

CASHLESS ECONOMY (A COMPARATIVE STUDY OF INDIAN ECONOMY WITH OTHER LESS CASH ECONOMY)

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ABSTRACT

It is more vivid that Indians are slowly catching the cashless syndrome. With a cashless economy in the coming future, there are many benefits, as well, as it has its own share of negative implications. A cashless economy somehow scotch the possibility of unclean transactions and encourages new ways of payments through electronic mode which is more convenient & easy to keep track of all the transaction. This paper studies and compares the Indian economy (recently moved towards less cash transaction) with other economies such as Singapore, Netherlands, and France etc. which have become the synonyms for cashless countries. The paper also covers the benefits reaped by the cashless countries with concerning limitations of getting cashless & finally presents the idea of the possible way of making the world's second largest populace country into one of the world's largest cashless economy.

KEYWORDS: Economy, Cashless, Digital Payment, Electronic, Transaction.

INTRODUCTION

All around the world the word cashless is trending among the billions of people. Indians are catching the cashless syndrome which are seen in recent trends. A cashless economy is an economic situation where the amount of cash transactions in the economy is very limited, even in this situation every other transaction is through electronic or digital mode which includes ATM's, POS, Mobile payment or wallet online banking etc. With world economy touching new heights every year, cash continues to be predominant form of transactions. In an article published in www.statista.com entitled "Value of euro banknotes in circulation from 2002 to 2016 (in billions)" It stated "the value of euro banknotes in circulation starting from 2002 to 2016, euro banknotes in circulation accounted to

nearly 1.02 trillion euro in 2014". In a report published in www.europeanpaymentscouncil.eu titled "WORLD PAYMENT REPORT 2017" by Capgemini It stated that^[1] "Global non-cash transaction volumes increased 11.2% during 2014–2015 to arrive at 433.1 billion, the highest growth of the past decade, and somewhat higher than last year's forecast, This increase was driven to a large extent by developing markets, which witness a 21.6% increase in 2015 while mature markets grew by 6.8%, a nominal climb of 6% recorded in 2014".^[1] The CIC (cash in circulation) to GDP ratio is escalating at a higher swiftness globally exception can be seen in Denmark, Sweden, Canada, and South Africa etc. and this may impede the development in the direction of cashless societies.

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As CIC is rising, it is anticipated that cash will continue to remain in the system for a longer period than estimated. In countries such as United States & Sweden, transactions in cash accounts 7 and 3 per cent of the total transactions respectively.

LITERATURE REVIEW

Cashless economy is not the complete absence of cash, it is an economic setting in which goods and services are bought and paid for through electronic media.

Pranjali A. Shendge, Bhushan G. Shelar (2017) in their research report entitled "Impact and Importance of Cashless Transaction in India" have explained that payment industry is dynamic and changes accordingly with ever changing customer sentiments and the flexible & dynamic wants of business. Up-gradation in this field is non-stop and ever changing and it takes its own pace to penetrate among the general public. Digital payments and transactions are traceable and easily identifiable and hence this can be taxable, finally stop the demon black money circulation.

Kumar, Piyush (2015)^[4] in his research report "an analysis of growth pattern of cashless transaction system" comments that cashless system is the need of the hour. Almost all the online portals and e-commerce primarily depends on digital system. The cashless transactions are not only secured than the cash transaction but also less time consuming .It also solve the problem of carrying huge load of money in pocket.

Krushnavarma, Vijaya (2016) in his research report "A road map to cashless economy in India" explained that cashless economy should not be inflicted on the general public rather a step by step process should be followed, before that a basic infrastructure should be developed & banking facilities should be built at remotest corner of the country.

Pappu B. Metri & Doddayallappa Jindappa (2017)

in their research paper entitled "Impact of Cashless Economy on Common Man in India" cash dominates overall transactions in the country. The overall value and number of currency notes which are in circulation are much higher than other big economies. The paper also explains the digital transaction trends after demonetization in India.

Bansi Patel, Urvi Amin in their article "Plastic Money: Roadmap towards Cash Less Society" explains that world economy should change as the trends in digital transformation takes place. Life in digital era becomes more comfortable, along with the plastic money in use it becomes possible to control & trace the money laundering and effective& optimum utilization of financial system would become more promising which would also be helpful for tax collection & preventing tax evasion.

Srinivas, N. (2006) in his study-"An analysis of the defaults in credit card payments", has tried to evaluate defaulter's of credit cards socio-economic profile, to identify the responsible factors which made a contribution to such a defaults & recommends the steps to minimize the same. The main recommendations were that the banks should newly design the payment structure of credit card defaulters in a flexible and reasonable installment.

OBJECTIVES OF THE STUDY

The aim behind this Research is:

- To know what a Cashless economy means.
- To compare the Indian economy with other less cash economy
- To study the benefits reaped by cashless economy & also its implication.

RESEARCH METHODOLOGY

The study is based on secondary sources of data & information. Various books, newspapers, articles, journals, and relevant websites have

been consulted & considered in order to make the study an effective one. The study compares the different economies with Indian economy, the growth & possible development.

THE CONTINUING ROLE OF CASH (CIC TO GDP)

According to a report published in European payments council by Capgemini & payments card sandmobile (<http://www.paymentscardsandmobile.com/non-cash-transaction-record-highest-growth/>)^[1] “Regardless of the increased adoption & usage of digital payments, cash continues to be the key player in all transactions, especially for minimal value transactions such as payment for food and personal care supplies & general merchandise”. It also said that ^[1] “It is even used for P2P (peer to peer) transfers in spite of the increasing popularity of P2P money transfer apps like Venmo and PayPal”. “Other major factors adding to the persistence of cash are anonymity a cash transaction has, the lack of a present payment infrastructure & limited access to the banking system in developing markets like India, China etc. numerous countries are carrying out initiatives to reduce the use of cash and to move to a cashless country”. The report also comments that these “moves indicates ever changing customer preferences & shopping behavior, rising costs of maintaining & keeping cash in circulation, and finally security issues. However the share of cash in overall payment volumes is declining in most of the countries, (CIC) cash-in-circulation remained stable, constant or raised slightly during the past 5 years (see Figure 1.1)”. It quotes that “As a repercussion, it is predicted that cash will remain as a payment instrument for a long period of time than few observers have estimated. The ratio of CIC (cash in circulation) to GDP of a country is increasing at a faster pace globally exception can be seen in countries like Denmark, the U.K., Sweden, Canada, and South Africa (Figure 1.1)”.

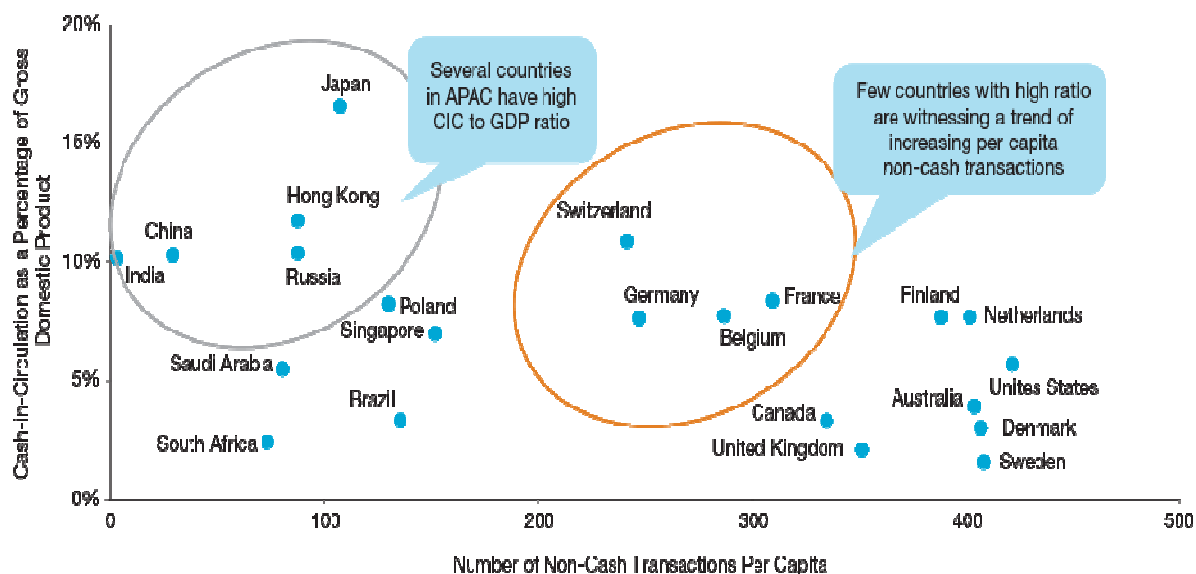
the report even explains how“ This rise might hinder efforts to create cashless society & economy .The continued increase in the total share of cash in overall Gross Domestic Product has been a major challenge across the globe & could come out as an obstruction to the transformation into cashless economies”. According to the statistics reveled by World Bank, “world economic growth rate was estimated to arrive 3 per cent in 2015 (and the same stabilizing at 3.3 per cent in 2017) &with CIC mounting at 3 times the world growth rate. Many of the countries have acknowledged the concerning problems associated with a growing CIC-to-GDP ratio and are taking steps to embrace digital payments like mobile banking etc.” the same reports quotes.

INDIAN ECONOMY (JOURNEY FROM DEMONETISATION TO POTENTIAL CASHLESS ECONOMY)

On November 8, 2016, the Indian Prime Minister Narendra Modi declared that Rs.500 & Rs.1000 notes were no more legal tender money & were demonetized.^[10] These denomination notes amounted for 15.4 trillion; it was 86.9% of the value of total currency in circulation”.

The aim behind the said decision was to eradicate Black money, eliminating corruption, keep control on duplicate or counterfeit currency, inflation & finally stopping funding to terror group. It was predicted that this would boost the economic growth but it resulted in downfall later in the first quarter of the financial year 2017-18. During the period of November when demonetization was announced, till February 2017 some sector was seen huge growth whereas other sector were worst affected. The following table was taken from the RBI publication published on Mar10, 2017 entitled “*Macroeconomic Impact of Demonetization- a Preliminary Assessment*” dated Mar10, 2017.

Cash-in-Circulation (CIC) as a Percentage of Gross Domestic Product, 2015



Source: Capgemini Global Services Analysis, 2017; IFCR Statistical Data Warehouse, 2015 figure released October 2016; Bank for International Settlements (BIS) Book 2015 figure released December 2016; Country's Central Bank Annual Reports, 2016

Source: *The world payments report 2017 by capgemini (European payments council)*

Figure 1.1

IMPACT ON GROWTH: 2016-17: [9]

Table 1. Lead Indicators of Economic Activity

(y-o-y growth in per cent)							
Sr No.		Apr-Oct	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17
I.	Macro indicators						
1	M3	6.4	10.4	8.5	6.6	6.4	6.5^
2	Currency in circulation (CIC)	6.9	17.2	-23.6	-39.9	-37.8	-28.2^
3	Bank credit \$	1.8	8.4	6.2	4.9	4.7	4.5^
4	Indirect tax collections@	24.7	23.4	36.5	20.2	13.9	15.3
5	Service tax collections by the center @	25.2	29.6	43.9	13.1	12.1	5.3
II	Sectorial indicators						
1	Agriculture						
		2016-17					N.A.
a.	Food grains production	8.1					N.A.
		Apr-Oct	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17
2	Industry						
a.	PMI manufacturing (index)	52	54.4	52.3	49.6	50.4	50.7
b.	IIP	-0.3	-1.9	5.7	-0.1	2.7	N.A.
i.	Mining	-0.2	-0.9	3.7	5.5	5.3	N.A.
	Coal	0.7	-1.6	6.4	4.4	4.8	N.A.

	Crude oil	-3.3	-3.2	-5.4	-0.8	1.3	N.A.
	Natural gas	-4.0	-1.4	-1.7	0.0	11.9	N.A.
ii.	Manufacturing	-1.0	-2.4	5.5	-1.7	2.3	N.A.
iii.	Electricity	4.5	1.1	8.9	6.3	3.9	N.A.
3	Services						
i.	PMI services	52.6	54.5	46.7	46.8	48.7	50.3
ii.	Automobile sales	15.0	8.1	-5.5	-18.7	-4.7	0.9
iii.	Commercial vehicles sales	6.9	11.9	-11.6	-5.1	-0.7	7.3
iv.	Passenger vehicles sales	11.0	4.5	1.8	-1.4	14.4	9.0
v.	Three wheelers sales	11.8	4.4	-25.9	-36.2	-28.2	-21.4
vi.	Two wheelers sales	16.0	8.7	-5.9	-22.0	-7.4	0
vii.	Cargo handled at major ports	6.3	13.2	10.2	12.9	3.6	N.A.
viii.	Railway freight traffic	-1.7	-2.6	5.5	-0.1	0.3	N.A.
ix.	Tourist arrivals	10.8	10.4	9.2	13.6	16.4	N.A.
x.	Cement production	4.8	6.2	0.5	-8.7	-13.3	N.A.
xi.	Steel consumption	2.7	0.3	5.0	5.3	3.1	N.A.
xii.	Civil aviation: domestic cargo traffic	7.5	10.6	-0.6	7.5	10.1	N.A.
xiii.	Civil aviation: international cargo traffic	9.2	15.6	15.4	12.6	16.0	N.A.
Xiv	Civil aviation: international passenger traffic	9.1	7.4	7.7	7.7	8.8	N.A.
xv.	Civil aviation: domestic passenger traffic	22.5	23.6	22.0	23.9	25.6	N.A.
xvi.	Bank deposits growth	6.4#	9.3	15.7	14.9	13.5	12.6^
xvii	Insurance premium*	31.1	22.4	72.1	21.1	32.1	-4.5**
xviii	Merchandise exports	0.2	9.0	2.4	5.5	4.3	N.A.
Xix	Merchandise imports	-9.8	8.3	9.4	0.1	10.7	N.A.

Sources: Reserve Bank of India; Ministry of Agriculture, Markit Economics, CSO, SIAM, IRDA, CMIE.[9]

The above table clearly shows that indirect tax & service tax collection have reported huge growth during this period which can be attributed to future scope of getting larger tax if more & more digitalization takes place.

In an article entitled “400-1000% increase in digital transactions after demonetisation, says Government” published on 9 Dec, 2016 on THE TIMES OF INDIA (BUSINESS) clears the picture how India is gradually moving towards cashless and adding a significant share to government exchequer, this might be because of demonetization but it helped the country to move towards a digital mode.

COUNTRIES CLOSER TO CASHLESS ECONOMY

In an article published on <http://indiatoday.intoday.in> (indiatoday.in) dated Nov 16, 2016 entitled “It's not all about the money: 10 countries that have almost gone cashless” gives a list of countries working hard to convert their entire economy into digital. It adds “In Sweden the cash transactions have declined to just 3% in the national economy. From riding the public bus to donating at the church, the Swedish citizen use card or online banking. This has drastically reduced bank robberies in the country, the robberies dropped from 110 in 2008 to 16 in 2011 as most of the Swedish banks didn't have

cash anymore” & further it adds Canada to its list stating “Almost 90% of the population in the country opts for cashless transactions, while an average of 70% of payments is done through cards. According to a Report it was commented that new currency has been printed since January 1, 2013 & this decision was chosen mostly because of the negligible demand of new money in the Canadian market. A survey done & held by PayPal Canada showed that 56% of the public here preferred & chosen online wallet to carry cash”. The article also gives place to Norway quoting “Norway is leading the global contest of going completely pro-electronic banking. It is said that one can buy even street food and newspapers via mobile banking. DNB (Den Norske Bank), the largest bank in Norway, urge the public to stop using cash. This significantly reduced black money and crimes like money laundering. In Norway, a number of banks don't even give out cash to customers”. The same article said “In UK Cash is a sole mode of payment in limited number of places. For transportation and other transactions, almost 89% of the population uses digital banking. Paym, country's most accepted & trendy mobile payment system, has already surpassed 26 million pounds in transaction volume, as 2/3rd of the population opt for mobile payments in UK”. The article gives place to Denmark and says “About 1/3rd of the population in the country use cellphone app MobilePay to do their monetary transactions. Even the businesses, for instance clothing retailers, petrol pumps restaurants and are actually legally free to refuse or reject cash payments from the respective customers. However, it doesn't apply to hospitals, post offices etc. Some Danish media Reports said that Danish government has "set a 2030 deadline to fully do away with paper currency”. It also said that in Belgium “an average of 93% of the population decided on going for cashless transactions in the country, with 86% having a debit card. Furthermore, country's government has imposed a restriction & limit of 3000 Euros on cash payments, for this reason

coaxing people to go for digital or electronic transaction. Mobile app Sixdots is used broadly for transactions, & this is supported by the Belgian banks”. SOMALILAND also gets a place in the same article and comment that Even “with the tag of being one of the Africa's poor country, comparably rather more people chosen for electronic banking than in world's most developed countries. Liquid cash is swiftly declining in the market here, It can be seen in the country that even street vendors accept mobile payments. To the extent that even the cards are becoming a basic or primary mode of payment. A 2012 survey illustrates an average customer in the country makes some 34 online transactions per month, which is far higher than anywhere in the world”.

COMPARING INDIA & GLO1BAL NON-CASH TRANSACTION VOLUMES

India along with world has seen huge rise in its Non cash transaction but not to the extent which her fellow countries both developing and developed have recorded. Undoubtedly a little increase also contributes to the economy and takes a step forward on becoming a Cashless economy or country. The following table 2^[3] (end of the article) shows how from the date of demonetization (Nov-16) to the current fiscal of 2017-18 the non cash transactions (electronic payments) have recorded a huge rise in both value and volume.

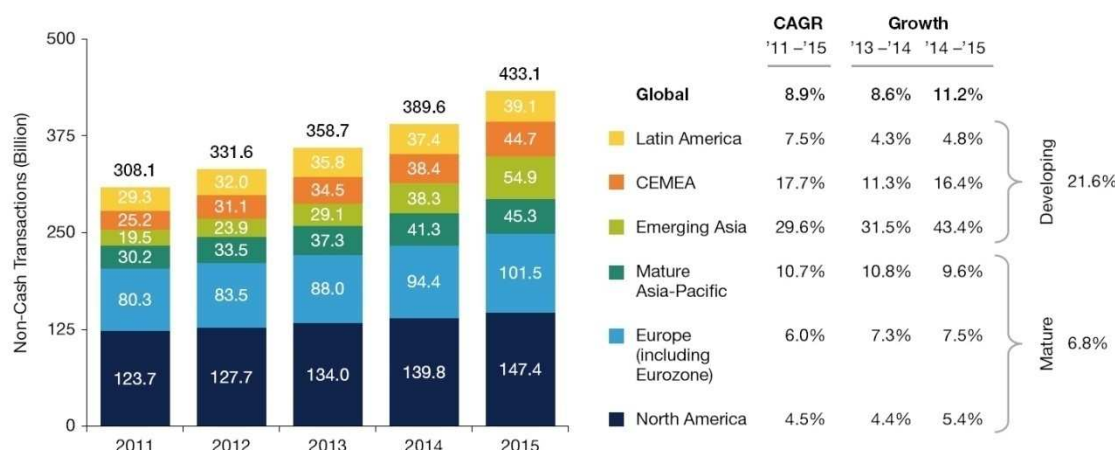
In the report published in European payment council by Capgemini entitled “WORLD PAYMENTS REPORT 2017” ^{[1][6]} “Global non-cash transaction volumes escalated 11.2 per cent during the period 2014–2015 to arrive at 433.1 billion. Two regions pushed this rise: Emerging Asia with a growth rate of 43.4 per cent and CEMEA (Central Europe, Middle East, and Africa), with 16.4 per cent growth”.

In an article published in payments cards and mobile (<http://www.paymentscardsandmobile>.

com/non-cash-transaction-record-highest-growth/) entitled^[1] “Global non-cash transaction volumes record highest growth of past decade” and report by Capgemini explains how “Expansion in Emerging Asia was due to remarkable growth across all geographies as drastic preference & adoption in mobile payments and wallets generated a large number of card use. (EBPP) Electronic Bill Presentment and Payment solutions that influence real-time payments network and infrastructures boosted credit transfers”. The report also said^{[1][6]} “Central Europe, Middle East, and Africa recorded the most growth in cards transactions and credit

transfers in countries such as Saudi Arabia & Poland. This was mainly true in countries where card network development is not mature”. The report also pointed out^{[1][6]} “The developing markets (for example- CEMEA Emerging Asia and Latin America) recorded increased volume growth of 21.6%, driven by individual countries like China (63.2%), Russia (30%), India (16%), Mexico (10.9%), and South Africa (10.7%)”. The following figure shows the growth around the world for non-cash transactions and this also results in betterment of the respective economies along with world economy.

Figure 1.1 Number of Worldwide Non-Cash Transactions (Billion), by Region, 2011-15



Note: CEMEA (Central Europe, Middle East, Africa) now includes Algeria, Bulgaria, Croatia, Kenya, Nigeria, Egypt, Israel, Morocco, and UAE in Other CE and MEA countries; Latin America now includes Argentina, Colombia, Venezuela, Chile, Peru, Uruguay, Costa Rica, Bolivia, and Paraguay in Other Latin American countries; Emerging Asia now includes Malaysia, Thailand, Indonesia, Philippines, Taiwan, Pakistan, Sri Lanka, and Bangladesh in Other Asian countries; Mature APAC (Asia-Pacific) includes Japan, Australia, South Korea and Singapore; NA (North America) includes the U.S. and Canada; Chart numbers and quoted percentages may not add up due to rounding; Some numbers may differ from data published in WPR 2016 due to previous year data updated at the source and addition of new countries

Source: Capgemini Financial Services Analysis, 2017; ECB Statistical Data Warehouse, 2015 figures released October 2016; Bank for International Settlements Red Book, 2015 figures released December 2016; Country's Central Bank Annual Reports, 2015

Source: The above figure is taken from “WORLD PAYMENTS REPORT 2017” by Capgemini published on European payments council (<https://www.europeanpaymentscouncil.eu>). Retrieved on 27.08.2017^{[1][6]}

Figure 1.2. Number of worldwide Non cash Transaction (Billion), by region 2011-15

IMPLICATION OF GOING CASHLESS

Being a cashless economy there is enormous opportunities & benefits but undoubtedly it has its own share of implications. According to an article published in Business Insider (www.businessinsider.in) by SUCHAYAN MANDALDEC on 1, 2016 entitled^[2] “Sweden is the world’s first cashless economy and has negative bank interest rates. Can Indian middle

class handle it?” according to the article^[2] “Sweden is slowly becoming to be the 1st country in entire world to plunge its people into a fascinating-& terrifying -economic experiment—a cashless society. Sweden begins its journey towards cashless economy from many years. Take a bus ride or any public transport, purchase a magazine or a chewing gum, digital payments are available & accepted everywhere. Swedish

banks have already started removing cash ATM machines from rural areas of the country, annoying the dependent old people and rural farmers". The same article also said how the^[2] "Interest Rate of Sveriges Riksbank, the central bank in the Sweden is almost -0.500% since last February. Although the retail banks are yet to pass on that negative rate to Swedish consumers, the longer period of time it is held there the more financial & monetary pressure there is for banks to pass on the costs onto their ultimate customers". The article presents its concerns that^[2] "Danger lies here the commoners or common people have to keep the money in bank and have to pay for it. They can't withdraw cash & cash transactions are refused by retail stores having legal backup. The senior citizens who are most dependent population are the worst affected as they lack concentration to focus on mobile banking. Swedish citizens need to pay banks charges for keeping their money and that's the only way of survival". In the same article of Business Insider it quoted^[2] "As per a Quartz report & surveys conducted by Riksbank show that for transactions lesser than 100 kronor (around Rs 750), 41 per cent of people still prefer to use cash as a mode transaction & Swedish National Pensioners Organization, which accounts for or represent some 400,000 of the country's elderly people, says 7 per cent of its members never even use bank cards". In another article published in online edition of a newspaper it said In Indian context "where some millions of widows, unemployed people and retired employees who thrive on bank interests for their survival after demonetization it could be seen that interest rates of almost all nationalized banks dropping down to 4%-5%, which was 3 per cent below normal rates. Most people in the service sector in India has few ways to save their hard earned money by fixed deposit which gives a better percentage of annual increment".

"Some other negative implications could be rise in fraud rates, people's being not comfortable

about electronic footprints in many semi urban and rural stores across the country. Another industry sector that would be very badly hit by cashless economy is the tourism industry, the footprints & proof of which has already begun to show in Sweden". In the same article it mentioned "that a grand music festival in Sweden sparked chaos after their payment system broke down"

SUGGESTIONS

- In India where half of the population lives in rural areas having very minimal rate of development of basic infrastructure, it is utmost important for the government to first address this issue by investing heavily on rural Infrastructure as China did. A basic infrastructure facility like Banking facility, road etc. would allow for other development in these areas.
- Indian government has many welfare programs running in every corner of the country, this can be used as tool for materializing the cashless economy dream, by utilizing the local people/ workers like Asha Bhenji, Anganwadis, SHGs, Gram-Panchayats, teachers to educate the rural folk about digital transactions and its mode. The help given to pregnant women by government through Asha workers can be transferred through digital mode and these workers can help to educate the people about digital transactions.
- NPAs (Non-performing assets) of Banks is matter of concern & need to be addressed effectively, as this directly affects the economy of a country and even the effects were seen in low interest rates provided by bank on FDs and savings. Government should work on creating a National Asset Management Company (NAMC) like Korea & Malaysia did to control stressed assets.
- The Indian government should work on bringing larger population under Tax bracket

as only 5 crore people pay taxes in India, as even if the people uses Digital mode of saving and payment , the government would not be able to collect income tax (E.g. Farmers Agricultural Income etc.).

CONCLUSION

The economy of India is now the 6th largest in the world measured by nominal GDP & 3rd largest by purchasing power parity (PPP) but it is not hidden truth that India lacks in basic banking facility in most of the rural & semi urban area. Before heading towards a cashless society or economy first banking facility should be made available to these areas as Norway did. Forcing the people to adopt cashless mode could have either implications as seen in Sweden where people were annoyed with high bank charges. So the concept should be studied in detail by the concerned government & if feasible with the current condition of the Respective country should be adopted as it might give a country a global status but it could also lead to economic distress.

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Table 2. Electronic Payment Systems - Representative Data

<i>Volume in million, Value in Rs. Billion</i>												
Data for the period	RTGS		NEFT		UPI*		Debit and Credit Cards at POS ^{&}		PPI #		Mobile Banking	
	volume	Value	Volume	Value	volume	Value	volume	value	volume	Value	Volume	Value
Nov-16	7.9	78479.2	123.0	8807.8	0.3	0.9	205.5	352.4	59.0	13.2	72.3	1244.9
Dec-16	8.8	84096.5	166.3	11537.6	2.0	7.0	311.0	522.2	87.8	21.3	70.2	1365.9
Jan-17	9.3	77486.1	164.2	11355.1	4.2	16.6	265.5	481.2	87.3	21.0	64.9	1206.7
Feb-17	9.1	74218.8	148.2	10877.9	4.2	19.0	212.3	391.5	78.4	18.7	56.2	1080.0
Mar-17	12.5	123375.8	186.7	16294.5	6.2	23.9	229.7	416.2	90.0	21.5	60.8	1499.9
Apr-17	9.5	88512.2	143.2	12156.2	6.9	22.0	231.1	431.4	89.2	22.3	61.0	1443.8
May-17	10.4	90170.5	155.8	12410.8	9.2	27.7	233.4	450.8	91.3	25.3	64.9	1940.7
Jun-17	9.8	92812.6	152.3	12694.2	10.2	30.7	232.4	468.2	84.7	24.1	77.1	1584.7
Jul-17	9.4	87149.3	149.5	12115.1	11.4	33.8	237.6	439.3	88.7	25.1	69.5	1019.2

1. Data is provisional.

2. Card transactions of four banks.

RTGS – Real time gross settlement

NEFT – National electronic funds transfer

UPI - Unified Payments Interface

POS – Point of sale

PPI – Prepaid payment instrument Source: Originally uploaded in NPCI & representative data by RBI. Link http://rbidocs.rbi.org.in/rdocs/content/docs/ELECT07022016_A.xls.

(Retrieved on September 2017)^[3]