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**Title of the paper**

*Demonetization: Innovation In Currency Management Policy*

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## **Abstract**

It is too early to conclude the Indian Government's move of Demonetization as a success or failure in terms of its larger political goals. As a broader view, they aimed at cleansing the system of the existing black money, fake currency which abets the activities such as terrorism and other illegal activities and to convert the existing informal and cash based Indian economy into an economy that is formal, less cash dependent and Digital in nature. However, the policy taken by the Indian Government is worth an analysis and the authors try to analyze the same. Currency management issues cause creation of informal sectors and reduction in tax collection which has a direct impact on government revenue and thus Public finance. Demonetization is a major currency reform. A study on India's economic growth from 1999 to 2016 and the Cash to GDP ratio of India showcases the presumption that such move was inevitable in future if not now. The author also argues that the criteria of the policy was in line with security considerations and other logistical issues and that it is near to impossible to come up with a criteria which is universally acceptable and wouldn't cause any hardships or short term economic shock in the present economic and demographic situation of India. Thereby this paper tries to analyze the immediate need for India to demonetize currency and balance the costs and benefits. Currency management is a major aspect of public finance management. The study in this paper includes logistical analysis of the process of remonetisation which includes printing of the new currency in limited time, distributing it to various parts of the country and distribution of the currency back to the market proportionate to the demand of the market which is largely cash dependent. This also includes innovation introduced in the area currency management in form of digital methods of currency exchange. For a country like India with medium set of tech savvy public, a transition from cash-based to cash-less economy led to a lot of disturbance. With availability of devices, awareness, internet facilities etc still India has been reluctant for a digital transformation. As

India aims to solve a currency issue through the use of digital technology the plausibility of such reform is analyzed in this paper. The Digital Campaign led by the government includes promotion of Digital payments through advertising and incentives.

**Key words:** Demonetization, Cash-less Economy, Digital Payments, Currency Innovation

## **CHAPTER ONE: NEED FOR INNOVATION IN CURRENCY MANAGEMENT**

### **Cash and Indian Economy:**

Indian economy is largely cash dependent. With India's currency to GDP ratio standing at a staggering 12.4% which is higher than its cohorts such as Brazil [4.1%] and Mexico [5.7%] Thus India uses a lot of cash. India' uses a lot of cash by other standards as well; it has a high ratio of currency to in broad money [M1] and a low velocity of cash-i.e. a low ratio of GDP to narrow money. The ratio of money held in bills and coins (M0) to the amount held in demand deposit and savings accounts (M2) in India is 51%, which is higher than Egypt (29.3%), South Africa (8.9%), and Mexico (8.7%). For example, the velocity of M1 in India is 1.5 against that of America's 6.6 in Q3 2013 at which time the USA's easy money policy had driven velocity down from a five year peak of nearly 11,<sup>1</sup> around 76% of all consumer payments are also done in cash<sup>2</sup>.

The above mentioned figures suggest that the use of cash in India is substantially higher than the global standards of normal.

When the notes of Rupees 500 and 1000 were demonetised by the India government they amounted to 86% of the total notes in circulation as compared to 76% in 2010. Figures point to a speedy rise in the amount of circulation. The same is with India's rising cash to GDP ratio.<sup>3</sup>

Economists around the world have considered high usage of cash as one of the primary reasons for the existence of elicit/informal economy. Cash also fuels black money and the menace of counterfeit notes or which is generally referred to as fake currency. The black

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<sup>1</sup> Benjamin D. Mazzotta, Bhaskar Chakravorti, Rama Bijapurkar, Dr. Rajesh Shukla, Dr. K. Ramesha, Dr. Dhananjay Bapat, Dr. Deepankar Roy, *The Cost of Cash in India ,Institute of Business in global context*, The Fletcher School, Tufts University, 2014

<sup>2</sup>Medium Term Recommendations to Strengthen Digital Payments Ecosystem, Committee on Digital Payments Constituted by Ministry of Finance, Government of India, Report December 2016

<sup>3</sup> *Supra* Note 1

money and Fake currency is further used for illegal activities such as drug trafficking, human trafficking, aiding the terrorist and naxalite operations which have both security and economic impacts on the nation.

Despite all the harmful effects of cash mentioned above the cost of managing cash itself is a huge burden on the Indian Economy as against the Seigniorage that it receives. The whole financial system is weakened by the cost of managing cash thus finding it unable to fulfill its primary objective i.e. financial inclusion.

#### Cost of Cash:

Cost of cash can be understood by making a distinction between the costs of cash incurred by the consumer as against the cost of cash incurred by the government in managing currency.

#### Cost of cash to the consumer:

Cost of cash incurred by the consumer can be divided in the categories mentioned below

- 1] Fees: In cases of ATM's charging fees from non consumers
- 2] Transit: The cost and time of travelling to the access point
- 3] Queue: The time lost as a result of standing in queues to receive salary, to cash in cheque.
- 4] Risks: Cash is usually not recoverable when consumers experience accidental loss or theft as against the protection provided by banks against any fraud.<sup>4</sup>

Apart from that the holding of cash is also one of the reasons behind inflation which ultimately affects the consumer.

As per survey done in the cities of Delhi and Hyderabad it was found that residents of Delhi invest 60 lakhs hours per month and Rs. of 9.1 crore to obtain cash as against 17 lakhs hours and 3.2 crores of Rs. Spent by an citizen of Hyderabad.

Thus the myths associated to cash as a fastest, safest and least cost consuming mode of transfer are busted.

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<sup>4</sup> *Supra* Note 1

**The cost incurred by the Government for Managing Cash:**

The currency is printed and minted by the RBI; the work is given to the factories under government or RBI control. Cash in transit companies, managed service providers and commercial banks are all part of the cash management cycle. The cash is available at banks and ATM's

As per the RBI the total cost required for managing the whole cycle of cash is 21,000 crores a year which is a huge burden on the India economy. The cost on managing cash is explained in the table below<sup>5</sup>.

1	New currency	2,872 Rs
2	Currency Chest	2,400 RS
3	ATM	10,500 RS
4	Interest Chest	1,600 RS
5	Interest ATM	492.75 RS
6	Interest Branch	2,660 RS
7	Cards	520 RS
8	Total	21,045.74 RS

Source: RBI annual reports. The abovementioned figures are in crores.

These are the costs of cash incurred by consumers and government. It is considered that net cost of cash is 1.7% of India's GDP.

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<sup>5</sup> Source-Reserve Bank Of India.

### **Informal economy and cash:**

Informal economy is generally referred to economic activities that are neither taxed nor audited by the India Economy. Similarly, estimates indicated that foregone tax revenues from the shadow economy constituting 19% of India's GDP, account for 3.2% of India's GDP<sup>6</sup>. It is the abundant use of cash that fuels the informal economy. Cash transactions cannot be trailed and thus act as a method for tax evasion. When majority of transactions happen in digital payment method system these transactions will be easy to monitor and thus prevent tax evasion.

In addition to tax evasion informal economy leads to unethical trade practises such as distorted prices, and leakages in government transfers and subsidies. A formal economy provides the poor urban population with rightful wages as the money is directly transferred in their account.

There are lots of small players in the informal economy that will benefit if they come under formal sector through benefits derived from the banking sector. This will be further discussed under the head financial inclusion.

### **Black money and cash:**

The role of cash in the creation of black money is rather complex. While cash whether illicit or not can be used as a medium of exchange or can be stored in the form of gold and property. While illicit cash can be used for transactions that are legal it can also be converted into white through money laundering or other means such as declaring it to the authorities and paying taxes.

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<sup>6</sup> *Supra* Note 2

During demonetisation it was estimated that black money in form of cash is only 6% of the black money. But the question as to whether it fuels the black money stored in property or gold is unanswered.<sup>7</sup>

When one looks at the rising cash to GDP ratio of India one may link it with economic growth. During inflation in 2000 the ratio had gone down but again rose after inflation was over. Same is the case with high denomination notes.<sup>8</sup> However there are some indicators that suggest that all this cash is not necessarily used for consumption. Asymmetry in the cash to GDP to GDP per capita income, soil rates of high denomination against low denomination are indicators of the fact that a lot cash especially the high denomination notes are used for corruption and black money. This is explained in the 2016-2017 economic report of Indian government.

Estimates are that cash which is not used for transaction and is potentially black is about 3Lakh crores which represents 2% of the economy.<sup>9</sup>

Black money is a funding source for terrorism and naxalite activities in India and elsewhere in the world. Thus high dependence on cash has social, security and economic implications.

The relationship between of cash and especially high denomination notes with black money is widely known. There have been demands made in USA for the demonetization of €500 note, the \$100 bill for the elimination of Black money.<sup>10</sup>

Thus an economy which is digital and less cash dependent is seen as a solution to tax evasion, Terrorist Finance, financial crime and other illegal activities.

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<sup>7</sup> Black cash in India: Surjeet Bhalla, Indian Express, Dec 6 2016.

<sup>8</sup> Economic Survey 2016-2017, Ministry of Finance, Gov of India.

<sup>9</sup> *Ibid*

<sup>10</sup> Peter Sands Assisted by Ben Weisman, Maja Sostaric, Alex Smith, Joel Smoot, Ofir Zigelman and Joel Mathur Making it Harder for the Bad Boys-Case for Elimination of High Denomination Notes, February 2016, Harvard Kennedy School Mossavar –Rahmani centre working paper



### **Tangible benefits of the Digital Economy:**

Transformation from a cash dependent economy to a digital economy has a lot of tangible benefits. The first obvious benefit is reduction in the cost of cash management. A digital economy is more transparent as digital payments can be traced. Therefore it will ensure that black wealth is not further generated. It will also ensure reduction in tax evasion if not completely eradicate it. And it allows banks to provide services to those who have been financially excluded. There are limitations to the brick and mortar system of banking in terms of its speed and capacity to provide services to a large number of populations who have so far been excluded from the formal banking sector. It will ensure that labours and government employees get their rightful wages as money is directly transferred to their accounts. The leakages in the subsidy due to corruption will also be taken care of.

Transitioning to electronic payments itself government could save up to 100,000 crores of rupees yearly with a transition cost of an estimated 60,000 to 70,000 crores rupees<sup>11</sup>. This benefit will accrue out of the current government system of transfer. Ministry of Rural affairs and both state and central governments are going to benefit out of this<sup>12</sup>. India could reduce its cost of cash which is 1.7% of GDP to 1.3%.<sup>13</sup>

It is estimated that a transformation to digital economy can boost India's GDP by 700 billion dollars by 2025<sup>14</sup>. As an effect 344 million new individuals can be included in the financial system<sup>15</sup>. It has the capacity to generate 21 million new jobs, 799 billion dollars of credit

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<sup>11</sup> *Supra* Note 2

<sup>12</sup> Mckinsey And Company, Inclusive growth and financial security the benefits of e-payments to Indian society, 2010

<sup>13</sup> Visa, Accelerating growth of Digital Payments in India,

<sup>14</sup> Mckinsey Global Institute, Digital Finance for All: Powering Inclusive Growth in Emerging Economies, 2016

<sup>15</sup> *Ibid*

through new deposit, 689 billion dollars of new credit and 24 billion dollars of reduction in government leakage<sup>16</sup>.

Thus with so many benefits in prospects as against loss occurred due to cash and the brick and mortar banking system complementing it, India has every reason to undergo a major change in its currency management system through revolutionising its current cash based payment ecosystem and shift to a digital economy.

Demonetization was a move by the Indian government through which notes of RS.1000 and 500RS amounting to 86% of total cash in circulation ceased to be legal tender<sup>17</sup>. This move was brought to penalise black money holders and address the issue of black cash, fake currency which funded terrorist, insurgency and other illegal activities<sup>18</sup>. Later during the process of remonetisation government came up with an aggressive campaign in favour of a digital economy through an effective digital payments promotion campaign. Apart from creating the infrastructure for a digital payments ecosystem the awareness campaign of the government after demonetisation is seen as a catalyst to the process of digital economy<sup>19</sup>.

In further chapters we will analyse the campaign for a digital economy run by Gov.of India, condition of digital payments pre and post demonetisation, case stories of transformation and address the faults in the existing digital payments ecosystem.

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<sup>16</sup> *Ibid*

<sup>17</sup> *Supra* Note 8

<sup>18</sup> Extracts from PM Modi's Speech announcing demonetization, 6<sup>th</sup> December 2016.

<sup>19</sup> *Supra* Note 9

## **CHAPTER TWO: DEMONETISATION AND DIGITAL ECONOMY**

A committee by the Union Government of India was formed under the chairmanship of Ratan.P.Watal on 23<sup>rd</sup> August 2016, which came up with its report in December 2016.

The committee draws a roadmap for the future growth of digital payments ecosystem. In this chapter we shall discuss the pre-demonetisation steps taken by the government of India in order to ensure that during the remonetisation period when people shift to digital modes of payment [primarily due to cash crunch and the digital campaign led by the government] there is an existing infrastructure to undergo such transition.

### **Policy decisions taken Pre-Demonetisation:**

Prime Minister in February 2016 in the union cabinet gave its approval to introduce steps for the payments done via cards and digital methods.

The move was aimed to discourage cash transactions and provide access to financial payments through card and digital means. And reduce tax on the digital payments.

- Migration of Government payments and collections from cash to through digital mode.
- A task force was created for recommending short term measures for promoting digital payments under the chairmanship of secretary DIPAM.
- In his May 2016, “Man ki Baat” addressed the Nation and told about the need to go cashless in order to eradicate black money.<sup>20</sup>

The successful finalisation of the UPI i.e. unified payment interface by National Payment Corporation of India [NPCI] is another big step towards a sustainable digital payment interface. The option of inter-operability will give unleash the power of mobile phones into

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<sup>20</sup> *Supra* Note 2

making them devices for digitalisation of payment. M-mobile phones are integral part of the JAM trinity<sup>21</sup>

### **Decisions taken for incentivising Digital Payments Post Demonetisation:**

Below is the list of number of notifications brought by the central after 8<sup>th</sup> of November to incentives Digital payments.

1] **28<sup>th</sup> November:** In order to cut down the cost of POS machines the NIL excise duty was imposed on all POS machines and goods required to manufacture such machines<sup>22</sup>.

2] According to N.P Hota, Managing Director of NPCI “Removal of excise duty on PoS manufacturing is a big step forward. The country took five years to add last one million terminals. The government now plans to bring one million terminals in the next three months. It would certainly accelerate usage of cards on PoS”<sup>23</sup>

3] There is a significant shortage in the amount of POS machines the no. of POS stood at 1.07 million at the end of March 2014 as compared to 10 million retail businesses nationwide even though the no. has doubled since 2010. The abovementioned levy on the excise will boost the production and sale of these machines<sup>24</sup>.

4] **On 8<sup>th</sup> of December** Government of India launched series of schemes to incentivise Digital Payments:

- 0.75 Rs discount on all Central Government Petroleum PSU’S on the purchase of petrol or diesel through digital means. The scheme will benefit nearly 4.5 crore customers who buy petrol at these stations. It is worth noting that the number of customers paying in digital means on these petrol pumps has increased by 20% in 2016. The Government of India aims at increasing this base by another 30% and reduces the cash requirement of nearly 2 lakh crore per year at petrol pumps.

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<sup>21</sup> *Supra* Note 9

<sup>22</sup> Notification no. 35/2016-central excise, Government Of India

<sup>23</sup> Government removes excise duty on PoS machine manufacturing to ease cash flow- Komal Gupta, Suranjana Roy, Livemint-Epaper, 29<sup>th</sup> Nov. 2016

<sup>24</sup> *Supra* Note 1

- Many critics of demonetisation complained that those worst hit due to cash crunch were rural areas where means of digital transactions are scarce. Thus to expand the digital payment infrastructure in rural area <sup>25</sup> NABARD will expand financial support to eligible banks for deployment of 2 Pos devices each in 1 lakh villages with population less than 10,000. The machines are intended to be deployed at co-operative societies, milk societies, and agricultural inputs to facilitate digital payments at such villages.
- Rural regional Banks and co-operative societies to be funded by NABARD to provide “RUPAY KISAN CARDS” to 4.32 crore kisan credit card holders so they can make card transactions.
- Railway to provide 0.5% discount to customers for monthly seasonal tickets. From Jan 2017 for payment made through Digital Means. 80 Lakh passengers spend around 2000 crore largely in cash to book tickets annually, Gov plans to bring this no. down to 1000 crore.
- Around 14 lakh passengers buy railway tickets everyday amongst which 58% people buy online tickets. This no. is expected to rise by 20% more after the government notification that all online ticket buyers will get free accidental insurance of up to Rs 10 lakhs.
- Railway will give 5% discount on all its paid service such as catering, lodging and retiring rooms etc. If payment is made in digital means.
- Public sector insurance companies to provide 10% discount or credit for premium in general insurance policies and 8% in new life insurance policies.
- Transaction fee/MDR charges associated with the payment to be borne by the state for a particular period.

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<sup>25</sup> NABARD: National Bank For Agriculture And Rural Development.

- Public sector banks told to make provisions that in effect don't require the merchant to pay more than 100 Rs rent on the Pos machines.
- No service tax to be charged on the digital transaction charges and MDR charges for the particular time as advised by the government.
- A discount available on toll plazas of 10% for using RFID cards or Fast Tags<sup>26</sup>.

5] These were the incentives that were announced by the central government through notification on 8<sup>th</sup> of November incentivising digital payments on day to day transactions and targeting a large sect of population.

6] **16<sup>th</sup> December 2016-** Banks and Prepaid Payment Instrument were asked by the RBI to levy any charges for transactions made up to 100 Rs made through IMPS-Immediate Payment service and the USSD and UPI systems, for a particular period of time. Also for payment up to 1000 Rs the MDR charges were kept at 0.25% and for payments from 1000-2000 they were kept at 0.5% <sup>27</sup>.

7] **20<sup>TH</sup> December-** Income tax under the provisions of IT act, 1961 section 44AD brought on digital turnover brought down from 8% to 6%. Encouraging the MSME'S to transact digitally<sup>28</sup>.

8] **29<sup>rd</sup> January** 5Rs of discount on all the LPG cylinders refill booked online and paid online.

9] **5<sup>th</sup> Jan-** Government of India launched a helping no. for all payments related to digital transactions.

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<sup>26</sup> Press Note- Press Information Bureau Government of India Ministry of Finance 08-December-2016 18:20 IST

<sup>27</sup> RBI/2016-17/185-16<sup>th</sup> December[RBI NOTIFICATION]

<sup>28</sup> Press Note-Press information bureau Government of India Ministry of Finance, 20 december2016 20:14 IST

<sup>29</sup> Press Note-Press information bureau Government of India ministry of Petroleum & Natural Gas ,03-january-2017 18:19 ist

All queries related to Aadhar Enabled Payment system, mobile wallets, Bhim App, USSD transfers are addressed by this helpline. This will be of great help to the citizens who face difficulties during digital payments.

These notifications brought during the period of cash crunch brought by demonetisation were to capture a large pool of population through method of monetary incentivisation. The cash crunch itself was an incentive to pay digitally. These other these levies and discounts on taxes and fees act as additional incentives.

The process of remonetisation went on till mid February at which time cash was readily available in the market; let's look at other steps taken by Indian Government during this period.

#### **10] Lucky Grahak Yojana and Digi Dhan Vyapar Yojana:**

NITI Ayog the official think tank of Government of India launched two populist schemes such as **Lucky Grahak Yojana** through which daily reward of 1000Rs to be given for 15,000 lucky customers for a period of 100 days. The weekly prizes of Rs 1 Lakh, 10,000 and 5000 for the customers who use digital means of payments. The scheme of Digi Dhan Vyapar Yojana will give weekly prizes of Rs50, 000, Rs5000 and Rs 2500 to be given to merchants undertaking digital transactions.

#### **11] Mega Draw:**

Three mega prizes for customers worth RS1cr, RS 50lakh and Rs25 lakh given by government of India for transactions done between December 2016 to April 2017. Similarly the prizes for merchants were of Rs 50lakh, Rs 25lakh and Rs 12 Lakh.

These two schemes have a populist appeal that will draw the attention of the population which is usually apathetic about learning about new means of transactions and adopting new technology.

12] The launch of **BHIM** app which provides UPI service and USSD service and application on all bank transactions is the game changer, the easy to use app which will be available in all languages soon will act as a catalyst to the digital revolution.

### **Creating a Policy Framework:**

<sup>30</sup>As the scale of Digital Transactions was increasing rapidly post demonetisation was announced a committee was formed under the leadership of NITI AYOOG CEO Mr.Amitabh Kant, the committee sat and evaluated the state of digital transactions on a daily basis. The committee gave timely recommendations to RBI, NPCI, and Ministry Of Finance to make necessary changes in the policies and introduce new incentives to promote Digital Transactions. All the stakeholders such as banks, customers, merchants, state and UT officials were consulted by the committee. The committee was tasked with monitoring the state of Digital Transactions. The recommendations that the committee comes up with will be extremely relevant and useful for any institutional policy framework brought by the Indian Government regarding Digital Transactions. A massive outreach campaign undertaken by the NITI AYOOG will also be discussed further.

A committee of Chief Ministers under the leadership of Chandrababu Naidu, Chief Minister Andhra Pradesh was also constituted. The committee was also tasked with coming out with a policy framework for achieving the vision of digital payments in the fastest manner possible<sup>31</sup>.

The literature of P.N Watal committee, NITI Ayog committee and the chief Ministers committee will provide the Government with an effective and clear policy that takes Government in a right direction towards creating a robust digital payment ecosystem.

### **Advertising and Awareness:**

Lack of awareness regarding cost of cash and means of digital transactions is seen as a bigger problem than issues related to physical infrastructure and policy framework. The habit of

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<sup>30</sup>*Supra* Note 2

<sup>31</sup> *Ibid*



using cash is deeply entrenched in the society. Many people are still unaware of the available means of digital payments. For people to get used to the new technology they have to believe that these transactions are easy to make and do not need expertise in the field of technology. Also doubts regarding privacy and security have to be removed.

Prime Minister has been a frontrunner in the awareness campaign for Digital payments. He is often seen in his rallies giving a step-by-step demonstration of the different methods of Digital campaign. Prime Minister has urged the people to embrace the new technology for the creation of a cashless society.<sup>32</sup>

The awareness campaign for Digital Payments was run by NITI Ayog; the volunteers from NITI Ayog gave presentations to different ministries, Member of Parliament, traders, merchants, children etc and demonstrated the methods of digital transactions. It distributed campaign material consisting informative videos, brochures explaining different methods of Digital Transaction to ministries, state Departments, Banks, newspapers, media etc.

Banks also participated in this campaign by putting out advertisement and urging the customers to get their mobile phones registered to their bank accounts. While they also launched their payment apps ex: “SBI Buddy”, “Easy Pay”

Many private mobile wallet companies came up with discounts to attract consumers in order to increase their consumer base in the market. One of the prominent players was Paytm.

Thus with the combined effect of all the above mentioned developments a wave for Digital Transactions was created. It became the main topic of discourse amongst the population. One can't say whether such campaign would have had the same impact had it not taken place in the backdrop of a move such as demonetisation.

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<sup>32</sup> *Supra* Note 2.

In the next chapter we will analyse the state of Digital Payments in India pre and post demonetisation to see the impact of the campaign for digital payments. And also discuss the current physical and policy infrastructure of the digital payments ecosystem.

## **CHAPTER 3: ISSUES AND IMPACT OF DEMONETISATION ON INDIAN ECONOMY**

India being a developing Economy, every small change in the daily methods of economic life brings a major impact on the Economy as a whole. On 8th November 2018, the Indian prime minister, Mr. Narendra Modi brought out through an announcement to the world that Indian Currency of Rs.500 and Rs. 1000/- that was in major circulation shall become illegal tender there on. It is almost about 86% of the total circulation that the 500 and 1000 notes are a part of. Considering this large stake, the announcement led to a major crunch in usage of cash for daily transactions. However, by a statement made by the deputy Governor of RBI shows that there has been a deposit/exchange of Rs.12.44 lakh crore of old Rs. 500 and Rs.1000 notes after considering them as a legal tender.

Figures for the currency in circulation (CIC), which is the sum of currency with the public and cash with banks, are given out weekly by the RBI through its routine releases of reserve money data. The last date before the demonetisation announcement for which this data was released was November 4, at which time the CIC was Rs 17.97 lakh crore. Even on November 11, after two days of the banking system working post the demonetisation announcement, the CIC was Rs 17.88 lakh crore. According to the latest figures issued by the RBI on December 28, the CIC stood at Rs 9.42 lakh crore on December 23, Rs 8.55 lakh crore less than the level on November 4. Indeed, the CIC has come down every week after the demonetisation announcement, which means that the net infusion of fresh currency by the RBI in each of these weeks has been less than the value of the old Rs 500 and Rs 1000 notes being returned to it over the same period. The CIC on any date must be the sum of the values of the invalid and valid banknotes held by the public and banks. In other words, it would exclude the invalid notes that had been already returned to the RBI by that date but would

include invalid notes deposited by the public with banks that have not yet been transferred to the RBI<sup>33</sup>.

Considering all the above statements, it definitely is necessary to look at what demonetisation has done to the Indian Economy. While it has brought a major change in the transactions done by Indians from cash based transactions to Digital Payments, demonetisation in India also had certain drawbacks and barriers for its Success in last six months disturbing various economic activities.

Firstly, though it is a short term effect, demonetisation definitely had a liquidity crunch or colloquially speaking lesser cash-in-hand for the public to use. Immediately after the ban on notes, the RBI printed and circulated notes of very high denomination as a substitute which is as high as the Rs.2000 note. A 49% stake of Rs.500/- previously circulated notes, the flashy pink new Rs. 2000 note in everyone's hand, transacting has become a trouble for public in the initial weeks.

Secondly, one of the most important sector of Indian working culture are paid in cash and transacts daily in cash. This sudden crunch of cash had a major affect on this sect of public.

However, like the Finance Minister of India states, though there are several factors, demonetisation also played an important role in the fall of GDP rate to 6.1% in the Q4 that was declared few days ago.

One of the main reasons for demonetisation to occur was to curb the black money prevalent in India. Of the Rs 17 lakh crore of total currency in circulation in the country, black money is estimated at mind-boggling Rs 3 lakh crore.<sup>34</sup> However, the after-effects of demonetisation showed that people saved very less amounts of illegal money in cash. Most of such were kept in form of gold or other physical assets.

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<sup>33</sup> Surajit Mazumdar, While the RBI Is Silent, Its Numbers Tell Us Demonetisation Has Failed, The Wire, 29th December 2016

<sup>34</sup> Impacts of Demonetisation on Indian Economy- Issues & Challenges, Ms.E.Kamatchi Muthulakshmi, IOSR Journal Of Humanities And Social Science, e-ISSN: 2279-0837, p-ISSN: 2279-0845. PP 34-38

Demonetisation not only brought the above effects on public and economy, it had other impacts as well even with an alternative like digital payments that has been working in other countries successfully.

**Infrastructure Issues:** There is need for a significant upgrade of the banking system as well as in the telecom infrastructure that would provide the backbone for digital transactions. For people to be able to transact at any time and place as well as for them to consider it a reliable medium of exchange, it is important that not only the banking system is upgraded to ensure that transactions can be completed without a hitch, but the supporting infrastructure too is up to the mark. For instance, in many parts of the economy, there is limited and intermittent supply of electricity as well as mobile connectivity. In these areas, it would be difficult to expect people to shift to electronic medium of exchange.

2. **Consumer behavioral Issues:** Apart from the technological issues, there is a behavioral change that is being expected in people from using cash as a medium of exchange to using other cash substitutes both for making payments and receiving payments. This transition requires individuals to make two changes in their behavior: one, agents need to move from tangible means which can be seen and felt to forms which are less tangible or not tangible, and second, they have to learn to rely on technologically advanced tools to undertake regular day to day operations. The latter requires agents to be educated to the extent of comprehending the content of transactions. If this transition is not suitably managed, agents might be tempted to move to non-official cash substitutes.

3. **Accessibility in language:** In addition to all of the above, most of the banks and the mobile instruments for transaction are currently adapted to a single to two languages. If the bulk of the population of this country needs to come on board, it might be important to make these facilities available in a myriad of Indian languages to ensure that the user can comprehend the transaction that they are entering into.

**4. Impact through taxes:** There are multiple channels through which taxes will be affected:

At the point of transition to the new regime, people have attempted to convert cash balances into commodities like gold or luxuries. On these transactions the governments would have a spurt of taxes. This would however not last beyond the transition phase.

In the subsequent period, the impact on indirect taxes would be negative because of the compression in demand.

On property taxes, some local bodies have given people a window of opportunity to pay old as well as current taxes in the scrapped notes. This would result in an increase in revenue collections in property tax.

On income tax there can be two potential effects: first, with compression in the economy, there could be a reduction in the tax collection. In the unlikely event of people choosing to deposit unaccounted balances in the bank and pay taxes and penalty on the same, or if the tax department through investigation, finds that some of the deposits are not explained income tax collections would increase. For any individual depositing balances above Rs 10 lakhs, the tax and penalty together would absorb the over 90 per cent of the deposited amount. This would serve as a disincentive for people with large balances to come and deposit the same into accounts. In other words, the government cannot expect to get major collections in terms of the tax and penalty on unaccounted incomes revealed<sup>35</sup>.

However, with all these challenges that the post-demonetisation period India faced, the policy also brought out various good things to the country. A report for internal assessment of Modi Government shows that the demonetisation advantages report of the Modi government says that with Rs 14.2 lakh crores of currency the economy is able to meet all its transactional requirements. This means that the economy now has roughly Rs 5 lakh crores of cash lesser than the amount it would have had if demonetisation had not happened. This essentially

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<sup>35</sup> Demonetisation: Impact on the Economy, National Institute of Public Finance and Policy, 2016

means that the amount of cash stashed away by citizens has come down. This is advantageous to the economy since the hoarding of cash delivers no value to the country's economic growth. One of the most important benefits of demonetisation has been the sharp increase in the country's tax base. The government's estimate is that thanks to demonetisation, India's net personal income tax revenue could double over the next couple of years. Some of the dividends are already visible. The number of people who have filed self assessment forms for the financial year 2016-17 grew by 23.8 per cent. The government's calculation is that out of this 23.8 per cent, at least 10 per cent growth is thanks to demonetisation. Senior officials in the administration say that demonetisation has sent a message that those who evade tax are engaging in a form of financial terrorism and that the law is now going to come after them. One of the big advantages of demonetisation has been the move to a more formal digital economy. In FY 2016-17, there were a total of 300 crore digital transactions. If the rate seen in the first few weeks of FY 2017-18 continues, then the government estimates that this year there will be more than 2500 crore digital transactions. The usage of mobile wallets like PayTM, SBI Buddy, FreeCharge is already worth more than Rs 200 crore per day. In the five months since its launch, 2 crore people have downloaded the BHIM app. The BHIM and UPI payment gateways are already averaging a daily transactional value of Rs 140 crore per day.

## **CHAPTER 4: STATUS-QUO OF THE DIGITAL PAYMENT SYSTEMS IN INDIA**

With the launch of E-Commerce in the country, the then financial needs of the people were not being fulfilled effectively by the existing traditional method of payment system. Therefore, recognising these issues, various steps were taken to evolve the digital payment system in the country. This notion of replacing physical currency with digital payments was nothing new. At that time, several examples existed globally of cash less or less cash societies but it always looked like a distant dream for India. Digital payments surfaced as a mechanism of making traditional unbanked and underbanked sections of society more credit worth. Recognizing this reality, the existing society acknowledges various kinds of electronic payment system in India: Online Credit Card Payment System, Online Electronic Cash System, Electronic Cheque System, and Smart Cards based Electronic Payment System. This system is managed by reserve bank of India (RBI)<sup>36</sup>.

As a result of demonetization, India witnessed a gigantic hike in digital transactions with reports indicating a dearth of ATM withdrawals even after the economy stabilized. Suddenly, the digital financial transaction during those months increased by leaps and bounds. It is essential to realise that the existing role of technology in driving financial inclusion is not just limited to having a bank account for everyone in the society. Rather, it is about creating an ecosystem that enables and encourages people to use financial instruments in their everyday life. If we see the current atmosphere of digital transaction and related materials, these stated conditions are largely absent in India. Despite of the fact that 61% of Indians own a basic mobile phone, there is noteworthy disparity in access and usage across the country. Further, the research shows that only 17% of Indians own a Smartphone which is again a major hurdle

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<sup>36</sup> Rajinder Kaur & Rupinder kaur, *Current And Future Scenario Of E –Payment System In India*, 2 International Journal Of Business Management 1-3 (2015).



since, unlike in Kenya where M-Pesa's USSD technology is phone-agnostic, most Indian payment wallets are only accessible on smartphones<sup>37</sup>.

It started with ECS (Credit) in 1990s and since then it is constantly evolving. Soon after this evolution of popular Electronic Fund Transfer (EFT) system in the late 1990s which enabled people account-to-account transfers, was replaced by one-to-one NEFT system in November 2005. NEFT System was available on all working days from 8 A.M. to 7 P.M. It currently provides 12 batch settlements after every hour, thus enabling *near real-time* transfer of funds. Other unique features, including acceptance of cash for originating transactions; initiating transfer requests without any minimum or maximum amount; facilitating one-way transfers to Nepal; providing confirmation of the date/time of credit to the account of the beneficiaries, etc., were also made available with the NEFT system. The NEFT accounts for a lion's share (91%) of transactions in terms of value, with close to Rs. 58 trillion (US\$892 billion) from 886 million transactions, by the end of the first three quarters of 2015/16.<sup>38</sup> But it was with the establishment of the National Payments Corporation of India (NPCI) in early 2009 that the retail payments has achieved its pace today which is still acting as the umbrella organisation to govern this. In 2004, Real Time Gross Settlement (RTGS) was introduced which is a funds transfer systems where transfer of money takes place from one bank to another on a "real time" and on "gross" basis. RTGS is primarily meant for large value transactions. It processes customer transactions above Rs.200, 000 (US\$3,076) and is available between 9 AM and 4.30 AM on all the banking days

Further, currently, the central government has also introduced Jan Dhan-Aadhaar-Mobile (JAM) to facilitate and transform government-to-person payments platform. The bank

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<sup>37</sup> Vishnu Padmanabhan, Transforming the digital payment infrastructure <http://www.livemint.com/> (2017), <http://www.livemint.com/Opinion/GOqw0yvSZqFbIB5Oxd1J2O/Transforming-the-digital-payment-infrastructure.html> (last visited Jun 4, 2017).

<sup>38</sup> *Supra* Note 37

accounts have been linked to biometric identity and mobile phones by which the government hopes to develop the infrastructure to transfer benefits directly to the poor, circumventing rent-seeking intermediaries and reducing market distortions in the process.

The payment system in any country needs to pass the litmus test of safety, security, soundness, efficiency, and accessibility. In response to this, Andhra Pradesh has shown some signs of shifting to an electronic-payment infrastructure to improve programme delivery by reducing leakage. The AP government in 2006 launched a smart-card programme for MGNREGS and social security pensions where payments were delivered to bank accounts linked with biometric smart cards. A randomized evaluation of the intervention by affiliates from the Abdul Latif Jameel Poverty Action Lab (J-PAL) revealed that biometrically authenticated transfers resulted in a faster, less corrupt payment process. Similarly, in an unconditional cash transfer programme in Niger, researchers affiliated to J-PAL found that mobile transfers were the most cost-effective delivery mechanism and led to improved household and child-diet diversity. The study attributes these results to the time-saving associated with cashing out mobile transfers and shifts in intra-household bargaining power for women. Digital payment systems for improved public service delivery need not be restricted to government-to-person related transfers. In Bihar, a J-PAL evaluation of a fund-flow reform which allowed panchayats to bypass the district and pull MGNREGS wage payments directly from the state account, found that this reduced programme expenditure without a detectable decline in programme performance.

India is growing at a rapid rate when it comes to digitisation of the economy and with different service providers entering this industry, India will soon develop a strong base for digital payment system. The recent news of WhatsApp prepping up to launch peer to peer

payments in India<sup>39</sup> is an example as to how the providers are entering this industry where they would be able to handle customer support in India. India's leading mobile payments company Paytm has also announced that it has formally received permission from the Reserve Bank of India (RBI) to launch a digital bank, which is a signal towards digitisation of the economy<sup>40</sup>. Considering the internet penetration rate in India, it is difficult to develop the digital payment system in India effectively because still there are many people who still have no access to Internet or not aware of the usage. Those looking towards revalorising the digital payment industry will have to keep this thing in mind while looking forward for fully effective Digital Payment system in India.

Digital revolution has provided an easy way to go for digital payment. The future of digital payments is very bright. India is experiencing a remarkable growth in digital payments. In 2015-16, a total of Rs. 4018 billion transacted through mobile banking as compared to Rs. 60 billion in 2012-13. The support and cooperation shown by the government along with the expanding network of mobiles and internet in the country, this will surely increase the number of digital payments.

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<sup>39</sup> Rishi Iyengar, WhatsApp may introduce digital payments in India CNNMoney (2017), <http://money.cnn.com/2017/04/04/technology/whatsapp-digital-payments-india-upi/>.

<sup>40</sup> Priyanka Pani, Paytm gets RBI approval for payments bank The Hindu Business Line (2017), <http://www.thehindubusinessline.com/money-and-banking/paytm-payments-bank-gets-rbi-nod/article9457278.ece>

## **CHAPTER 5: CONCLUSION**

### **DIGITAL PAYMENTS IN INDIA, SUCCESS OR FAILURE?**

While demonetisation has played both roles, what Indians greatly benefited out of this was the transit from cash transactions to digital transactions. Indian Government is also carrying out various pro-digitalization activities in order to promote and ease to its public the use of digital payments. It brought in various Digital Payment Methods, protected and secured the cyber so as to avoid cyber attacks, awareness through various mediums and stop the myth of cyber theft. It also brought in digital payments and awareness within Government Departments.

#### **Digital Village:**

Akodara, a village 90kms away from Ahmedabad, Gujarat is worthy knowing about with regards to its digitalisation. While demonetisation has created an effect in whole of India, Akodara had a smooth transactions in day-to-day life. Residents have been using e-banking for everything possible. With a total population of 1200, this village was first adopted by ICICI Bank to demonstrate how digital payments can be successful and ease the daily transactions of individuals.

Khandalvadi, a village on Chennai-Trichy Highway in Tamil Nadu is another cashless village adopted by the State Bank of India. With a population of about 2000 people, the SBI adopted village has wifi and free internet service provided. In a matter of weeks, 99% of the village residents had bank accounts with debit cards<sup>41</sup>.

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<sup>41</sup> Welcome to Tamil Nadu's first cashless village, Indian Express, December 28, 2016

**Report on Success of Digital Payments:**The report released by Niti Aayog on April 14, 2017<sup>42</sup> states that in a matter of 6 months from demonitization and digitalisation, there have been various success stories to be proud off for India.

- At least 15,000 institutions have gone cashless across just these 100 rural and urban cities across each one of the 27 states and 7 UTs.
- BHIM App and QR Codes launched
- BHIM App has already created a new world record by registering 1.9 crore downloads in just four months since its launch in December, 2016.
- Volume of various digital transactions (including UPI, USSD including BHIM) increased by about 23 times with 63,80,000 digital transactions for a value of Rs. 2425 crore in March 2017 compared to 2,80,000 digital transactions worth Rs.101 crore in November 2016.
- Aadhaar Enabled Payments have increased from 2.5 crore in November 2016 to over 5 crore in March 2017.
- Niti Aayog's Lucky Grahak Yojana and Digi-Dhan Vyapar Yojana

Modi's demonetization initiative has been a boon for India's e-payment providers. Paytm reported a three-time surge in new users, tacking on over 14 million new accounts in November alone. While Oxigen Wallet's daily average users increased by 167% since demonetization began. Ever since Prime Minister Narendra Modi's Demonetization announcement, we have suddenly seen a spike in both app downloads & merchant registrations. This spike is now coming from all cities, big and small, pan-India, consisting of small merchants like vegetable vendors, Kirana shopkeepers [small convenience stores], street vendors, rickshaw drivers, taxi's etc., who've signed onto our Oxigen Wallet app for

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<sup>42</sup> Digital Payment Revolution: Facts & Figures, Niti Aayog

the merchant payments service. The lack of cash in the economy combined with the buzz around electronic payments systems has also sparked some very innovative solutions. The farmers' markets of Telangana began experimenting with their own electronic payment system where customers with Aadhar-linked bank accounts could buy vegetables using tokens which could be purchased via debit cards at specialized kiosks.<sup>43</sup> IDFC kept counters in Telangana's Rytu Bazaar that connected to various bank and also kept an small sized ATM machine. During the period of demonitization when people had a cash crunch of small denominations, this bazaar provided anyway with an Aadhar number link to take tokens to buy Vegetables in the market.

However for a successful digital economic system in India, these few numbers do not substantiate the large scale cash crunch of almost 86% cash in transaction in November 2016. As it emerges, the payment ecosystem in India, is largely bank-centric, with most payment systems being operated either by the RBI, or NPCI, which is owned by a consortium of major banks.<sup>44</sup> The bank-centric nature of the payments industry in India, has been brought to light by several earlier inquiries into the payments industry in India.<sup>45</sup> Most recently in 2016, the Report of Task Force for Promotion of Payments through Cards and Digital Means, chaired by Secretary, DIPAM, noted that payments infrastructure and operations in India are largely driven by banks leaving aside a vast set of players associated with the payments ecosystem. How much are the Indian Banks ready to promote digital payments in India is a question yet to be answered. In a country that had 90% cash based transactions suddenly had to fall for

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<sup>43</sup> Wade Shepard , A Cashless Future Is The Real Goal Of India's Demonetization Move

<sup>44</sup> National Payments Corporation of India, Press Release – “NPCI Shareholding Gets Broadbased”, The initial set of promoters of the NPCI included six public sector banks, viz. State Bank of India, Punjab National Bank, Canara Bank, Bank of Baroda, Bank of India and Union Bank of India; two private banks, viz. ICICI Bank and HDFC Bank; and two foreign banks, viz. Citibank and HSBC. More recently in 2016, the shareholding has been diluted to include 13 additional public sector banks, 15 additional private sector banks, 1 additional foreign bank, 10 multi-state co-operative banks and 7 regional rural banks.

<sup>45</sup> Zarir J. Cama, Report of the Working Group on Electronic Money, In July 2002, the Report of the Working Group on Electronic Money, while exploring the potential of electronic money, recommended a model which restricted the full use of electronic money only to scheduled commercial banks, with very limited participation to non-banks, owing to concerns of lack of seigniorage income for the RBI and the lack of perceived credibility of non-bank financial institutions.

cashless economy. The government has tried its best to incentivize and make it easy for public to habituate itself to a cashless and digital economy. With a faceless, paperless and cashless dream of Digital India, a transformation is worth an applaud to whatever extent it could till now.

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