721	85,283	1.93 crore	38 crore
USSD	97	4001	1 lac	49 lacs
POS	50.2 lacs	98.1 lacs	1,221 crore	1751 crore

Source: Ministry of Electronics and Information Technology

Cashless Society- Importance & Rewards

The root cause to the above stated problems could somewhere be linked to the use of excess cash in our day to day transactions. An economy which uses 68% of the transaction by volume and 65% by value through cash can never be considered a sign of healthy future. To overcome this major push to cashless transactions was needed. A cashless society refers to payment system where notes or cash money is not used and the entire payment is done whether it is personal, governmental, organizational, and international through non-physical cash.³ Cashless societies in the past were based on barter system where people exchanged one good for another. However, in the present times cashless transactions are made with the help of digital currencies like credit card, debit card, internet banking, mobile banking, payment wallets and so on. (World atlas, 2016¹²)

It is generally perceived that cashless societies are comparatively corruption free society (Refer Table 1.2) Recently Transparency International did a research on corruption in countries and results showed that the cashless countries are in top-30 corruption free countries in the world. Cashless societies are also said to be less prone to social crimes like robberies, burglaries, extortions, snatching etc.

Table 2 Country-wise analysis of Transparency by Transparency International

Rank	Country	Noncash payment's share of Total Value of Consumer Payments	% of Population with a debit card	Transparency International's Corruption Perception Index. Perceived Transparency rank aka most "clean" countries	Rank
1	Belgium	93	86	15	1
2	France	92	69	23	2
3	Canada	90	88	9	3
4	U.K	89	88	10	4
5	Sweden	89	96	03	5
6	Australia	86	79	13	6
7	The Netherlands	85	98	05	7
8	U.S.A.	80	72	16	8
9	Germany	88	88	10	9
10	South Korea	70	58	37	10

Source: The top 10 cashless countries have better transparency than India https://www.reddit.com/r/india/comments/5o0rmp/the_top_10_cashless_countries_have_better/5

It is absolutely imperative to make the Indian economy cash less for a number of reasons foremost being the highest cash to

gross domestic product ratios in the world. Besides this some other arguments in favour of Cashless economy are:-

- Using cards for payment is more convenient and secure (as they are usually password protected), than making cash withdrawal to make purchases. People assume that using cash is free of cost. However it is estimated that , residents of delhi alone spend 6 million hours and INR 9.1 crores (us \$1.5 million) to obtain cash. (Cost of Cash , 2016)
- Electronic payments will help business people grow their customer base and resource pool, far beyond the limitations of their immediate geographic area.
- It¹³ saves the cost of issuing and using cash. According to the reports on *The Cost of Cash by the Institute for Business in the Global Context (IBGC)*, the Reserve Bank of India and Commercial Banks incur a total cost of Rs. 21,000 crores (us \$3.5 billion) in currency operations annually.
- It will drive the development and modernization of the payment system, promote transparency and accountability, reduce transaction costs and decrease the size of the grey or informal economy.
- It is beneficial for banks too as it reduces their cash operations as a result in the reduction of the cash usage by the customers. Banks also benefit from the float on unused value in electronic purses (Hugh 2013).
- With global economic uncertainty on rise there is increase in negative interest rate by the banks –this has also increased the possibility of people to take their money from banks. The cashless society reduces that risk as it eliminates cash from the society⁸ (Chakravorti et.al. 2016).
- Cashless society also eliminates money laundering and shadow economy. It curbs inefficiency and corrupt practices.

How Cashless Is World Today

The advancement in technology has led to digitalization at a faster pace with unprecedented opportunities. The rapid globalization of business environment has resulted in convergence of consumers taste and preferences which in turn

This has resulted in *borderless economy where the marketplace has become virtual and the society a paperless or*

¹² Top countries using digital money for cashless transactions. <http://www.worldatlas.com/articles/which-are-the-world-s-most-cashless-countries.html>

¹³ <http://fletcher.tufts.edu/~media/Fletcher/Microsites/Cost%20of%20Cash/COC-India-lowres.pdf>

cashless society. (Misra, 2004). Thus a Cashless economy is an attempt to unite the world in terms of currency.

According to Master card advisors analysis 85% of the total transactions in India are in cash. The question then arises why Indians have so much affinity for cash even though they can earn much more returns by investing the same money somewhere else. The obvious answer to this is the security cash offers to its holders as cash is both universally accepted and also untraceable⁵.

Mastercard advisors analysis divided 33 countries in four categories while analyzing cash versus non-cash payments (Refer Figure 1). They are: inception, transitioning, tipping point and advanced.

- Countries in *inception* categories are basically the developing countries where cash transactions accounts for 90% of total transactions. The main reason attributed to this low rate is lack of financial inclusion of the people. India falls in this category.
- Countries in *transitioning* category comprise both developed and developing nations where cash transactions account for 80-90% of total transactions. Many reasons have been attributed like culture as in Japan or sluggish economy as in Brazil.
- Countries in *tipping point* are those whose shares in cash transactions are 29-45% of the cash transactions. The medium volume of cash can be attributed to people willingness to opt for cashless payments. France and Netherland fall in this category.
- Countries in *advanced* categories like USA and UK are those who have high rate of financial inclusion. They prefer to do cashless transactions as they are aware of the benefits of the cashless transactions. Sweden

All the countries in the world are promoting cashless transactions, either gradually or a forced upon, as is the case of India. The percentage is much higher in developed economies like Europe, US than in developing countries like India, Africa. The below graph (Refer Figure 1) clearly depicts the extent of cashless transactions used by their citizens in their day to day activities.

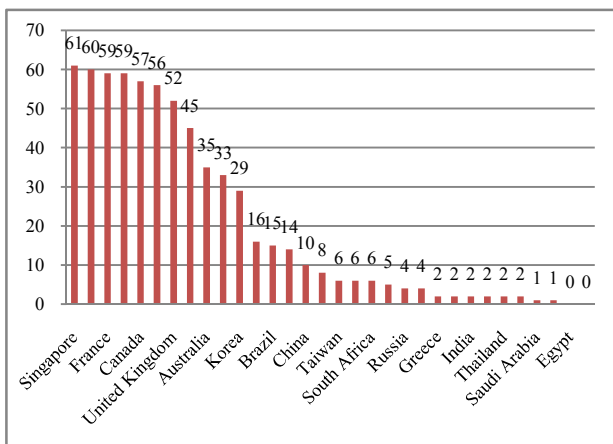


Figure 1 Estimated Percentage of Consumer Payment Transactions done using non-cash methods

Source: Mastercard Advisors Analysis 2013.

India's Current Position as Cashless Economy

According to Mastercard advisors analysis India is in inception category of cashless transactions which means that 90% of

transactions are in cash in India. The study by The Fletcher Institute, Tuft University on Cost of Cash in India states that RBI is spending enormous amount in cash operations annually. The report further states that the ratio of currency to GDP in India (12.2%) is higher than countries such as Russia (11.9%), Brazil (4.1%), and Mexico (5.7%). Thus, it is imperative to reduce India's dependence on cash. This will also benefit the government to acquire more funds as cashless economy will prevent people from evading taxes.

In order to encourage a cashless economy the government of India and RBI have taken numerous steps like; opening of bank accounts under the Jan Dhan scheme, issuing licenses by Reserve Bank of India for opening micro-finance banks and payment banks to bring financial innovation and inclusion. The banks are also trying to promote internet banking through RTGS/NEFT, Unified Payments Interface to make digital payments easy and convenient. Many newspaper articles and reports have stated, a considerable growth in the number of ATM transactions in India but payments through debit card is still at a very nascent stage (Refer Figure: 2).

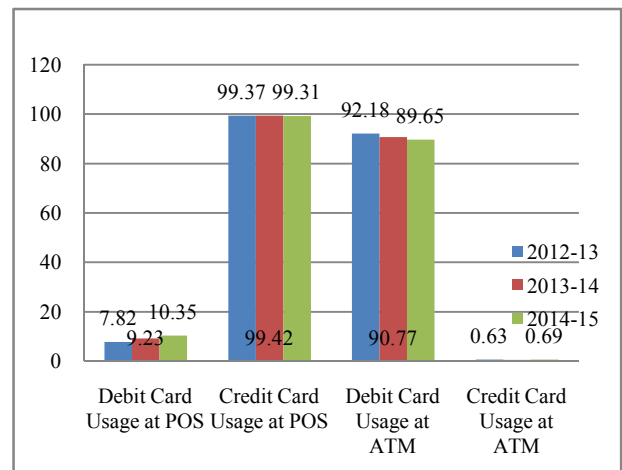


Figure 2 Debit/credit card usage as a percentage of total volume of transactions at POS/ATM

Source: Reserve Bank of India Reports on Card Acceptance Infrastructure-A concept Paper

The cross-country statistics in the Red Book (as cited by RBI)⁹ the number of card payment transactions (including debit and credit cards both at ATM's and POS) per inhabitant in India is 6.7 which is 37 times less than the number of transactions of Australia which stand at 249.3. Even when compared to other developing countries like Brazil, Mexico and China the number of transactions in India are a petite (Refer Table 3).

Table 3 Country-wise Card Payment Transactions

S.No	Country	Number of card payment transactions (including debit and credit cards both at ATM's and POS) per inhabitant
1.	Australia	249.3
2.	Canada	247.9
3.	Korea	260.8
4.	Sweden	270
5.	United Kingdom	201.7
6.	France	143.4
7.	Brazil	54.8
8.	Russia	47
9.	Mexico	16.6
10.	China	14.4
11.	India	6.7

Source: World Bank Database

The cross country comparisons in terms of infrastructure we find that India is much behind. According to the report of RBI on *Card Acceptance Infrastructure*, China has maximum number of POS machines established i.e. 1600 thousand machines and 600 thousand ATMs by 2015. In India from 2013 to 2015 the ATMs increased by 48% while POS machines increased by 28 %. This implicates that people in India use cash for most of the transactions and card usage is less at point of sale. This also implicates that though people may be ready to opt for digital payment modes in their daily life but they don't have adequate means and infrastructure.

Challenges in Making India Cash-Less Economy

The emergence and expansion of different payment systems have reiterated and enforced the society to adopt less cash in their transactions. The revolution and advancements in technology has no doubt facilitated this. However in India giving its colossal nature it is difficult and challenging to go for digitization. The cash disruption caused by the existing government has, though, forced the citizenry to go for digital options yet there are quite a few challenges which need to be tackled before India can move on to become a cashless economy. This section of paper elaborates the challenges which require urgent action.

The colossal nature of the country: The very first challenging aspect is the massiveness of the country. With a population 1.25 billion it is a huge task to wean of the people from their cash addiction. Adding fuel to fire is the huge unorganized sector where 90% of India's workforce is employed¹⁴. (Indian Express, 2015). High level of part time, casual and contract labour has resulted in fragmented household earnings which again make the economy cash-intensive. Thus it becomes a mammoth task to shift them to cashless methods.

The Cash Attachment: According to a report by Business Standard 2016 India is more dependent on cash than many other countries across the globe. As per the "*reserve money to broad money ratio*"-an indicator of the scale of cash in circulation-is around 0.18 for India. That is very high when compared with other developing countries. India's ratio is three-and-a-half times that of China's, triple than of Brazil and double that of Mexico. Compared with developed countries, India's ratio is 2.25 times that of Japan, 2.5 times that of the Netherlands, 4 times that of Canada, 4.5 times that of the UK and 6.5 times that of Sweden and South Korea (Jakki 2016)

Lack of Digital Infrastructure: The reason behind high degree of cash reliance is the lack of means and ways to use cashless transactions. The card and mobile payments are growing but at a very modest rates. The card transactions at ATM are more than the payments (refer figure 2). All of development is concentrated in urban areas whereas rural areas still struggle for a bank branch in India. The internet access to Indians is very limited with only 34% of the total population have access to internet. This also restricts the use of the online methods of payments. People face difficulties in making payments even in metro cities and the situation of rural areas is even grimmer. The Mckinsey analysis (2013) shows that there is a positive correlation between countries with low penetration of fixed

telephone lines per inhabitant and penetration of POS terminals. The report further points out that less than 9 percent people of the same group have a debit card and only 2 percent have a credit card. Furthermore, despite a higher mobile penetration rate-defined as the number of cellular phones per 100 people-and triple the population, only 2% of Indians reported engaging in mobile and electronic payments. India also fares poorly in terms of ATM access when compared to Kenya, Nigeria, or Egypt.

On the supplier side the cost of point-of-sale terminals and their maintenance costs are also high which discourages the expansion of acceptance infrastructure at the desired pace. In addition to this for small value transactions it has been found that the cost of paying Rs 500 every month as rental for the POS terminal and payment of minimum MDR (merchant discount rate) of 0.75% acts as inhibitors for small traders & merchants to promote digital payments (Das,2014).

High propensity to save in cash in India-Indians has more propensities to save in cash rather than in financial assets. Cash savings in urban area is approximate 40% whereas in rural India it is 27%¹⁰. One major reason for preferring cash over electronic payments is the lack of comfort among Indians for technology and technology enabled transactions.

Existence of a large shadow economy: The strongest argument given by government in support of demonetization was the elimination of black money or the shadow economy. The size of the shadow economy of India is about 19 percent of the GDP.¹¹ Tax Evasion, corruption and lack of knowledge of benefits from formal sector contribute to the existence of shadow economy (Refer figure 3).

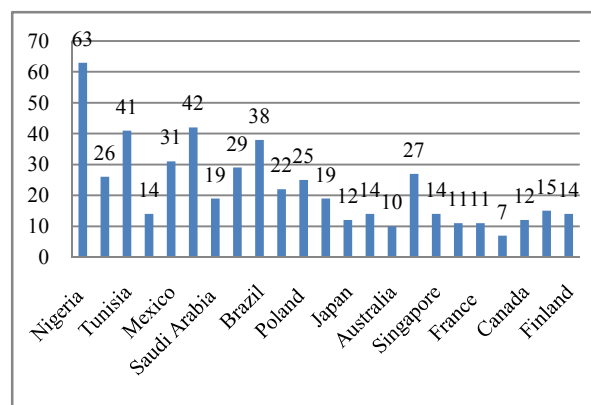


Figure 3 Expected shadow economy (percent of GDP)

Source: Olivier Denecker, Florent Istace, and Marc Niederkorn, "Forging a path to payments digitization," McKinsey (2013)

The McKinsey analysis (2013) points that those countries who have high levels of electronic payments, such as the United Kingdom and Norway, have smaller shadow economies in comparison to those countries with low levels of electronic payments. The analysis between non cash payments of total consumer payments and Shadow economy shows a negative correlation of 0.632. This implicates that higher is the non cash payments in the country, lower is the expected shadow economy (Refer Figure 4).

Lack of Financial Literacy and Inclusion: Financial inclusion can be broadly understood as; the access to basic bank services, provided by the formal institutional players in the industry, to the finance deprived sections of the country. According to Census 2011 out of 24.67 crore households only

¹⁴ 90% Indian workforce in unorganised sector deprived of welfare schemes, says, Justice T S Thakur, Indian express, (2015) <http://indianexpress.com/article/cities/chandigarh/90-indian-workforce-in-unorganised-sector-deprived-of-welfare-schemes-says-justice-t-s-thakur/>

14.48 (58.7%) have access to banking services. On the other hand Financial Literacy can be understood as the skill and knowledge that allows individual to take informed and effective financial decisions (Norman 2010¹⁵). As per Standard and Poor's 2016 Report, 76 percent Indians do not adequately understand key financial concepts. People in India significantly lack financial literacy. Pradhan Mantri Jan Dhan Yojna was the initiative to spread the financial wings for the unbanked Indians however most of the accounts opened under this scheme are still inoperative. The latest government report on financial inclusion-'Overview and Progress on Financial Inclusion', in rural areas the number of bank branches stood at 48,557 and in the rest of the areas-semi-urban, urban and metropolitan-the number was 77,300. According to World Bank data, the number of bank branches per 100,000 adults in India was 9 and 13 in 2004 and 2014, respectively. This is broadly in line with the global average of 9.1 and 13.4 branches in 2004 and 2014, respectively. But India has got a long way to go to catch up with many developed countries Further the World Bank Report Global Financial Inclusion Database¹⁶ (2014) estimates that not more than 35 percent Indians above the age of 15 have an account in a formal institution

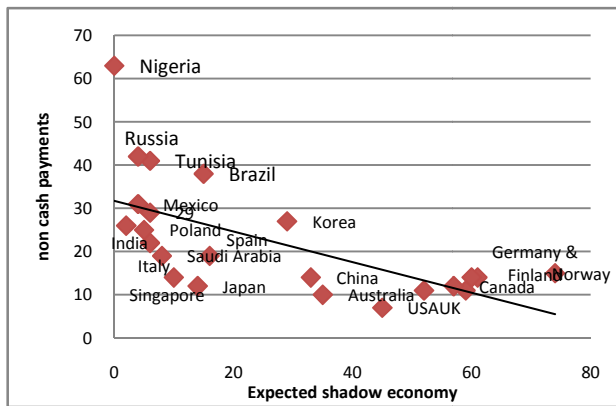


Figure 4 Non-cash payments versus Shadow economy

Source: Own construct from data extracted from World Payments Report, Mckinsey Analysis (2013) & various sources.

Gender imbalance in the use of digital payments: The visa analysis on the growth of digital payments have attributed to gender imbalances as another impediment in digital payments. According to the report women are marginalized and have very insignificant access to financial services. According to a 2014 World Bank Survey, as cited by the Visa Report, 2016 women's use of internet for the purposes of payments is very less at only 0.38 % of women above 15 years, compared with 2.04 % of men. The use of debit cards is also less in case of women with 3.25% women using debit card in comparison to 5.25% of men.¹⁰ The use of credit cards for payments is also lower in case of women with 1.6 % and men using credit card is 6.7 %.(Refer Figure 5). Several studies prove that when a female has a saving account it leads to higher social and financial gains both for the family and economy. (Anand & Jensen ,2016) in a research conducted in Nepal witnessed an increase in household assets by 16 percent within a year after

the females in the family opened a saving account with a bank. Thus removing gender imbalance in a must for the sustainable growth of a country.

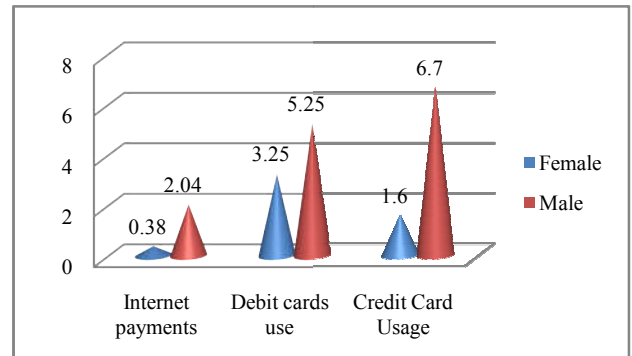


Figure 5 Use of digital methods by women for payment purposes.

Source: World Bank database 2014.

By Cyber attacks- The success of the cash full to cash less society will largely depend on, how the battle between bankers and hackers play out. In a digital economy if millions can be transacted in a second then millions accounts can be hacked in a second too. In October 2016, India saw a malware attack where 3.2 million debit cards of India's top banks were stolen and used in various foreign locations. Even though the fraud is still under investigation, it is almost forgotten among the haste of digitalization. According to Juniper Research¹⁷ the value of online fraud is expected to reach 25.6 billion by 2020 that means that by the end the decade out of every INR 1000 INR 4 would be fraudulent. In another study by Asshchom¹⁸ and PWC it has been reported that a surge of 350 percent in the reported cases under IT act 2002 between 2011 to 2014. The rise in cyber attacks and cases of unethical hacking makes people wary of using digital methods.

DISCUSSION AND CONCLUSION

Surveys done immediately after 8th Nov 2016 suggested overwhelming support for PM from general public. Reducing India's dependency on cash is desirable for numerous reasons but the challenges have to be addressed first because the benefits accruing from cash less economy is many fold.

The role of government is that of a catalyst. The government is required to find ways and means to incentivize cashless transactions and discourage cash payments. The tax systems should be revamped so that small merchants are encouraged to pay taxes instead of evading them. The government requires creating amicable conditions and fiscal incentives so that people are tempted to opt for more cashless transactions.

On the supplier side cheaper modes for merchant payments like UPI could be initially subsidised for transactions which are of small values. Low cost POS terminals can also boost the digital payments as traders and small merchants will be able to install it at less cost. In many countries (for instance Uruguay, Argentina, Mexico) government has provided financial subsidies and tax credits in the establishment of POS terminals. These countries have witnessed a substantial increase in POS terminals. This can be replicated in India too.

¹⁵ Norman,S. (2010). Importance of financial education in making informed decision on spending. Journal of Economics and International Finance , 2(20), 190-200

¹⁶ Demirguc et al. 2014. The Global Findex Database, Measuring Financial Inclusion around the World. A world bank report retrieved from http://documents.worldbank.org/curated/en/187761468179367706/pdf/WPS7255.pdf#page=3

¹⁷ Mobile & Online Remote Payments Digital & Physical Goods, https://www.juniperresearch.com/researchstore/commerce-fintech/mobile-online-purchases

¹⁸ Cyber attacks: Is your critical infrastructure safe? A pwc and Asschom report, Retrieved from https://www.pwc.com/us/en/industry/utilities/assets/cyber-attacks.pdf,

Technological development is imperative in this major drive. Inadequate acceptance infrastructure in terms of ATM and POS terminals add to the woes of the citizenry who may be willing to switch to cashless methods of payments and fund transfers. Peer countries like Brazil, Korea have POS Terminals three to four times that of India.

The development of common infrastructure in India has enabled the people to use other bank ATMs (through NFS) the use of Aadhaar card can also be increased to extend the facility for payment system. Aadhaar card can also ensure that unbanked people are brought into the formal system especially in banking system.

Therefore a considerable effort is required by the government and banks to ensure adequate infrastructure to be the support system of cash less drive and financial inclusion. Further significant changes are required in the process of increasing the financial inclusion in India which has always been bank-led and not telecom-led. The telecom companies can play an impressive role in financial inclusion of people as in Kenya where financial inclusion has been led by telecom companies like M-PESA of Vodacom. New business models and innovations are required to suit the local needs. These demands for strong presence of RBI to protect and instil a feeling of security and trust amongst people on non-cash methods of payments. The 'fear of unknown' is pervasive among new users of electronic money which deter them from using it extensively for all their payments. The feeling of security can also be instilled by presence of strong cyber cell so that the citizenry are not wary of doing digital transactions for the fear of cyber attacks and unethical hacking.

The positive reports on payments by The World payments report (2014) suggests that global non cash transactions have risen by 8.4% in 2014. The highest growth rate has been registered in Asia with China and India leading the charts 47 % and 13.4 % respectively. After demonetization there has been a surge in mobile wallet payments which shows a positive development. Digital payments through Unified Payments Interface (UPI) have continued to surge even after the end of demonetized induced cash shortage. According to Reserve Bank of India in latest electronic payment systems-data dissemination the UPI-based transactions has increased by 20% from January 2017 from Rs.1660 crore to more than Rs.2000 crore in March 2017. BHIM Mobile App developed by National Payments Corporation of India (NPCI) which is based on the Unified Payment Interface (UPI) seeing around 80,000 transactions per day as reported by NPCI which provides much needed boost to the government as it appears determined to push the digital transactions. This entails establishment of acceptance infrastructure, fiscal incentives, levying administration sanctions on use of cash, revamping of regulatory framework, increase participation of micro-finance institutions, crafting of new business models, efforts to increase financial literacy to nudge the stakeholders towards digital methods.

The program like VISAKA-a digital financial literacy campaign for students in universities and colleges has embarked on the new journey of digitization in payments owing to high readiness of youth. Nevertheless all the stakeholders will benefit from electronic payments and the recent bout of demonetization has provided the much needed motivation to go digital in India. This will increase wider tax

base and transparency. Though it is a bumpy ride but surely India will achieve its mission of not Cash-less economy but at least a less-cash economy.

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