

PROBLEMS AND PROSPECTS OF CASHLESS ECONOMY POLICY IN INDIA

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ABSTRACT

Worldwide, there is diligence among policymakers to investigate the plausibility of moving towards a cashless economy and seeing digitization as an ideal approach for this. A cashless economy is when, the flow of cash within an economy is non-existent in its physical form and all transactions have to be through electronic channels such as direct debit, credit and debit cards. It is nothing but the latest stage in the evolution of money from commodity to fiat money. India's ratio of cash to gross domestic product is, one among the highest in the world, against this background On November 8, 2016, Prime Minister Narendra Modi made a memorable declaration of demonetization as a result 86 per cent cash was all of sudden halted. It shows the urgent scamper of policymakers seeing India as a cashless economy. In this scenery, the present study carried out to approach how the monetarist theories addressed the cashless, frictionless economy and what are the socioeconomic digital realities of India which is stand up for welcoming cashless economy along with the steps adopted by government and how far it is gaining ground in our country.

KEYWORDS: *Frictionless Model, Cashless Transaction, Challenges in Cashless Economy*

INTRODUCTION

In recent years, around the world technological innovations generates stunning advancement in the financial sector especially in banking retail payments like electronic payment process, digital wallets, mobile-enabled payments etc. As a result of these changes creates aspiration among the world countries to give up cash, we have seen it as, most convenient and widely recognized in its functions like a unit of account, a medium of exchange and store of value. Canada, Sweden, UK, France, Singapore were found to be ahead of the trend in ditching cash, but these countries are not reached into a complete absence of cash rather, an attempt to reduce the value of cash in the total value of transactions.

Central Bank of India has been taking slow and steady efforts over the years like; in the 1990s the Reserve Bank of India initiated Electronic Clearing Service (ECS), Real Time Gross Settlement (RTGS) in 2004 and National Electronic Fund Transfer (NEFT) in 2005 (Kumar & Radhika, 2017). All these e-payment facilities enable paperless clearing system and instant money transfer. Similarly in order to encourage electronic payment system Reserve Bank of India in its vision document 'Payment System in India- Vision 2012-2015' focused key elements Accessibility, Availability, Awareness, Acceptability, Affordability, Assurance and Appropriateness (7 A's) and 'Payment System in India- Vision 2018' changed their broad contour in to 5C's, Coverage, Convenience, Confidence, Convergence, Cost, in order to achieve paper-less clearing instruments, increase registered customer base for mobile banking, accelerating Aadhaar in payment systems. But in spite of all these, policymakers and researchers claim that demonetization, announced by Prime Minister, Narendra

Modi on November 8, 2016, acted as an impetus for the cashless economy aspiration. The initial fourfold aim of demonetization was, to curb corruption, counterfeiting, arrest terrorist activities, band black money (Economic Survey, 2016-17). However, when 99 per cent of demonetized currency returned to bank the predefined marvelous aims further condensed to cashless movement. Thereafter, as we can see an eagerness from the side of government and policymakers for transforming India into a cashless one.

But the question is whether India ready to move towards cashless economy? Or this is the right time for such a movement? The rationale behind these questions is highly valid in a country with the large size of the population having a great deal of socio-economic and geographical diversity. As per Oxfam report, in the last year wealth generation 73 per cent contributed by the richest one per cent, whereas one per cent increase in the wealth of poorest half of the populationⁱ. Labor market characteristics is another dilemma in the country where 90 per cent of the total workforce has been engaging in the informal sector with the glaring gender gap in labor force participation 24 per cent of female and 75 per cent of male (Labor Bureau, 2013-14). Apart from these, large sections in our country are not benefitting from the country's growth. In this backdrop, I set the following objectives for this study.

OBJECTIVES

- To analyze the important achievements in cashless transactions after demonetization.
- To examine the major impediments to overcome, in order to make less cash economy into a reality.

METHODOLOGY

The paper investigates the initiatives and challenges of India for moving towards a less cash economy. Author has used descriptive methodology. Secondary data gathered from various reports from Reserve Bank of India, NITI Aayog, Global Hunger Index, International Labour Organisation etc. Other sources of data which is used in this study are from journals and authentic websites.

Structure of the Paper

This paper is structured in the following manner: Section II gives a description of theoretical and empirical evidence. Section III deals a cashless transaction. Section IV examines the challenges in India for attaining cashless economy. Finally, the last section concludes the findings from the study

Theoretical and Empirical Frame Work

Quantity Theory of Money (QTM) developed in the 18th century unveiled the implication of money supply for the country's GDP growth. Cantillon, Hume, Ricardo, Mill, Marshall, Fisher, Pigou, Hayek and even Keynes were contributed for this theory and it was later celebrated by Milton Friedman (in 1970's) which set the theoretical foundation of monetarism. It was greatly influenced by a large number of Central Banks and they conditioned their monetary policy by targeting money supply for stabilizing the economy. According to the quantity theory of money, arise in the stock of money should lead to a proportionate increase in nominal GDP (P*Y), assuming the velocity of money is constant(Dalebrant, 2016).

$$M*V=P*Y$$

(M: Money Stock, V: Velocity of Money, P: Price Level, Y: Volume of Transactions of Goods and Services)

But the payment system has been changing and most of the countries trying to follow strategies to make reduce the cash in circulation through digital payment systems. So in this case the important concern is, about the effectiveness of monetary policy in a cashless economy. A positive effect of money supply on nominal growth of GDP empirically proved not working in Sweden, an economy racing to 100 per cent cashless economy, ready to bear negative interest in making it is in reality. The central bank has been following a variant of the Taylor rule when setting the short-term interest rate. So the cashless movement not negatively affecting the Riksbank ability to conduct monetary policy moreover, at the zero lower bound in Sweden might be a less prove to experience a bank run which in fact would strengthen monetary policy and the overall financial stability (Dalebrant, 2016).

Whereas, Stori and Grawe in their frictionless model, demonstrated the efficiency of Central bank and monetary policies in a cashless economy. Where two characteristics are existing, primarily, there are no notes and coins in circulation issued by central bank and all the money issued by private financial institutions (banks and possibly other firms), additionally they continue to assume that, in cashless society the unit of account remains a national affair and it is provided by the state. Price indeterminacy is crucial in a cashless economy where agents are not subjected to money illusion. The price indeterminacy can be illustrated by the equation of money market equilibrium $M = P(y, r)$ i.e. Real demand = Real supply. According to this equation, there are an infinite number of combinations in money stock M, and price level P, in which the money market is in equilibrium. Both are nominal variables, agents are care only relative price because they are not subjected to money illusion, that's why they are not attentive about the nominal variables such as price level and nominal money stock. So in the cashless economy with the absence of a central bank monopoly, who would take the responsibility to fix the nominal variable. This is the route cause of price indeterminacy. In addition, they claimed that, due to loss of monopoly power, low currency, inadequate bank reserves and the provision of liquidity, central bank fail to run system of standing facility and open market operation in order to control the short term interest rate (Stori&Grawe, 2001).

Goodhart (2002) explained the central bank has hold in short term interest rate even in the cashless economy because it is not a profit-maximizing firm along with it can take resource from the state. But this reasoning was widely criticized on the ground that willingness of state treasury to bear the losses of the central bank does not increase the power of central bank to increase the interest rate and it looses the independent of the central bank. (Therefore contradiction is existing in cashless economy about the power of central bank and state in the monetary affair). So the role of the central bank in a cashless economy should be revised in accordance with assuring the quality of private money and ensuring control over it. A central bank can implement a system where they certify the quality of private money by printing "logo" and thus giving the legal tender characteristics to money. In addition, the central bank required to use macro economic criteria to control the money stock and interest rate by increasing the capital adequacy ratio during boom or increase the collateral banks are required to use in extending loans (Stori&Grawe, 2001).

Fabulous Frictionless or cashless model was done by Woodford in his book, *Interest and prices; Foundations of a theory of monetary policy*. He inspired on *Wicksell's interest and prices* and made his model adapting the Wicksell's pure credit economy frame work. Notably, Wicksell provided the frictionless model (cashless economy framework) for getting an idea about how money affects the economy. Whereas, Woodford (2003) gives up money in his monetary policy for the determination of price level in a cashless economy and argued interest rate rules can control the price level (inflation). For

Woodford, the cashless economy is “an economy in which there is no reason to hold money balances, even when they earn the rate of return that is dominated by that available on other assets” (Woodford, 2003). But this model had to face a lot of criticism, especially in the ground of absents money, in its strict sense money is absent but the price of real good and financial asset quoted in monetary unit of account. This monetary unit of account defined in terms of a claim to a certain quantity of a liability of the central bank; which may or may not have any physical existence (Barbaroux, 2007).

Cashless Transactions in India

There has been an intense effort from the side RBI and Government for reducing physical cash in circulation on the ground of cost of printing currency, increasing the tax base, convenient, restriction of the parallel economy, financial inclusion, tracking spending etc. But how far these movements succeeded, especially after demonetization, this is going to analyze in this section.

As per the RBI annual report 2018, the share of electronic transactions in the total volume increased from 88.9 (2016-17) to 92.6 percent in 2017-18, at the same time the share of paper-based clearing decreased from 11.1 percent (2016-17) to 7.4 per cent in 2017-18. Amongst the electronic modes of payments, the Real Time Gross Settlement (RTGS) volume of the transaction recorded 15 per cent growth from 2016-17 to 2017-18, and it is handled transactions valued at rupees 1, 167 trillion in 2017-18, up from rupees 982 trillion in the previous year. During 2017-18, the number of transaction carried out through credit cards and debit cards was 1.4 billion and 3.3 billion respectively. After the demonetization, percentage growth rate in a number of the transaction in credit card was 15 per cent, whereas the growth rate in the debit card was 39 per cent. Prepaid Payment Instrument (PPI) recorded a volume of about 3.5 billion transactions, valued at rupees 1,4,16 billion. PPI facilitates the purchase of goods and services against the value stored on the payment instrument (Table: 1).

Table 1: Payment System Indicators- Annual Report, 2018

Item	Volume (million)			Value (billion)		
	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18
1	2	3	4	5	6	7
1. RTGS	98.3	107.8	124.4	8,24,578	9,81,904	11,67,125
Retail Payments						
Total Paper Clearing (2+3)	1,096.40	1,206.70	1,170.60	81,861	80,958	81,893
2. CTS	958.4	1,111.90	1,138.00	69,889	74,035	79,451
3 Non-MICR Clearing	138	94.8	32.6	11,972	6,923	2,442
Total Retail Electronic Clearing (4+5+6+7+8+9)	3,141.50	4,222.90	6,382.40	91,408	1,32,324	1,93,112
4. ECS DR	224.8	8.8	1.5	1,652	39	10
5. ECS CR	39	10.1	6.1	1,059	144	115
6. NEFT	1,252.90	1,622.10	1,946.40	83,273	1,20,040	1,72,229
7. IMPS	220.8	506.7	1,009.80	1,622	4,116	8,925
8. Unified Payment Interface	-	17.9	915.2	-	69	1,098
9. National Automated Clearing House (NACH)	1,404.10	2,057.30	2,503.30	3,802	7,916	10,736
Total Card Payments (10+11+12)	2,707.30	5,450.10	8,207.60	4,483	7,421	10,607
10. Credit Cards	785.7	1,087.10	1,405.20	2,407	3,284	4,590
11. Debit Cards	1,173.60	2,399.30	3,343.40	1,589	3,299	4,601
12. Prepaid Payment Instruments (PPIs)	748	1,963.70	3,459.00	488	838	1,416
Total Retail Payment	6,945.20	10,879.70	15,760.60	1,77,752	2,20,703	2,85,612

Source: RBI annual report, 2018

Thus we can see advancement in volume and value of cashless payment in the total payment system in India but while taking overall growth trend in digital payment from 2011-12 to 2017-18. Up to 2014-15, the growth pattern was like a slow and steady improvement but after that, there is a clear-cut upward burst, particularly in the next year after the demonetization. But in 2017-18 growth rate has been moderated to 44.6 percent from the previous year hype (Figure 1). It shows that we have failed to keep the increase caused by demonetization. Here the high increase in 2016-17, itself creates a question that is, whether it is the choice made by the people or by force of the circumstances.

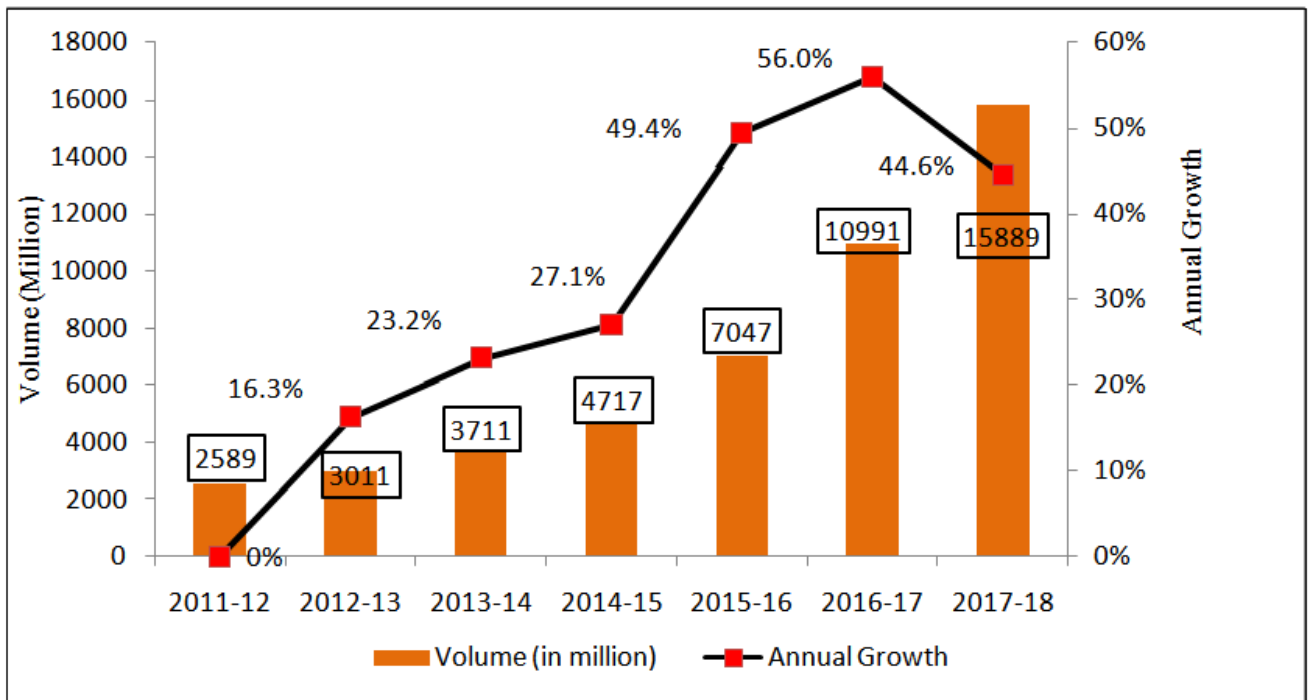


Figure 1: Digital Payments- Overall Growth in the Volume of the Transaction (2011-12 to 2017-18)
Based on RBI Data

Source: NITI Aayog- 2018

The trend is similar in the overall growth of the volume of a digital payment transaction, as figure 2, shows in 2016-17, the value of transaction reached 31.1 per cent growth rate, demonetization spike. However, the growth rate has fallen into 11.9 per cent in 2017-18. So we can conclude from the result at the period of demonetization people had to find digital payment as a substitute for cash, the temporary effect of demonetization not able to continue after the sufficient currency in circulation.

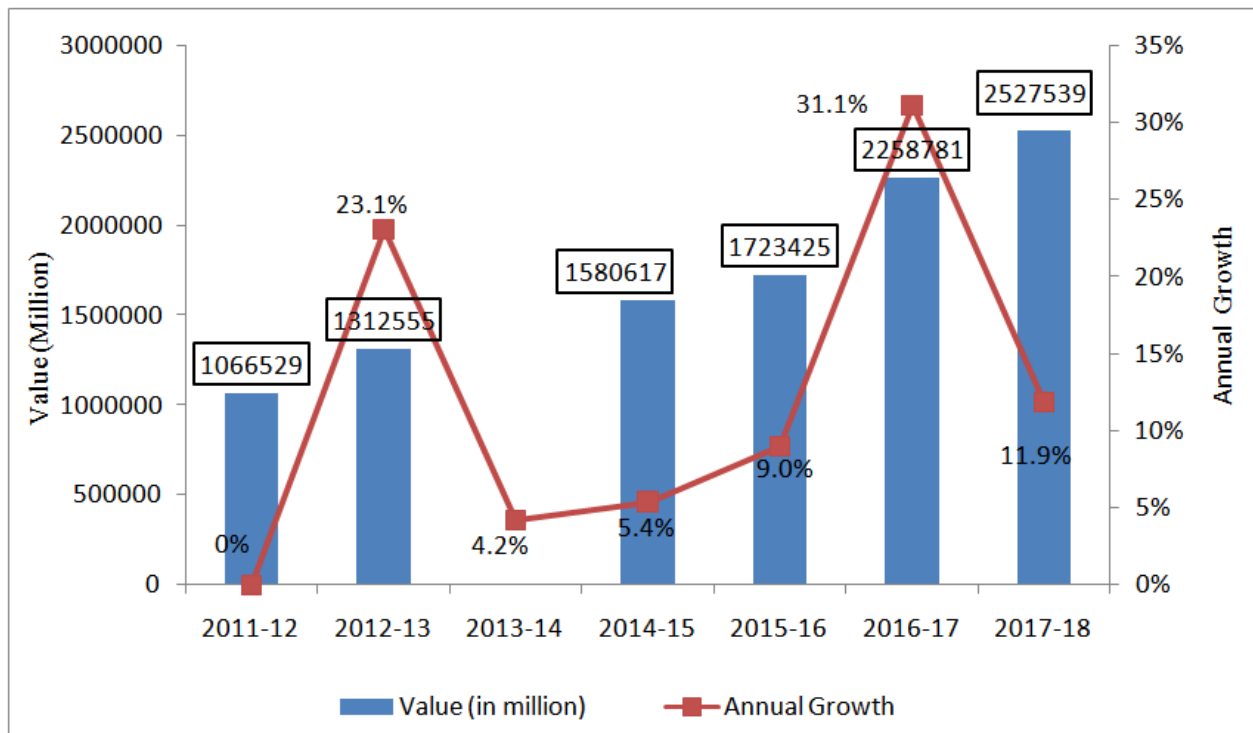


Figure 2: Digital Payments- Overall Growth in Value of the Transaction (2011-12 to 2017-18) Based on RBI Data

Source: NITI Aayog- 2018

Supply of bank notes was higher after demonetization, currency in circulation as on March 31, 2018, accounted for 101.8 per cent of its pre demonetization level (RBI Annual Report 2017-2018). The outstanding stock of currency in circulation was 12 per cent of GDP during 2011-12 to 2015-16, declined to 8.8 per cent during 2016-17, reflecting the impact of the demonetization. But as per RBI data available in April 2018, this trend has reversed as the outstanding stock of currency in circulation has climbed back to 11.3 per cent of GDP (NITI Aayog, 2018). So here is the problem of sudden implementation of demonetization and directionless effort from the government because a country like India having huge economic inequality makes a large section of people are out of the mainstream development. This is one among the important challenge for India's cashless dream.

Challenges in India for Attaining Cashless Economy

Whatever the policies or innovations introduced in a country it should be inclusive in nature but a country like India; we cannot guarantee inclusive progress in the digital revolution in its incubation stage. A number of factors is lagging behind in the headway of leading growth. This contraposition is very crucial in terms of digital payment revolution, demanding average progress in terms of awareness and infrastructure. Here we just close look some of the dilemmas, want to focus along with the authorities hastiness to make India into a cashless one. Structural changes are going on in India's labor market from agriculture to manufacturing and service sector, still, the additional employment opportunities creating in service sector from 1991 to 2014 is only 7 per cent, whereas overwhelming workforce skewed in agricultural sector itself (47 per cent). As per official source, there are 402.4 million is the employed person, among which 206 Million (51.4 per cent) were self-employed. What is the nature of self-employed in India: a major part of self-employed are not big entrepreneurs, 12 million of our enterprise do not have an address, 12 million works from home, only

seven million registered in Goods and Service Tax, this shows a massive informality in self-employmentⁱⁱ. Apart from self-employed, 195 million (48.6 per cent) were wage employees, from these wage employees, 121 million were casual labors, only 38 per cent of wage employees were regularly salaried. (ILO, 2018). So the question is, how the cashless economy is going to address this self-employed and casual workers (92 per cent of total workers) or what is the need for these people, who are engaged in irregular work, facing difficulties to meet both ends of their life from their irregular wage to move in a cashless economy.

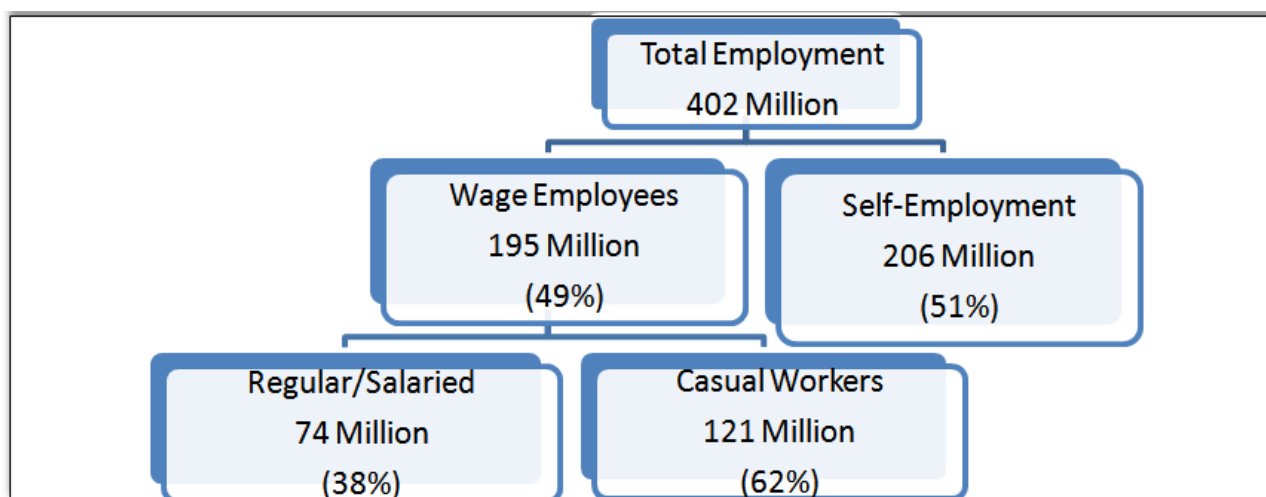


Figure 3: Structure of Employment in the Indian Economy

Source: ILO (2018) estimates based on NSSO data.

In 2018 Global Hunger Index, India ranks 103rd out of 119 countries. The GHI score for India (31.1) fell under the category of serious hunger in severity scale and India is ranked below many neighboring countries, including China, Nepal, Myanmar, Sri Lanka and Bangladesh (Global Hunger Index Report, 2018). So here is the problem of talking more credibly, India is the single country having a billion mobiles and seeing it as right time for cashless economy movement. Actually, the emphasis is given by the government for digital payment revolution through allocating millions of rupees, subsidies, and incentives through tax reduction redirecting our financial resources from the crux area like wasting and stunting among children below five years. So for the country, this the time to assert the right to food for all and make zero hunger a reality

Table 2: Status of India in Global Hunger Index

Country	1992	2000	2005	2010	2018
India	46.2	38.8	38.8	32.2	31.1
China	25.9	15.8	13	10	7.6
Russian Federation	-	10.5	7.7	7	6.1
Pakistan	42.7	38.3	37	36	32.9
Afghanistan	50.2	52.3	43.2	35	34.3

Global Hunger Index Report: 2017, 2018

The country has come a long way from low literacy; still, it is home to the biggest illiterate of adults. Without the basic knowledge to read and write, how they were a part of the digital revolution. According to the 2011 census, Uttar Pradesh literacy rate was 67.68, Bihar it was 61.80, there are a number of illiterate population constituted in states like

Andhra Pradesh, Madhya Pradesh, Rajasthan, Jammu & Kashmir, Jharkhand, Arunachal Pradesh, hence for connecting them in the chain of technology, that need an average education in order to get rid from fraudulence and malpractice in cyber era would be a matter of concern.

Table 3: Literacy Rate in India

State	Literacy Rate
Uttar Pradesh	67.68
Bihar	61.8
Andhra Pradesh	67.02
Madhya Pradesh	69.32
Rajasthan	66.11
Jammu & Kashmir	67.16
Jharkhand	66.41
Arunachal Pradesh	65.38

Source: www. Census 2011.co.in

Universal electricity access is still a distant dream for India. Lakhs of houses without electricity in impoverished parts of India shows they have to travel the long distance to bridge the digital divide. As per 2011 census, electrified houses were 67.2 per cent. Still, more than 3.1 crore households in rural areas and 50 lakh houses in urban areas have no electricity. In Uttar Pradesh, number houses not being electrified is around 1.4 crore, about 3 million in Bihar, 2.9 million Jharkhand and 2.4 million in Assam (Table 4). This infrastructural barrier left out a large section of society from the benefits of the digital revolution and keeps them away from mainstream progress in our country.

Table 4: Houses without Electricity

State	Number of Houses
Uttar Pradesh	1,41,77,290
Bihar	33,18,554
Madhya Pradesh	12,51,973
Rajasthan	19,56,375
Jharkhand	29,88,404
Assam	24,04,637
Tripura	1,66,258
Jammu & Kashmir	2,62,461
Uttarakhand	3,02,952
Manipur	1,02,673
Meghalaya	1,31,427

Source: Ministry of Power, 2017ⁱⁱⁱ

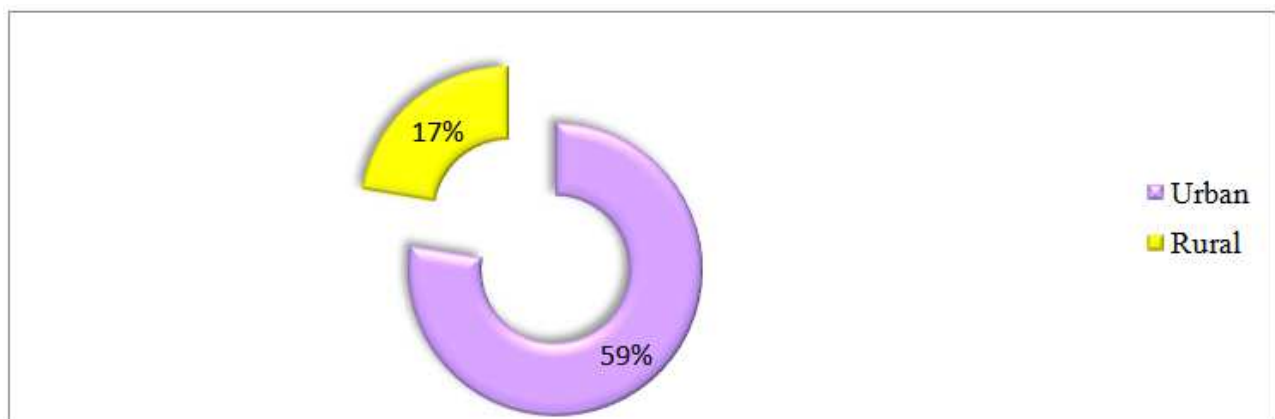
Along with these issues, large sections of the world population left over from the digital revolution, only 15 per cent in the world have broadband internet and nearly 60 per cent of the world has no access to the internet connection. The world offline population is mainly from India and China. 1.63 billion Indians were offline (Table: 5), which is the highest among the world countries (World Development Report, 2016).

Table 5: World Top 20 Countries in their Offline Population (in millions)

India	1630 million
China	755 million
Indonesia	213 million
Pakistan	165 million
Bangladesh	148 million
Nigeria	111 million
Brazil	98 million
Ethiopia	95 million
Mexico	70 million
Congo, Dem. Repo	68 million
Philippines	63 million
Russia	55 million
Iran, Islamic Rep.	54million
Myanmar	54 million
Vietnam	52 million
United States	51 million
Tanzania	49 million
Thailand	48 million
Egypt	42million
Turkey	41 million

Source: World BankReport, 2016

People with Low income, illiterate, elderly and women are largely excluded from the access of the internet and it is more critical in rural India. Semi-urban and rural areas are deprived of a stable net connection, while urban centers mostly enjoy high-speed connectivity. Internet and Mobile Association of India (IAMAI) and market research firm Kantar IMRB reported internet penetration in rural India is about 17 per cent, where as in urban India it is about 59 per cent. It shows a wide gap between rural and urban areas (Figure 4). As a result of digital initiatives in education, health, e-governance etc. are largely controlled by a few at the top of the pyramid leads to information poverty, which is more serious in India (Singh, 2010).

**Figure 4: Internet Penetration in India**

Source: IAMAI & KANTAR IMRB Report, 2016

In rural India, the internet user base has grown by 7 per cent from October 2015 to October 2016 to reach an estimated 263 million. It is further expected to grow 269 million by 2017. In urban India internet users have grown at the rate of 22 per cent between October 2015 and October 2016, to reach an estimated 157 million. The number is expected to reach in the range of 163 million by 2017. Despite so much initiatives, there has been a wide rural-urban gap is existing across the country.

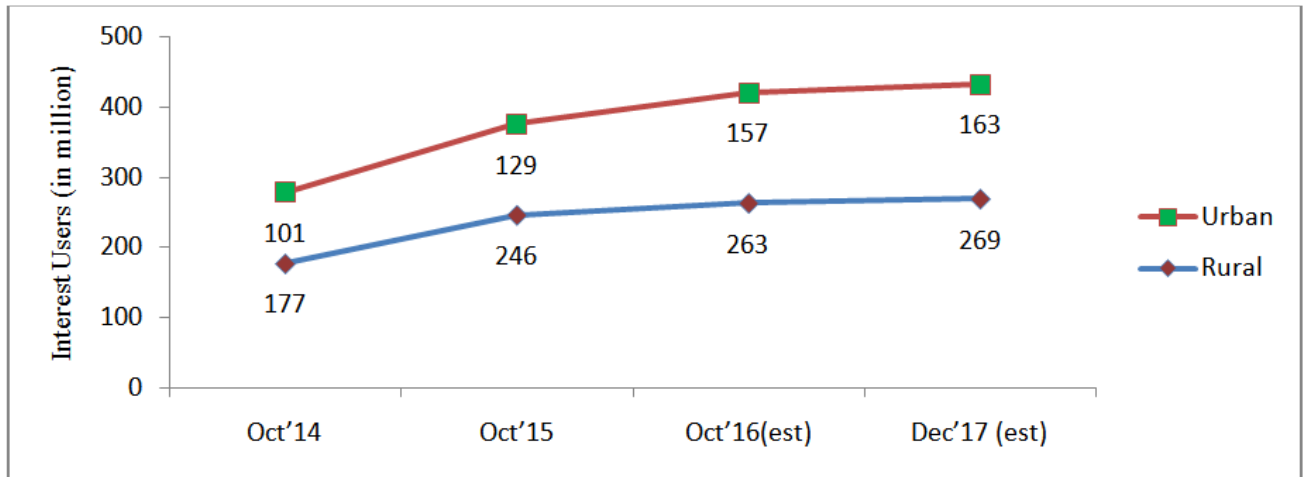


Figure 5: Rural-Urban Gap in Number of Internet Users (in million)

Source: IAMA & KANTAR IMRB Report, 2016

CONCLUSIONS

From the above analysis, it has been found that India is taking crucial initiatives for reducing transaction of cash and promoting digital payment methods; though failed to retain the hype in a cashless transaction during the phase of demonetization. The reduced currency in circulation induced people and business sectors to use alternatives. Looking at the prevailing situations in India, especially in labor market, infrastructure availability, volatile marginalized sections would not allow expeditious inclusive digital payment transactions, rather the present scamper from the government may create another divide among those who have a digital infrastructure and those who not.

ⁱ . <http://www.oxfamindia.org/blog/15-shocking-facts-about-inequality-india>.

ⁱⁱ <http://economictimes.indiatimes.com/news/economy/policy/view-indias-prosperity-depends-on-reducing-its-50-self-employment/articleshow/62964222.cms>, accessed on 4/1/2019.

ⁱⁱⁱ <https://powermin.nic.in/>, accessed on 25/12/2018.

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