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## Demonetization, the Movement to an Electronic Payments System and the inch towards Full Financial Inclusion in the Indian Economy

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# Bard

**Demonetization,  
the Movement to an Electronic Payments System  
and the inch towards Full Financial Inclusion  
in the Indian Economy**

A Senior Project Submitted to  
The Division of Social Studies  
of  
Bard College

By  
Satwik Srikrishnan

Annandale-on-Hudson, New York  
May 2017

## **Dedications and Acknowledgements**

First, I would like to thank my Mother, Suguna Srikrishnan and my Father, H Srikrishnan who cultivated the value of social inclusiveness in my upbringing. This paper is dedicated to both of you. Thank you for all the love, support and guidance throughout my undergraduate career at Bard. Second, I would like to thank my sister Sriya Srikrishnan who inspires me everyday. The passion she holds for her work drives me to work harder, as a younger sibling. Third, I would like to thank my advisors, Dr. Pavlina Tcherneva and Dr. L. Randall Wray for their valid instructions, continuous mentorship and for instilling in me, the fundamental idea of ‘breaking big banks’ as a means of financial reform. Special thanks to coach Craig Thorpe-Clark (the bogan) and The Bard Squash Team.

To all my Professors during my Bard career (and Manishka), thank you for building the finest learning environment away from home.

And finally, to my friends at Bard College, thank you for all the memories. This would not have been possible without your affection, comfort and motivation. I love each one of you.

### **Plagiarism Statement**

I have written this project using my words and ideas, except otherwise indicated. I have subsequently attributed each word, idea, figure, and table which are not my own to their respective authors. I am aware that paraphrasing is plagiarism unless the source is duly acknowledged. I understand that the incorporation of material from other works without acknowledgment will be treated as plagiarism. I have read and understand the Bard statement on plagiarism and academic honesty as well as the relevant pages in the Student Handbook<sup>1</sup>.

Satwik Srikrishnan

May 2th 2017

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<sup>1</sup> Giovannoni, O. (2015) Guide to the Senior Project in Economics, Bard College.

Note

Tuesday, May 2, 2017

1 US Dollar (USD) = 64.17 Indian Rupee (INR)

Satwik Srikrishnan

### Abstract

There is ever-growing evidence, and importance of Financial Inclusion in economic growth and development in emerging economies like India. However, there is little-to-no information about the role of institutions engaged in digitized payments in accelerating Financial Inclusion. This paper aims to study the effects of the recent Demonetization ordinance, and its impact on Financial Inclusion in 2016, as well as the impact on recent institutional policy announcements. Additionally, It aims to assess the potential benefits of a digitized payment ecosystem and its institutional framework, in response to orders made by the Government of India and The Reserve Bank of India in order to achieve full financial inclusion in the long-run.

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## **Introduction**

The Indian financial sector has undergone momentous structural changes from the onset of financial liberalization in the 90s. The period of liberalization became a crucial part in terms of structural adjustment as it attempted to improve economic reforms for the weaker sections in Indian society. The financial regulators of the country have been attempting to build an inclusive system that encourages economic growth, hoping it will translate to full financial inclusion. Furthermore, there has been an enormous generation of literature that established the positive impact of an efficient and extended financial sector on economic growth and development. India holds a consensus of financial inclusion taking priority, both from the government and public personnel, and has been striving to bring the entire currency under the radar of the law.

On November 8, 2016 the Government of India announced the demonetization of high-currency notes in the banking system. It was viewed as ‘one of the most extreme monetary experiments in recent history’ (Ghosh, Chandrasekhar, Patnaik, 2017). This had colossal effects on the economy, and caused distress especially on the lives of the rural population. More specifically, the unbanked. It immediately raised multiple concerns, related to its legality, ramifications and the experimental nature of the ordinance. Its initial goal was to eliminate ‘black money,’ the printing of ‘counterfeit notes’ and ‘terror financing’. A week after announcing the ordinance, the regulators changed the declared goal of Demonetization, of turning India into a ‘cashless society’.

On a parallel track, India has been on the wave of inviting dynamic payment ecosystems in the economy, given the rise of ‘fintech’ companies and increased smartphone subscription in the

nation. Digital payments have surged the economy in recent times, and assisted the Government's initiatives to 'formalise the informal' through easier banking solutions.

The objective of this study is to understand whether the unbanked in India, can facilitate payments in the formalised banking system, through the assimilation and intention of previous financial inclusion strategies, and whether the Demonetization ordinance was a mere impediment of the same. This paper is, at its essence, about Money & Banking.

The Paper is organized as follows:

**Chapter One** introduces the 2016 'legal tender charter' and previous iterations of the demonetization ordinance, the purported logic of the same, the 'Black economy,' the growth of currency holdings in the Indian economy, to its inadequacy in 2016, and a critique of the announced decision.

**Chapter Two** covers the role of banking in the Indian economy and the Government's previous institutional policy initiatives which is indispensable in order to sufficiently understand the intent, and trajectory of financial liberalization in the Indian economy, after the industrial boom (under Prime Minister Manmohan Singh), that helped liberalize trade and commodity markets, leading to the advent of a Payments System.

**Chapter Three** examines the current phase of financial inclusion in India's policy objectives, new ideologies of financial inclusion, and the operations of the electronic payments ecosystem, with a focus on the challenges with adoption and barriers to entry.

**Chapter Four** explores findings and perspectives on the current roadmap that the Government of India and RBI have created to 'bank the unbanked.'

## Chapter One: Demonetization

India has always been cash intensive, “even for a developing country”. (Mazzotta & Chakravorti, 2014, 5) It has a high ratio of currency in broad money (M1) and a low velocity of cash. 87% of all transactions are cash-based. Cash still remains as the most 'readily available and widely used' method of payment in India. Regardless of being part of a formal banking system, Indians tend to carry cash (usually high denomination notes). “Most Indians lack the means to use cashless alternatives, irrespective of their desire to do so”. There has been slow growth in the value of card payments, ‘despite a significant increase in the prevalence of financial cards and ATMs’. This Chapter will expand on the recent Demonetization initiative, that had an impact on the Indian economy. It will also expand upon the ‘Summary of Currency Holdings and High Cash Usage’ in the Indian economy— that there was an overall increase in the money supply, causing the population to be inclined to use cash as a ‘store of value’. India's density of bank facilities has grown since after bank nationalization and credit liberalization among the population<sup>1</sup>. As of April 19, 2017, 283 million accounts were open under the PMJDY scheme, after demonetization (PMJDY data). Although, after the ordinance, there was sparse activity after accounts were opened, due to a heavy reliance on cash had the population averse to adopting new methods of payment. “Too often we assume people resist moving away from cash because they fail to recognize the cost” (Mazzotta & Chakravorti, 2014, 35). This chapter expands upon the cost of currency operations from the supply-side (RBI & Commercial banks).

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<sup>1</sup> See Chapter Two

## 1.1 Defining Demonetization

Currency, in the form of banknotes issued by the Reserve Bank of India (issuing authority) is 'backed by the legal power invested' (Chandrasekhar, Ghosh, Patnaik, 2017, 8-10). Therefore, it is 'legal tender' wherein, the authority issuing it makes a 'promise to accept the note at its face value'. The process of demonetization is the 'removal of that backing'--it is the process by which particular currency notes are no longer legal tender.

*“All currency notes are promissory notes, explicitly or implicitly backed by the state. They contain the words ‘I promise to pay the bearer the sum of \_\_\_’ (Ghosh, Chandrasekhar and Patnaik, 2017). Hence, demonetization should not abandon this promise, i.e it should require the exchange of such notes to an ‘equal value’, in a form that is acceptable by the economy.*

### 1.1.1 The Three Iterations of Demonetization in the Indian Economy

On November 8, 2016, the Prime Minister of India Mr. Narendra Modi announced to the country, the government’s decision to remove the ‘legal tender charter’ of INR 500 and INR 1000 banknotes, and the currency ceased to be legal tender for four hours, after it had been disclosed at 8:00 am, effective as of midnight. This was an opportunity for banks to invite high and hasty deposits (within 72 hours after the announcement) which caused a high money supply in bank accounts of institutions (See Section 1.1.2). Banks opened their windows for the exchange of old notes in this 72 hour period. He also announced the issuance of new banknotes: INR 500 and INR 2000. It was described as “a historic opportunity’ for the PM to siphon out the evils in the country’s shadow economy (Dwivedi, Tamilmani, Rana et. al. 2016). The aim of the

government was to expose tax evaders, counterfeiters of money, hoarders of cash and corrupt personnel. The ‘increased incidence’ of fake notes in big denominations (RBI FAQs, 2016), were detected in the banking system (including notes seized by the authorities and enforcement agencies). The counterfeit notes made up for 0.002% of the notes in circulation. As per a Press Release on Nov. 8, 2016 under the ‘Gazette notification’ (Ministry of Finance, 2016) “the stated objectives were to:

- (i) curb the menace of fake currency;
- (ii) wipe out unaccounted and tax evaded money stored in such high-value notes; and
- (iii) prevent use of high denomination notes for terror financing.”

The first demonetization occurred in January 1946, when currency notes of denomination: INR 1000, INR 5000, and INR 10,000 were removed from circulation. In 1946 (British Colonial India), after the Ten pound note was called in, Sir Archibald Rowlands<sup>2</sup>, a Finance Member then, imposed this action towards India as ‘one more concrete example for the Indian Government to follow in its fight against black market money and tax evasions which have now assumed enormous proportions’ (Simha, 1970, 76). The government went ahead with the decision to demonetize notes of the denomination value of Rupees 500 and above. Governor Trevor, stated that the Financial Member gave him the impression that the decision would go ahead, only on the ‘onset of an inflationary spiral’ (in a scheme drafted by Mr. Sundaresan, Agarwal 2016) . What appeared as a scheme to ‘get a hold of the tax evader’, directed towards black-marketing, the role of demonetization in 1946 served as a ‘minatory and punitive gesture’ according to Sir

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<sup>2</sup>See “Rowlands, Sir Archibald (1892–1953),” B. R. Tomlinson in *Oxford Dictionary of National Biography*, 3rd ed. H. C. G. Matthew and Brian Harrison (Oxford: OUP, 2004); online ed., ed. David Cannadine, January 2011, <http://www.oxforddnb.com/view/article/35852> (accessed April 23, 2017).

Chintaman (An Indian Civil Servant) in a lecture delivered in February 1957 in Bombay. A correspondent in the Economic and Political Weekly Journal on May 13, 1967, questioned: What exactly will demonetization achieve ? He then proceeded to argue that “only a small proportion of hidden wealth at any point is likely to be held in the form of currency notes”<sup>3</sup>. Currency as we know can also be the channel to continuously finance bogus transactions as it possesses a nature of convertibility to multiple forms of assets such as real estate and gold.

The following iteration of demonetization was in 1978, when the President of India ‘promulgated high denomination banknotes’ on January 16, 1978, and then demonetized notes of INR 1000, INR 5000 and INR 10,000 with the objective in mind to eliminate “the possible use of such notes for financing illegal transactions”. These notes were of high value, and the promulgation of the 1978 demonetization had ‘little effect on the daily lives of people’ (Rajakumar and Shetty 2016, 13). Since these notes were of little use to common people, at that time, there was little attention given to the change. High denomination notes at the time constituted around 0.6% of the total currency in circulation. The total demonetized amount was INR 731 million (INR 73,100,000). The purpose of this demonetization ordinance was presented in the preamble as:

*“The availability of high denomination bank notes facilitates the illicit transfer of money for financing transactions which are harmful to the national economy or which are for illegal purposes and it is therefore necessary in the public interest to de- monetize high denomination notes.”* (Preamble to the High Denomination Bank Notes Act of March, 1978, RBI)

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<sup>3</sup> (1967). Demonetisation and “Black” Money. *Economic and Political Weekly*.

The authorities in 1978, noticed ‘quantum jumps’ in currency holdings (Table 1, Rajakumar and Shetty, 2016, 14). Only ₹100 notes (highest denomination then) in circulation attempted to meet the RBI’s view of ‘meeting higher transaction needs, arising from inflation’ (Rajakumar & Shetty 2016, 13). The ordinance issued did not succeed, because ‘out of a total issue of INR 1439.7 million of the high denomination notes, notes of the value of INR 1349 million were exchanged’ (History of the Reserve Bank of India 1970, 708). ‘45% of high-denomination notes in circulation or 53% of high denomination notes’, were in the vaults of banks and the form of government treasuries. In the most recent demonetization bill that was passed in 2016, about 86% of such currency was with the public in higher denomination. “The underlying common theme for the two episodes of demonetization in independent India is the respective government’s effort to curb the menace of black money” (Nag 2016, 18). Other differences from the earlier ordinances (1946 and 1978) from the 2016 one were that the size of the cash economy was larger in 2016. The previous ordinance did not impact the poor, as they were in possession of smaller denominations.

### 1.1.2 Summary of Currency Holdings and High Cash Usage (up to 2016 ‘DeMo’ Ordinance)

The dominance of cash in the country through the years, and the considerable changes in currency holdings, have absorbed higher amounts of currency from the banking system (after large foreign capital investments post financial liberalisation). In 2012, 87% of all cash transactions were cash-based<sup>4</sup>. This fueled the impetus to hold large amounts of cash. Since 2001-02, post the 1978 ‘DeMo’, there was outstanding diversification ‘in favor of the services sector’ (Rajakumar and Shetty 2016, 14). The liberal economic environment, especially in the commodity trading sector, followed through to high supply and inflation in the economic system, and also brought down the value of the rupee. The response to this was ‘reintroducing high denomination notes for ease of trade and general economic activity’ by the authorities (Rajakumar and Shetty 2016, 15). Thus, this has altered the way in which money supply behaves in the Indian economy.

In India, *M1* (narrow money) refers to the currency available to the public, demand deposits and other Reserve Bank deposits, and *M3* (broad money) consists of time deposits. The focus has been on the *M1* component. Within *M1*, the currency held by the public is primary. The ratio of currency with the public to *M3* has seen decline over the years (except 2014-15). The variation of *M1* was higher than that of *M3* because of slow growth in demand deposits (See Figure 1). In the expansion of *M3*, the share of *M1* doubled in 2013-14 from 14.4% to 28.8% in 2015-16 (Rajakumar & Shetty 2016, 15). During this period, inching towards the 2016 demonetization bill, there was a lot of liquidity generated, which was attributed to the increase in money supply, and subsequently, the amount of cash deposits in the banking system grew

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<sup>4</sup> Mazzotta & Chakravorti (2014, 11)

beyond the government's anticipation. This is in line with the public's use of higher denomination notes, in two years, especially from 2013-16 (See Figure 1). They became more inclined towards using money as a store of value, as people did not view the eroding possibility of the currency. Apart from money being a medium of exchange, in this case, people "increased their propensity to view currency as a store of value" (Rajakumar & Shetty 2016, 16). Moreover, a prevalent case for women in low income areas, is to save in the form of cash, away from the eyes of men in the house (Sharma, 2016).

	Currency with Public	Demand Deposits	Other Deposits with RBI	M1	Time Deposits	M3
Outstanding as on March 31 (in ₹ crore)						
2006	3,56,314	2,86,998	6,454	6,49,766	15,95,887	22,45,653
2016	15,98,095	9,97,021	15,451	9,97,021	90,43,773	19,94,042
Absolute variations (in ₹ crore)						
2005-06	55,810 (15.7)	1,20,425 (42.0)	389 (6.0)	1,76,624 (27.2)	2,97,217 (18.6)	4,73,841 (21.1)
2006-07	70,730 (17.2)	70,181 (17.2)	624 (9.1)	1,41,535 (17.1)	4,49,009 (23.7)	5,90,544 (21.7)
2007-08	85,556 (17.7)	1,00,768 (21.1)	1,560 (20.9)	1,87,884 (19.4)	5,19,933 (22.2)	7,07,817 (21.4)
2008-09	97,040 (17.1)	10,316 (1.8)	-3,494 (-38.7)	1,03,862 (9.0)	6,73,059 (23.5)	7,76,921 (19.3)
2009-10	1,02,042 (15.3)	1,29,282 (22.0)	-1,727 (-31.2)	2,29,597 (18.2)	5,78,325 (16.4)	8,07,922 (16.9)
2010-11	1,44,344 (18.8)	4,886 (0.7)	-153 (-4.0)	1,49,077 (10.0)	7,52,341 (18.3)	9,01,418 (16.1)
2011-12	1,11,834 (12.3)	-11,954 (-1.7)	-831 (-22.7)	99,049 (6.0)	7,81,666 (16.1)	8,80,715 (13.5)
2012-13	1,17,391 (11.5)	42,323 (6.0)	418 (14.8)	1,60,132 (9.2)	8,44,856 (15.0)	10,04,988 (13.6)
2013-14	1,04,758 (9.2)	58,753 (7.8)	-1,275 (-39.4)	1,62,236 (8.5)	9,65,331 (14.9)	11,27,567 (13.4)
2014-15	1,40,363 (11.3)	79,654 (9.8)	12,625 (642.5)	2,32,642 (11.3)	8,00,140 (10.7)	10,32,782 (10.9)
2015-16	2,11,913 (15.3)	1,05,389 (11.8)	861 (5.9)	3,18,163 (13.9)	7,86,009 (9.5)	11,04,172 (10.5)
Variations: As % to M3						
2005-06	11.8	25.4	0.1	37.3	62.7	100
2006-07	12.0	11.9	0.1	24.0	76.0	100
2007-08	12.1	14.2	0.2	26.5	73.5	100
2008-09	12.5	1.3	-0.4	13.4	86.6	100
2009-10	12.6	16.0	-0.2	28.4	71.6	100
2010-11	16.0	0.5	0.0	16.5	83.5	100
2011-12	12.7	-1.4	-0.1	11.2	88.8	100
2012-13	11.7	4.2	0.0	15.9	84.1	100
2013-14	9.3	5.2	-0.1	14.4	85.6	100
2014-15	13.6	7.7	1.2	22.5	77.5	100
2015-16	19.2	9.5	0.1	28.8	71.2	100

Figure 1: Movements in Money Supply and its Components (Source: Rajakumar & Shetty 2016,

Based on data extracted from Reserve Bank of India, *Handbook of Statistics on Indian Economy*

*2015-16*)

With one stroke of a pen, on November 8, 2016, the highest currency notes: ₹500 and ₹1000 were de-recognized. The aim, for the final iteration was to combat tax frauds, printing of counterfeit notes and corruption: the same three reasons as the previous iterations. In the Prime Minister's televised speech, he made apparent the goal of the act: "curbing financing of terrorism through the proceeds of Fake Indian Currency Notes (FICN) and use of such funds for subversive activities such as espionage, smuggling of arms, drugs and other contrabands in India, and for eliminating Black Money which casts a long shadow of a parallel economy on our real economy" (Ministry of Finance Press Release, 2016). One day after the ordinance, the old demonetized notes were up for exchange in banks and post offices, with 'proper identification', to then receive new ₹500 and ₹2000 notes. This was implemented without a deposit limit until December 30, 2016.

Limits to deposit were then increased to only ₹4500 from November 14, 2016 till December 30, 2016. Cash withdrawals from current accounts (equivalent to checking accounts in the United States) had a limit of INR 10,000 per day and INR 20,000 per week (Ghosh, Chandrasekhar et. al. 2017, 9). If an individual accounted for more than INR 250,000, the deposits would be matched with parallel income tax returns (this was enforced as a warning), after which a new scheme titled: 'Taxation and Investment Regime' was imposed: an opportunity for black money operators to come out clean, at a certain cost (a heavy penalty on black money deposited: tax rate of 50% with 25% invested for four years in an interest free deposit scheme<sup>5</sup>). These severe measures taken were performed in an environment where high dependency on cash transactions exists. The wealthy (and the criminals) who came forward

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<sup>5</sup> Lahiri (2016,3)

would receive the initial 25% after four years, after it has been accounted for. Hence, this move not only impaired people's daily convenience, but also all economic activity.

## **1.2 Claimed Goals and Assumptions of Demonetization**

The first integral assumption made by the government was that the two demonetized notes (INR 500 and 1000 or 'high value notes') were of use to the illicit economy. The second assumption was that the two notes were not likely to be used by ordinary people. In fact, it directly affected a large amount of people who have nothing to do with the black economy. Hence, it was of belief that the ordinance would impact 'hoarders of cash' and that there would be some 'temporary inconvenience' to individuals who ethically pay their taxes. Moreover, Finance Minister Arun Jaitley said: "The goal of this is to clean transactions, (to) clean money"<sup>6</sup>. The second claim/assumption was that the black economy consists of 'stocks of wealth, rather than of flows' (Chandrasekhar, Ghosh, et. al. 2014, 22). This refers to the unaccounted or 'under-reported' activity to tax authorities, and that majority of this stock was either hid in places, or 'stashed away'. The purported logic behind this was to reduce the incentive to generate and hoard black money. The third premise was that this procedure would stop the printing of counterfeit currency. The final argument that received the most attention, was that the proposed goal of 'DeMo' shifted within a month, towards the digitalization of the economy. This change is explored later in the chapter, under the critique of Demonetization.

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<sup>6</sup> News, India Business, comp. "Demonetization: How It Will Empower the Franchise Industry."The Times of India [Delhi] 9 Dec. 2016: n. pag. Print.

	(Number, in billion)		
	INR 500	INR 1000	INR 2000
<b>On November 8, 2016</b>			
(i) In Circulation	17.28	6.74	
(ii) With the public (96% of circulation)	16.59	6.47	
<b>Post-Demonetization</b>			
(iii) Conservative -- 85% deposited			
(a) Converted or deposited in accounts	14.10	5.50	
(b) With the public in currency	12.98	-	2.53
(iv) Aggressive -- 80% deposited or converted			
(a) Converted or deposited in accounts	13.27	5.17	
(b) With the public in currency	12.15	-	2.37

Figure 2: 2016 Demonetization Conversion Table (Source: Figures for INR 500 and INR 1000 from RBI Annual Report 2015-16 Table VIII.1., arranged by Ashok Lahiri, 2016, 89)

The figure above is data from the 2015-16 RBI Annual Report, with assumptions made by Lahiri. He writes:

*“If a uniform 15 per cent of such notes do not come back for circulation because of the anti-blackmoney measures, then only 14.1 billion of INR 500 notes and 5.5 billion of INR 1000 will be deposited into accounts or presented for conversion into other notes. A more aggressive assumption of 20 per cent of such notes not coming back yields 13.3 billion INR 500 notes and 5.2 billion of INR 1000 notes for conversion into either legal tender cash or deposits” (Lahiri 2016).*

Interestingly enough, his data arrangement is in line with RBI Annual Report 2015-16<sup>7</sup> indicating that the return of currency notes to RBI between November 10 and December 10, 2016 was worth: 12.4 billion of old INR 500 and 1000 notes. This is approached by Mr. Lahiri as a consistent calculation and he points out that “it is not clear as to how much cash deposited will turn out to be unaccounted and subject to the provisions of the taxation laws” (Lahiri, 2017, 8). However, the RBI is yet to ‘present an estimate of how much of counterfeit currency that had been in circulation had been neutralised by demonetization’.(Reddy 2017, location 2506)

### **Notes & GDP**

Figure 3 is a conversion of notes to % of GDP where the GDP is at ‘current and market price’ (Reddy 2017, location 1318). C.R Reddy (2017) argues that the year-on-year increase is of varying magnitudes. He thinks there is no unusual pattern. However, my argument suggests that high denomination notes are rising faster than all of the banknotes that are in circulation, and the reason for this is the growth in bank credit, and the concomitant access to banking infrastructure regionally.

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<sup>7</sup> Annual Report (pp. 88-89, Rep. No. 2015-16). (2016). New Delhi: Reserve Bank Of India.

	<i>Total Bank Notes (Rs in Billion)</i>	<i>GDP (Rs in Billion)</i>	<i>Total Bank Notes as % of GDP</i>
GDP 2004–05 series			
2000–01	2,125	21,774	9.8
2001–02	2,447	23,558	10.4
2002–03	2,751	25,363	10.8
2003–04	3,198	28,415	11.3
2004–05	3,612	32,422	11.1
2005–06	4,219	36,934	11.4
2006–07	4,961	42,947	11.6
2007–08	5,816	49,871	11.7
2008–09	6,811	56,301	12.1
2009–10	7,883	64,778	12.2
2010–11	9,359	77,841	12.0
2011–12	10,528	90,097	11.7
2012–13	11,647	101,133	11.5
GDP 2012 series			
2011–12	10,528	87,360	12.1
2012–13	11,647	99,513	11.7
2013–14	12,831	112,728	11.4
2014–15	14,289	124,882	11.4
2015–16	16,416	135,761	12.1

Figure 3: Notes and GDP (Source: Based on data extracted from the RBI [2016a], *Handbook of Statistics on Indian Economy 2015-2016*)

“The RBI’s decision to support the note ban and its flawed implementation have exacted a price from the economy in general but the poor in particular”<sup>8</sup>. India’s GDP was maintained at 7.6% when the ordinance was announced, although the lasting effects on private consumption are currently projected to slow GDP growth and fall to 6% in Q3 of 2017, but eventually rebound to 7.2% in FY 2017-18<sup>9</sup> (IMF data). Although, the level of hardship that was faced by Indian

<sup>8</sup> Balakrishnan, P. (2016, December 14). The Poor Are Paying for Demonetization. The Wire. Foundation for Independent Journalism Retrieved March, 2017

<sup>9</sup>PTI. (2017, February 22). Demonetisation to pull down India’s GDP by 1%: IMF. The Hindu. Retrieved March 20, 2017.

citizens, especially those who conducted daily transactions in cash, affecting private consumption still has its looming effects. Arjun Jayadev, a Senior Economist at the Institute for New Economic Thinking explains—“The widespread pain caused to those who are not its intended targets is a good reason to oppose such indiscriminate policy actions” (Jayadev, 2016). However, one can take away that demonetization was a long narrative that was bound to be accepted by those who were ‘unjustly injured’ (*ibid.*) by it, and it proves the manner in which it was aggressively imposed. The preamble on the Reserve Bank’s website states: “To regulate the issue of Bank Notes to generally operate the currency and credit system of the country to its advantage”. (Reserve Bank of India Preamble, 1934) This recent action left individuals confused, as this mission statement was clearly not upheld. Kumar (2017, 1) implies and emphasizes the situation that “majority of wage payments are made in cash form”. Moreover, 96% of total transactions in retail markets are in cash-form (Confederation of All India Traders Study). There was a significant change in labor market dynamics as the ordinance left the employment status of millions of informal labor workers, uncertain. Though the informal working class received a big blow, poor, ordinary individuals feared the unfavorable effects of a cash shortage. Additionally, The Agriculture Produce Market Committee (APMC) in Gujarat (cash-heavy business), reported only 10% of usual business being conducted<sup>10</sup>, and were forced to close the business for a couple of days, before transitioning into RTGS digitized payments (See 3.2).

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<sup>10</sup>TNN. (2016, November 18). Not business as usual at APMCs across Gujarat. The Times Of India. Retrieved March, 2017.

### 1.3 Inadequacy of Cash in the Banking System

An even higher denomination of INR 2000 was introduced after the INR 1000 and 500 were called back. On March 31, 2016, “out of the INR 16.6 trillion cash in circulation, the value of INR 500 and INR 1000 notes in circulation was INR 14.2 trillion” (Lahiri 2016, 5). The slow rate of printing new money, and the availability of new notes added to the shortage of replacement currency (Ghosh, Chandrasekhar, et. al. 2017, 10), and had the Indian economy run into multiple disruptions, like the time lag between processing old notes and replacing them with new notes.

The economy has always consisted of two types of cash: accounted and unaccounted. Cash is only legal when it is accounted either as a tax or in the bank’s current account, under the radar of the RBI and the Government. The cash that is outside of these accounts is either unaccounted or ‘black’. A Cash shortage is usually a common occurrence when current and savings accounts of banks are not freely convertible into 'cash at par' (Lahiri 2017, 4). A shortage rises with a 'suspension of this convertibility'. Demonetization posed restrictions on over-the-counter (OTC) cash withdrawals, where only INR 10,000 (subject to an overall limit of INR 20,000) a week could be withdrawn. Daily cash withdrawals from ATMs had restrictions of INR 2,000 per bank account, which was later raised to INR 2500 and then INR 4,500<sup>11</sup>.

Cash shortage was a new experience for a cash-hungry country like India, and with regard to the withdrawal restrictions, there were long queues of individuals either depositing old notes for new notes in return, outside banks, around the country. Individuals were even compared to 'soldiers standing in the frontline of combat'. PM Modi, in his speech used the

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<sup>11</sup> ET Bureau. (2016, December 31). RBI relaxes ATM withdrawal limit to Rs 4500 from Rs 2500 per day.. The Economic Times. Retrieved February, 2017

phrase 'black money' 18 times and mentioned the other goal of 'DeMo' as the eradication of terror financing. Ghosh, Chandrasekhar and Patnaik call this a 'hortatory device' that was used to 'mobilize and convince ordinary people of the soundness and desirability of this move' (Ghosh, Chandrasekhar 2017, 12).

#### **1.4 Cash Perspectives in India and Cost of Cash (Individual and Government level)**

Before addressing the cost of handling cash by the government, it is important to address the fact that the recent government bill wreaked havoc in the rural communities. "Rural Indians often have to travel a long way to reach a bank, and an estimated 300 million people don't have the official ID that is required to process a cash exchange"<sup>12</sup>. There was a certain cost incurred by the rural community upon the overnight disappearance of cash, as the monthly cash fees of those that possessed bank accounts, was lesser than that of the unbanked population (Mazzotta & Chakravorti 2016, 26). The Market Research Society of India uses the SEC classification (Demographic data ratified by the Market Research Society of India (MRSI) to classify households in India<sup>13</sup>) based on socioeconomic class. Figure 4 shows the fees of cash access in a month, against the level of socioeconomic class (A1 to D2). We see that the self employed professional (D2), who is unbanked, has to bear more costs of accessing cash. Figure 4 is discussed in detail in Chapter Four: Discussion and Conclusion.

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<sup>12</sup>Shah, H. (2016, November 28). India Wants a Cashless Society. But There's a High Cost. Slate Newspaper. Retrieved March 4, 2017.

<sup>13</sup>Gupta, P. (2005, September 9). Socio-economic Classification - Are we (in) SEC C? [Web log post]. Retrieved April 30, 2017, from <https://readbetweentheps.blogspot.com/2005/09/socio-economic-classification-are-we.html>

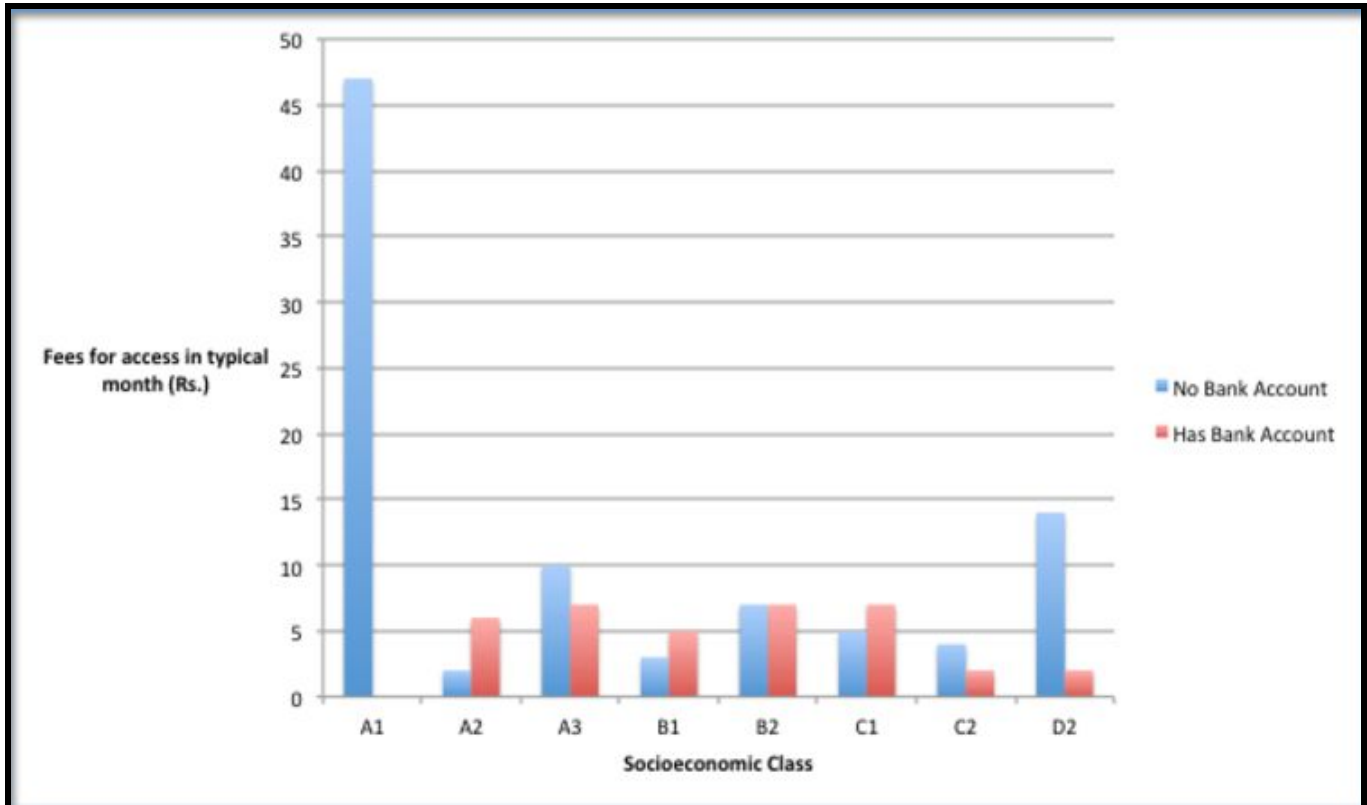


Figure 4: Cash Fees by Wealth and Financial Access, data from the *Market Research Society of India* classification (Source: Mazzotta & Chakravorti 2014, 25 )

The RBI's main function is to manage currency. "With respect to security of cash, guidelines regarding cash management operations are issued to the currency chest and branches". (Mazzotta & Chakravorti, 2014, 49). There are multiple reasons as to why India pays a hefty price for handling its payments. The first reason is having to reissue new currency after a course of poor handling—"low value notes have to be replaced in less than a year" (Mazzotta & Chakravorti 2014, 49) . The Institute for Business in the Global Context of Tufts University sheds light on the costs of currency operations in India, based on the works of Kleine, Krautbauer and Weller (2013). They discuss the RBI's cost incurrence from 'printing currency,

undertaking forward transport from manufacturing facility to issue department, and reverse transport of soiled notes’. The Reserve Bank and other commercial banks in the country spent around INR 210 million annually in currency operations (See Figure 5).

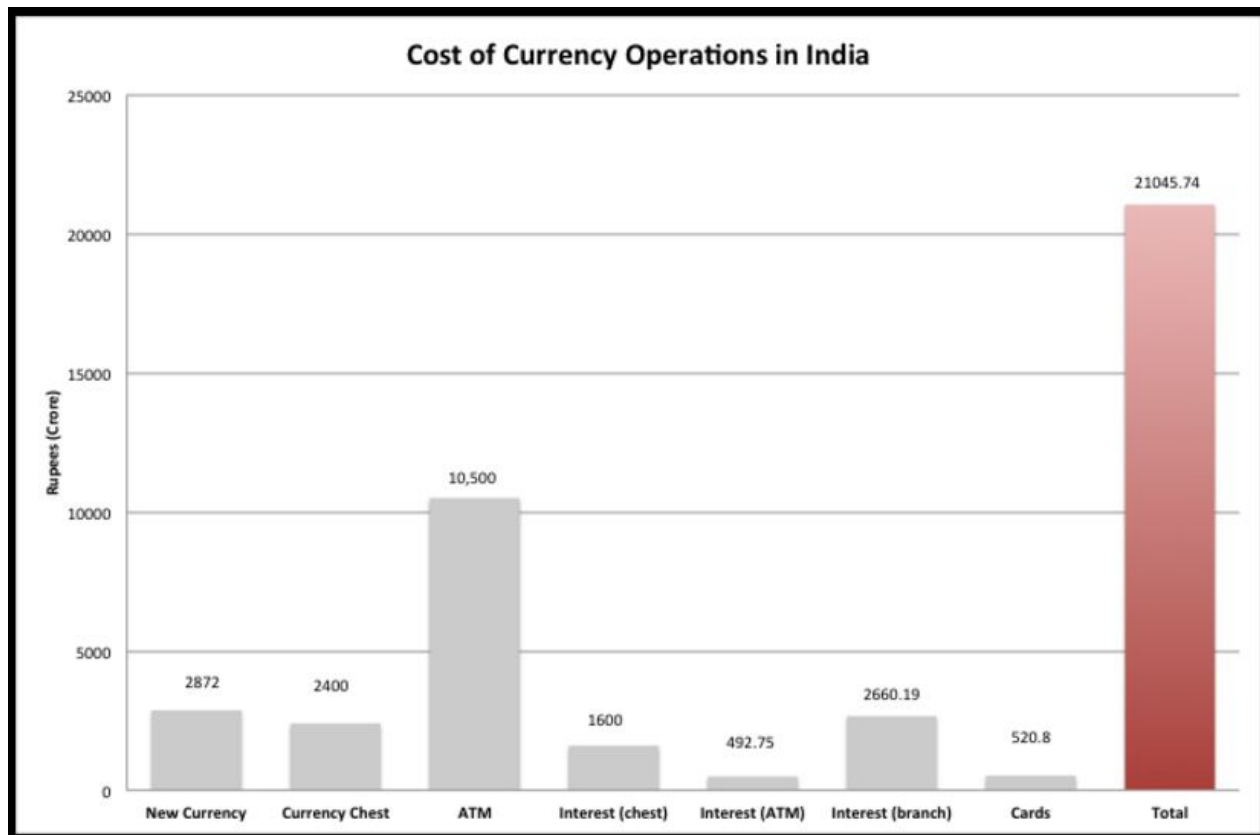


Figure 5: Cost of Currency Operations in India: units in Crores (Source: RBI Annual Report 2015-16)

Commercial banks earn a certain fee from cash operations, but they incur expenses for ‘cash handling, processing costs, insurance cost, payments for cash in transit companies, and losses on interest for standing amounts in branch and ATM’. (Mazzotta & Chakravorti 2014, 51).

In the next section, we will discuss the size of the illicit economy, and the impact of demonetization on eradicating illegal financing and unaccounted activity, in order to conclude with a critique on the 2016 ordinance, and whether the erratic policy change of a 'cashless society' was of high priority, masked with the masses' belief of wiping out black money.

## 1.5 The Black Economy: Effects on Banking and Financial Inclusion Development

*"Corruption pervades all spheres of economics activity in India, so much so that it can be regarded as an institution itself"*- (Benu Varman-Schneider, 82)

The manner in which currency holdings have risen through all three iterations of Demonetization forced the RBI to construct objectives, so as to scrutinize the 'black economy', and 'eliminate the possible use of such notes for financing illegal transactions' from 1978 to now. 'The White paper'<sup>14</sup>, according to C.R Reddy (2017) is the most 'comprehensive summary' of different estimates of black money. In India, black money makes for bad policy. It is the informal economy, 'that constitutes 50% of the Indian economy, employing 93% of the workforce' (National Commission for Enterprises in the Unorganized Sector data). Sarkar (2010) explains, "black income has been causing underestimation of GDP in India as an enormous volume of income is diverted to this unaccounted sector resulting in growing continuation of parallel economy of the country" (Sarkar, 2010, 129). 'The amount of currency which the government hoped to disable in the black economy' through the Demonetization ordinance was between INR 3-4 trillion (2-3% of the GDP). This was argued by multiple analysts as a 'minuscule fraction' of the economy. Ghosh, Chandrasekhar and Patnaik (2017) argue that this was only a small portion that would have been captured by the move. However, a statistic made by the National Institute of Public Finance and Policy (NIPFP) on the incidence of black money in India (which was submitted in December 2013 but has still not been made public or even submitted in Parliament) is reported to have suggested that the black economy amounts to as much as 75 per cent of recorded GDP<sup>15</sup>.

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<sup>14</sup>Jagota, M. (2012, May 21). Seven Things You Should Know About the White Paper on Black Money. The Wall Street Journal. Retrieved November, 2016.

<sup>15</sup>Mehra, P. (2014, August 4). Black economy now amounts to 75% of GDP. The Hindu. Retrieved February, 2017.

Cash as a medium of exchange in the black economy, is performed in various ways:

- 1) Bribes (small to medium sized), that are unreported by tax authorities, that are conducted using cash.
- 2) Transactions with the external market are done through cross-border transfers.
- 3) Transactions in the 'hawala exchange market'<sup>16</sup>, are likely to be in cash. (Reddy, 2017, location 959)

As mentioned earlier, the main function of the Reserve Bank of India, is currency management. The banking system, according to concrete guidelines set by the RBI is in close relation to how assets are allocated efficiently. The Bank, in its normality, operates currency chests, and accepts deposits. However, the accommodation of the banking system was stretched, after demonetization. Certain operations for banks included transmitting the 'used and surrendered notes' back to the RBI, to then receive new notes. In this scenario, there was a time lag between the 'surrender' of old and the release of new printed currency. As a result, banks were not able to 'discharge their normal obligation of withdrawals of deposits made' (Reddy 2017). The bankers faced the wrath of their customers, who were queued up outside banks for numerous days, and became 'increasingly restive' for not being able to receive the money they had deposited (Ghosh, Chandrasekhar et. al 2017). The biggest failure for the banking system was the lack of spread in Automatic Teller Machines (ATMs) because of the slow response and withdrawal assurance, within constraints posed by the RBI. Plus, it took 60 days for all ATMs in both urban and rural sectors to be re-calibrated, causing further delays.

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<sup>16</sup> a system or agency for transferring money traditionally used in the Muslim world, whereby the money is paid to an agent who then instructs a remote associate to pay the final recipient.

As for meeting the declared goal of capturing black money in 2016, there was associated hardship faced by poor individuals, due to the nudge in financial governance. The corrupt and wealthy were able to beat the consequences due to the loopholes in the system, by attempting to convert their unaccounted wealth, when previous notifications about the demonetization ordinance was announced.

*"Unfortunately, the long-drawn out process of the legal system, including the time taken to deliver final judgements, dampens the determination of people who would like to see anti-corruption laws implemented."* (Catching the Corrupt, EPW Journal Editorials, 2017)

The currency shortage forced the population to turn to the banking system, during its surge in operations, for deposit and withdrawal actions, although many banks were unable to open new accounts due to the pressure on bank personnel from existing customers.

The long-drawn out process of the legal system toward corruption reflects the inability of the lower sections of society from being able to access the formal financial system, arguing against erratic policy changes by the RBI. In public dialogue, the theme of ‘formalization of the informal’ made its emergence after the 2016 ordinance. “Demonetization and then digitization of monetary transactions would compel, it was argued, the informal sector to be economic agents into the formal sector and lead to greater tax compliance”<sup>17</sup>. Chapter 3 will introduce the aforementioned ‘formal sector’ ‘Pradhan Mantri Jan Dhan Yojana’ scheme or the Prime Minister’s Financial Inclusion Programme where the Financial Technology (Fintech) service in

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<sup>17</sup> Book Review. (2017, March 20). An extract from 'Demonetisation and Black Money' The Hindu. Retrieved March 22, 2017

India has been fused with a telecom revolution, to bring in all economic agents into the formalized sector.

## 1.6 Critique of the 2016 Demonetization

Since there is ever-growing, but sparse development literature and macro-economic analyses related to this topic (as these developments are contemporary), I have prepared some concluding remarks. What was initially projected as a convenient policy to uproot black money, delivered a third variation of the failure, after the past two ordinances. Many termed this act, as a 'financial emergency', by virtue of a single 'masterstroke', resulting in 86% of the currency being swept. Interestingly, during mid-November, the policy focus shifted again. In the Reserve Bank's 'Frequently Asked Questions' (RBI FAQs) page on Demonetization, there were a set of revised goals that completely disregarded the former goal of driving away black money from the economy. By late November, it was clear and evident that the economy was far from eliminating terror financing and black money. The final argument made by the government, was based on the outlook that India would abandon cash based transactions to shift to an electronic and digitized manner of payments, phrased by PM Modi as 'a cashless society' to enable a 'rule-based formal sector' (Ghosh, Chandrasekhar, et. al. 2017, 23) which would benefit an efficient tax collection system. 'More importantly, the impact of demonetization on black money is almost nil' (Patnaik 2017). Although I believe that the ordinance was a meaningless exercise, I argue that it was a transition of cash exclusion from the society, but with a belief of slow rebuilding and inclusion. Additionally, Demonetization shrunk demand through the money supply, as there was a gigantic shock on both the production and consumption of goods in 'predominantly cash-based' rural India. There are ever-growing arguments by many economists about the failure of Demonetization, how it was unsuccessful in attempting to meet its declared goals, and the

manner in which it caused a significant amount of damage to the rights of the Indian population, and to the Indian economy.

First, ‘secrecy was given paramount importance’ during the planning and coordination of the bill (Reddy 2017, location 1255). This automatically led to ‘administrative difficulties’ in the process. Additionally, it led to the time lag as ATMs had to be re-calibrated, in order to dispense new notes.. Second, the goal to formalize the informal economy, and drive away black money failed because the percentage of illicit wealth held in cash is as low as 6% of the country’s GDP. Jindal Global University’s executive Vice dean quotes: “This intervention is a one-time draining of this current stock of black money but unless the root causes of corruption are removed, corruption will continue. It is sort of like a dialysis, more of a short term cleaning up than a solution of the problem. It needs to be repeated periodically.”<sup>18</sup> Professor C.R Reddy offers an argument against demonetization in accordance with its implementation, and how an alternative way of acting upon illicit wealth would have been to ‘follow up on information on large cash withdrawals from banks, and thereby identify possible flows of unaccounted cash.’<sup>19</sup>

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<sup>18</sup> Demonetization in India: Who Will Pay the Price?. Knowledge@Wharton(2016, November 16). Retrieved February 2017.

<sup>19</sup>Reddy, C. R. (2017, April 2). With Demonetisation 2016 yet to deliver clear-cut benefits, what next? Scroll.in. Book Excerpt Retrieved April 3, 2017

### 1.6.1 Financial Exclusion in light of Demonetization

‘Financial exclusion’ after the Demonetization bill, apparently undermined the ‘special efforts’<sup>20</sup> at financial inclusion that had been prepared by the government (PMJDY<sup>21</sup> in 2014). Kumar & Kumar (2016), state that Demonetization was a ‘blessing in disguise’. They argue that it ‘resulted in rapid banking education to the vast multitude of the unbanked and semi-banked population’. However, they completely disregarded:

- 1) The fact that a new government initiative (PMDJY bank accounts, *see Chapter Three*) was ‘misused’ after demonetization and;
- 2) The poor, who had been ‘enticed into opening bank accounts’, were prevented from accessing their own cash, holding the argument that the new financial instruments were treated in a ‘discriminatory way’.

‘Small doses’ of the demonetized notes were deposited (as unaccounted wealth<sup>22</sup>) in the PMJDY accounts. According to the government, there were ‘relatively large deposits’ in few PMJDY accounts, rendering the act as a ‘misuse’ by the financial regulators of the country. Ultimately, the ‘total increase in balances in Jan Dhan accounts post-demonetization came only to INR 4152.3 million, (45 days after) less than 3 per cent of the value of the returned notes’ (Chandrasekhar, Ghosh et. al. 2017, 51-53). The ‘misuse’ was not a widespread one, since it amounted to a small fraction of the total value of notes that were demonetized. However, this was not alarming. The deposit ceiling of the Jan Dhan account is INR 50,000 (no account holder of the Jan Dhan could have deposited more than INR 49,000). Ghosh, Chandrasekhar and Patnaik (2017) provide an example of this. If the total income of a poor household is INR 7,000

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<sup>20</sup>Ghosh, Chandrasekhar & Patnaik 2017,49-51

<sup>21</sup> This section is easier to understand after referring to Section 3.1.1 in Chapter 3

<sup>22</sup> There are a total of 258 million Jan Dhan accounts in India, as of 2016: DeMo Decoded (check)

per month (below poverty line), it is not an amount to be held by a poor household for ‘precautionary or store of value’ benefits, especially in a ‘cash-dependent economy’. As we are aware, demonetization had ‘substantially increased deposits of old currency notes’, in spite of numerous restrictions enforced. Economists argue that “there were still many who did not hold accounts in the banking system, and had to use their relatives and friends to exchange their ‘old notes’ in a perfectly honest way” (Chandrasekhar, Ghosh et. al. 2017, 51-53).

The RBI’s manner of responding to the colossal deposits in ‘few accounts’ post-DeMo was to restrict the withdrawal value to INR 10,000 (for KYC<sup>23</sup>-compliant customers) and INR 5,000 (for non-KYC compliant customers), denying the poor account holders, from accessing their own cash. This was an act of exclusion by the RBI, and ‘a reversal of the policy of using the Jan Dhan accounts as instruments of financial inclusion’. Arguably, the ‘down-trodden’ were forced to conform to this ‘poorly shaped policy’, as they had little-to-nothing to do with counterfeit currency or illicit wealth, and were ‘made to pay (by denying them access to their own money)’. As for the black money operators, I agree with Patnaik’s statement:

*“The return of virtually the entire demonetized currency to banks is indicative both of the fact that the supposition of there being large cash-holding in the black economy was wrong, and also of the fact that black economy operators are always capable of taking steps to evade any measure, while it is the poor working people who become its victims”.* (Patnaik 2017)

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<sup>23</sup> KYC or ‘Know Your Client’ rules require proof of address and other documentation provided by the account holder to be confirmed by banks (Chandrasekhar, Ghosh & Patnaik 2017, 51-53)

The evasive measures that black money operators took, only led to its ‘proliferation’, while the goal of Demonetization was to curtail it.

## 1.7 Concluding Remarks

Every bill payment or fee is mostly paid in cash. “Among the 22% of adults who have to pay school fees, 99% paid in cash (6% reported of using a bank account as well). Among the 19% of adults (15+) who received wages in the past year, 86% received wages in cash” (Larquemin, 2015, 4)

Did the Indian economy, and especially the poor have to be shaken with the demonetization act, to drive the economy towards digitization? The process of forging an efficient path towards digitalization of the payments economy and prospects in financial inclusion initiatives, have been the biggest agenda for the financial regulators and the Government since 2014. There have been sizable improvements and progress between private companies and the ‘organized sector’ and those in the population who have accepted electronic/online methods of payment<sup>24</sup>.

The numerical adoption of digitized payments is discussed in Chapter 3. It will also cover the effects of the roll-out of government regulated bank-tech-led inclusion models (Aadhaar, PMJDY—FinTech duo). It is still the fact that the larger, underbanked/unbanked population, is still outside the scope of the digital payments society, and its growth is based on user base and acceptance. Before expanding on the operations of RBI’s current financial inclusion efforts, readers should be familiar with the origins of India’s payments system and the route of financial inclusion policies, from bank nationalization in 1969, to the onset of financial liberalization in 1991, to its digitization in 2016 in order to understand and evaluate policy changes toward full inclusion and be able to answer the bigger question: Can we bank the unbanked given the current

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<sup>24</sup> Reddy, C. R. (2017, April 2). With Demonetisation 2016 yet to deliver clear-cut benefits, what next? Scroll.in. Book Excerpt Retrieved April 3, 2017

circumstances? Chapter Two is an overview of the role of banking in the development of the economy, past financial inclusion policies in India, the system inversion (credit markets become more inclusive) and its governance.

## Chapter Two: Banking Sector Growth and Reforms

*“Financial governance is the process of interaction and decision-making among the actors involved in a collective problem that led to the creation, reinforcement, or reproduction of norms and institutions”* (Joshi, 2016). Good governance has always been a prerequisite to Financial Inclusion policy in India. It leads to an improvement in delivery services and the overall welfare of the financial consumer associated. An ever-growing literature shows that financial inclusion has a significant positive effect for individuals, and multiple studies have been able to prove that the lack of financial access leads to poverty traps and income inequality (Kunt and Levine, 2008). In 2015, The International Monetary Fund (IMF) published a report, noting that bolstering financial sector health and further financial inclusion would support growth going forward<sup>25</sup>. This chapter is an assessment of government interventions favoring past financial inclusion initiatives, and their impact on the access to banks by the poor. Rural credit markets have shown patterns of indebtedness, due to its ‘increasing informalization’<sup>26</sup> in dispersed locations. In addition, this chapter also introduces the current infrastructure, under the regimes set by the National Payments Corporation of India and the Reserve Bank of India.

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<sup>25</sup>IMF Survey. (2015, March 11). IMF NEWS. Retrieved April 01, 2017

<sup>26</sup> (Bose, 2005, 6), Sukanya Bose’s evidence from book under financial indebtedness: Financial Liberalization and Rural Credit in India by V.K Ramachandran and Madhura Swaminathan

## 2.1 Role of Banking in Economic Development in India

In Contemporary India, formal credit sources like commercial banks have played a dominant role. ‘In Section Five of the Banking Regulation Act, 1949, “banking” means the accepting, for the purpose of lending or investment, or deposits of money from the public, repayable on demand or otherwise, and withdrawable by cheque, draft, order or other’ (Joshi, 2016, 31).

*“It is not a mere theory, but a very tangible fact that banks, as the coordinating centres and observation posts of economic activities, transcend national as well as ideological frontiers in this modern age. At the present stage of development, banks are alone capable of ushering the surplus production, — and surplus production does exist even in the poorest districts of the poorest countries — into productive investment and thus promote technical progress and human welfare. When we speak about “underdeveloped” territories, we could more accurately use the term “under-banked” territories.”* (The Banking System and Rural India, George A Floris, Economic and Political Weekly on July 2, 1960)

George A Floris’ report on the banking system in India in 1960 addresses the need for the establishment of a “Rural Banking Society”, and he addresses the ‘practical proposition’ of opening branches in villages, and its hardships in the short-run. More importantly, he addresses that the ‘novel approach’ would be to devise a way to expose ‘local cash’ from ‘haystacks and pillow cases into the savings books and current accounts’.

There is long literature that establishes the positive impact of ‘an efficient and extended financial sector on economic growth and development’ (Larquemin, 2015, 1). However, for an emerging economy like India, it is important for the institution to leverage financial behaviour

based on existing regional disparities (for example, socioeconomic status and income inequality). Hence, there is a lot to understand about, the 'link between public institutions and the effect of their policies and initiatives on financial inclusion' (Larquemin, 2016, 1) and a great need to adopt a tangible roadmap for financial inclusion by the institution.

In accordance with Floris' proposition (among others) of a rural banking society, the RBI's inclusion policy originated after the RBI took control over operations in the banking system. The year 1969 was a landmark in the history of commercial banking, where fourteen major commercial banks were created with regard to expanding rural bank branch networks and to 'equalize individual access to banks across Indian states' (Burgess & Pande, 2005). Then heavily functioning as an agro-centric economy, the country was going through a phase of the 'green revolution', for which there was a need for rich farmers in the countryside to be able to access liquidity appropriately. The Government of India and the Reserve Bank of India both made 'concerted efforts' to channel financial inclusion into the national objectives of the country, by making radical changes with a focus on 'social and development banking'. Before bank nationalization, the rural countryside was not considered to be a problem of commercial banks.

## 2.2 The Evolution of Financial Inclusion Movement in India

### 2.2.1 Bank Nationalization: The Unevenness of Directed Credit regimes (1970-1991)

In 1969, Prime Minister Indira Gandhi confirmed the nationalization of commercial banks, so as to have the ‘non-wealthy’ access banking facilities (Karmakar 2008, 20). The goals set for nationalization by the financial regulators were as follows: “to stop corporations from controlling all banks, to use bank resources to distribute wealth more equally; to organize public savings (including the rural areas); and to focus on agriculture and small industry” (Karmakar 2008, 20).

Before financial inclusion became a priority for economic reforms, initial efforts were launched for the agricultural sector <sup>27</sup> by the National Bank For Agriculture And Rural Development (NABARD) in 1975, with the creation of a network of rural financial institutions called ‘Regional Rural Banks’ (RRB), promoted by the state governments and the RBI. These efforts aimed to make ‘cheap credit products available to poor households for asset creation’<sup>28</sup>, as rural markets in India then were ‘imperfect and fragmented’ (Ramachandran and Swaminathan, 2004, 1).

According to Mahajan and Laskar (2010, 6), RRBs were ‘instrumental in extending credit for poverty alleviation schemes’ as it provided access to institutional credit for the weaker sections of the rural community. One such scheme of directed credit was the Integrated Rural Development Programme (IRDP).

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<sup>27</sup> “Agriculture plays a vital role in the Indian economy, with more than 70% of the rural households depending on agriculture as their principal means of livelihood. India is the second largest agricultural land with 157.35 million hectares. The GDP of agriculture and allied sectors in India was recorded at US\$ 1 billion in 2014 with a growth of 3.6% (Larquemin 2015, 3, p. 3)

<sup>28</sup> Larquemin 2015, 4

The role of the government during this scheme was to identify ‘Below Poverty Line’ (BPL) families and monitor activities ‘for which they are to be given a loan’. Once individuals managed to receive loans, they were ‘reluctant to repay’ because the poor borrowers incurred informal expenses and wage loss, in availing a INR 7000 loan through the IRDP scheme<sup>29</sup>. The downside of this scheme was that no formal banking source had a role in identifying the activities of borrowers, attracting political interest, leading to corruption (Mahajan and Laskar, 2010). A World Bank document about the IRDP argues that it would be unrealistic to assume that most poor households would be able to propel themselves out of poverty over a short period of time (Puley, 1989, 13, 27). This is in reference to the measures of success for IRDP that are based on short-term data (Puley, 1989 Annex 1, 66). Additionally, the national average of success for ‘eligible beneficiaries’ in every state was 69%, although the national average for beneficiaries who have yet to repay credit is 56%, leading to low recovery rates by institutions. IRDP’s objectives on the other hand, were long-term measures. The prevalent problems that hindered the delivery and repayment of loans were the low recovery rates and loan-overdues, and this led to capital erosion, thus increasing the RRBs dependence of other sources of finance.

At this point, ‘bad debts of RRBs and commercial banks linked to IRDP mounted’ (Mahajan and Laskar, 2010, 7), and the low point in this history of ‘directed credit’ was that ‘it led to a complete collapse of the idea that banks could be used for social lending’ (*ibid.*, 8). RRBs rose from 5 in 1975 to 196 in number by 2004, and accounted for 30% of all rural branches of scheduled commercial banks except their share in total agricultural credit has remained between 6-9% (Report of the Expert Group on Agricultural Indebtedness). Figure 6

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<sup>29</sup> World Bank data, cited by: Mahajan and Laskar (2010) study the transaction costs in availing a loan of average size of INR 7000, where the poor borrowers incurred 18.9% towards informal expenses and wage loss.

shows the low recovery rates during the 1990s, with a high CD ratio of 83.7% in 1991 versus after bank liberalization, where a lower CD ratio was maintained.

Year	1991	1995-96	2002	2003	2004	2005
Reserves	-	-	1782	2375	3107	3618
Deposits	4035	11252	44539	50098	56350	62143
Loans & Advances outstanding (Credit)	3378	6117	18629	22158	26114	32870
Loans issued	-	-	10571	12641	15579	21082
Credit Deposit ratio (%)	83.7	54.4	41.8	44.2	46.3	52.9

Figure 6: Performance Indicators of RRBs from 1991-2005, figures in INR Crores (Source:

NABARD data, arranged by the Expert Group on Agricultural Indebtedness)

The poor design of long-term asset creation through the IRDP scheme was ‘in the hands of asset-poor households’ (Ramachandran and Swaminathan, 2004, 6). Jean Dreze (1990) argues that his findings did not imply that the IRDP was a ‘completely useless program’, and if it were to be ‘flawlessly implemented’, one could expect a ‘radical reduction of rural poverty’ (Jean Dreze, 1990, A-101). The cynical behaviour of bank officials translated to their action of speaking up in seminars about ‘the impact of rural credit of the greying of bank personnel and the thinning of their ranks’. Liberalization had an effect of eventually crippling RRBs, “rendering them incapable of fulfilling their original mandate” (Ramachandran and Swaminathan, 2004). Between bank nationalization and liberalization, the second phase of banking in India was an attempt to consolidate the institutional infrastructure of rural banking.

Shetty (1997, 253) points out that there was “an unprecedented growth of commercial banking in terms of both geographical spread and functional reach”, referring to the increase in commercial bank offices, aggregate deposits and gross credit outstanding<sup>30</sup>.

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<sup>30</sup> See Appendix I of Ramachandran and Swaminathan 2004

### 2.2.2 Liberalization of the Indian Banking Sector (MFIs, SHGs & Aadhaar)

While there have been numerous steps toward an economic reform in the 1980s, India's financial revolution only began in 1991, 'in the wake of a 'balance of payments' crisis. (Ravallion, 2016). The third phase in the Banking reform was 'liberalization'. The objectives of this era in banking were listed in the Report of the Committee on the Financial System, chaired by M. Narasimham<sup>31</sup>. The opening paragraph of the report called for "a vibrant and competitive financial system... to sustain the ongoing reform in the structural aspects of the real economy". This represented a 'clear and explicit reversal of the policy of social and development banking' (Mahajan and Laskar, 2010, 8). The Committee also advised the redistribution order "should use the instrumentality of the fiscal rather than the credit system" and phase out directed credit programmes. This inversion in the system only led to an unimaginable set of reforms in the banking sector, as the new institutional structure was market-driven and purely based on levels of profitability. The reforms that were posed by the Narasimhan committee were criticized heavily due to its 'bureaucratic failures and insensitivity to the social and economic contexts' (Ramachandran and Swaminathan, 2004, 7).

The policy reforms under financial liberalisation had a dramatic and direct effect on rural credit. There was a 'contraction in rural banking and in priority sector lending and preferential lending to the poor in particular' (Ramachandran and Swaminathan, 2002, Shetty 2004, Chavan 2004). Mahajan and Laskar (2010) argue that 'it represented a clear and explicit reversal of the policy of social and development banking'. MFIs and SHGs were integral in initiating programmes and schemes that aimed at reducing poverty, but their sustainability was jeopardized

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<sup>31</sup> See Akrani, G. (2010, September 16). Narasimham Committee Report 1991 1998 - Recommendations for all Economic Liberalization reforms in India

(especially SHGs), because of the quest of higher inclusion. Microcredit on the other hand, was catered to those low income households that were already engaged in economic activity, leaving out the poorer households (Mahajan, 1997).

#### A. Microfinance Institutions & Self Help Groups

Microcredit and microfinance have both been given great regard in development literature, right from when the influential policy objectives were formed by Grameen Bank by Muhammad Yunus in 1976. It aimed to disburse small loans, from borrowers in poor communities, and that the loans would generate income through self-employment.

In the 1990s in India, microfinance institutions<sup>32</sup> (MFIs) helped further open credit markets to remote locations in India. This was the origin of a ‘system inversion’ i.e, credit markets became more inclusive in objective, with the assumption that transaction costs of banks can be lowered significantly, if the costs are ‘passed on to NGOs or self-help groups’ (Ramachandran and Swaminathan 2004, 12).

Self-help groups were organized for poor women to help pool savings in a ‘common kitty’, out of which they would disburse small loans amongst each other. Research has shown that SHGs had a positive impact on women, and the use of microcredit helped generate income, especially in the state of Andhra Pradesh (Lazar, 2008, 39). The NPCI began a ‘pilot project’ on February 24, 2017, in collaboration with the Aadhaar Payment Bridge System (ABPS)<sup>33</sup> to initiate digital payments within the microfinance sector (Svatantra Microfinance)<sup>34</sup>.

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<sup>32</sup> See Yunus, M. (2004). Grameen Bank, Microcredit and Millennium Development Goals. *Economic and Political Weekly*.

<sup>33</sup> See Section 2.3

<sup>34</sup> See Nandi, A., Kamlesh, P. M., & Nandan, S. (2016, May). Directory of Microfinance Institutions (MFI) in India (Publication)

SHGs were later ‘digitized’ in 2016. Using paper-less models, group transactions for loans were monitored, with the potential of bringing in accountability. Chapter 3 will expand upon the digitization of the banking system through the PMJDY reform.

#### B. The Aadhaar Miracle: How to Know Your Customer

Dunning, Gelb and Raghavan (2004), set the agenda to the ‘Millennium Development Goals’ in 2014, and they assessed the importance of registering legal identity and birth registration. The objective for incorporating the two registrations were “inclusive development and access to services; it is no accident that those lacking birth registration and legal identity are typically the most vulnerable people in the poorest countries.” (*ibid.*)

The “Aadhaar” is a unique twelve-digit identification number, issued by the Unique Identity Authority of India (UIDAI), for citizens of India with the aim of providing them with a ‘quick and easy’ access to their financial address (Kansal, 2014, 5). The program was launched in January 2009. As of March 30, 2017 it was reported that 93% (1.12 billion people) of the population above the age of 18, enrolled in unique identities<sup>35</sup>, with the ability to link it to schemes for the “disbursal of benefits under welfare programmes run by the Centre and states” (Mazzotta and Chakravorti 2014, 67).

The Aadhaar was created in a time where the RBI had ‘consciously chosen a bank-led model over a telecom-led one’ (*ibid.*, 6). Its role in the financial sector was to create ‘financial prosperity to each stakeholder in the system including residents, government and service providers’ (Kansal 2014, 3) . The Aadhaar eased the process of opening bank accounts for the

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<sup>35</sup> Saldanha, A. (2017, March 30). 1.12 billion Indians have Aadhaar numbers by now. Here's how Modi government plans to sign up the rest. The Economic Times. Retrieved May 1, 2017

marginalised sectors of society. Previously, the only valid identities were: passport, driver's licence, Voter's ID or a PAN Card<sup>36</sup>. Unfortunately, not all citizens under the poverty line possessed any of these documents. To register for an Aadhaar, beneficiaries had to provide<sup>37</sup>: Demographic Information (Name, DOB, Age, Gender, Address etc) and Biometric Information (Ten fingerprints, two iris scans and a facial photograph). Using the Aadhaar as a financial address brought the identification of an individual under the government's radar to track: transfer of government benefits to the poor, person to person payments, and credit card transactions. It also enabled the 'e-KYC' process, an electronic form of 'Know Your Customer' (KYC). Kansal (2014, 3) quotes: "The resident's data can be verified by the relevant branch or Business Correspondent (BC) electronically in a matter of seconds and relevant information can also be auto-updated to the service provider's database with appropriate consent from the resident". In Nandan Nilekani's book (then the chairman of UIDAI) , *'In Imagining India: Ideas for the New Century'* (2010), he writes about an IT driven, national identity system that "would be nothing less than a revolutionary in how India distributes state benefits and welfare hand-outs", through the Direct Benefit Transfer system (DBT).

According to the Economic Survey 2007-08 and National Survey Sample Office<sup>38</sup>, 93% of the population works in the unorganized sector or the informal economy. The Aadhaar aimed to provide a platform for opening bank accounts enabled through a 'token-less' digital identity and allow 'residents of the informal economy to start saving money with banks and perform various transactions via Business Correspondents (BCs). The BC provides services at the 'point

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<sup>36</sup> Permanent Account Number (**PAN**)

<sup>37</sup> See 'About Aadhaar'. Retrieved February, 2017, from <https://uidai.gov.in/your-aadhaar/about-aadhaar.html>

<sup>38</sup>Ministry of Finance. (2008). Economic Survey 2007-08 (English). Retrieved February, 2017

of customer interface and a retail outlet’ (Mazzotta and Chakravorti 2014, 66). Figure 7 is the growth of Banking Correspondents (BCs) in India from 2010 to 2013. BC units grew from 34,532 to 1,95,380 from 2010-2013 (Figure 7, LTP Data). The privatised BCs used innovative models to ease the delivery mechanism, at low transaction costs. The low penetration of formal banking infrastructure led the RBI to introduce BCs. Banks deployed more than INR 19 million BCs, covering 221,000 villages as of March 31, 2013<sup>39</sup>.

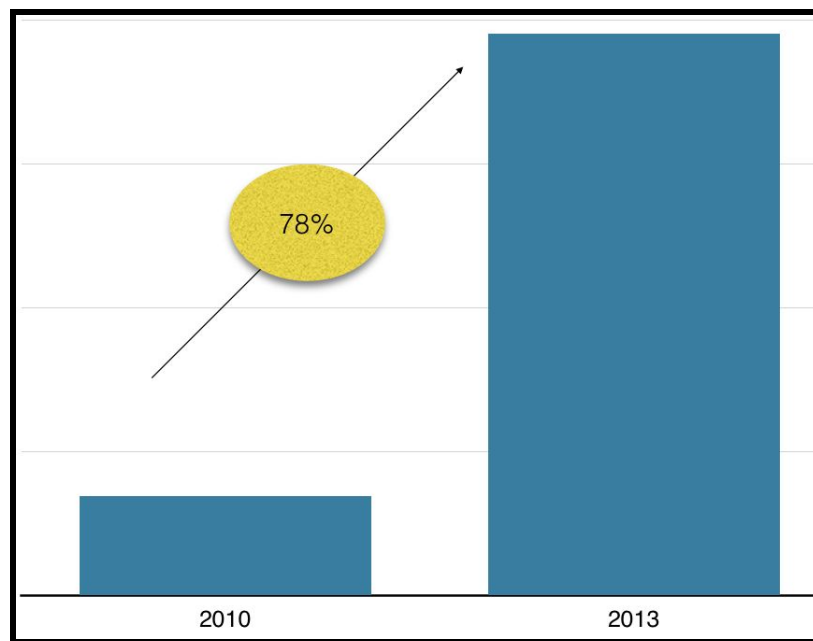


Figure 7: Banking Correspondents (BCs) in India, *growth from 2010-2013* (Source: RBI data, arranged by LTP)

<sup>39</sup> Team, LTP. (2014, March 05). Banking Correspondent: A Channel For Financial Inclusion in India & Micro ATMs. Retrieved March, 2017

Sr. No.	Particulars	Year ended March 2010	Year ended March 2016	Half year ended# September 2016
1	Banking Outlets in Rural locations – Branches	33,378	51,830	52,240
2	Banking Outlets in Rural locations – Branchless mode	34,316	534,477	537,609
3	Banking Outlets in Rural locations -Total	67,694	586,307	589,849
4	Urban Locations covered through BCs	447	102,552	91,039
5	BSBDA-Through branches (No. in million)	60.2	238.2	247.4
6	BSBDA-Through branches (Amt. in ₹ billion)	44.3	474.1	537.9
7	BSBDA-Through BCs (No. in million)	13.3	230.8	247.8
8	BSBDA-Through BCs (Amt. in ₹ billion)	10.7	164.0	181.1
9	BSBDA-Total (No. in million)	73.5	469.0	495.2
10	BSBDA Total (Amt. in ₹ billion)	55.0	638.1	719.0
11	OD facility availed in BSBDAs (No. in million)	0.2	8.0	8.4
12	OD facility availed in BSBDAs (Amt. in ₹ billion)	0.1	14.8	18.1
13	KCCs -Total (No. in million)	24.3	47.3	46.4
14	KCCs -Total (Amt. in ₹ billion)	1,240.1	5,130.7	5,543.4
15	GCC-Total (No. in million)	1.4	11.3	11.5
16	GCC-Total (Amt. in ₹ billion)	35.1	1,493.3	1,613.2
17	ICT-A/Cs-BC- Total number of transactions (in million) *	26.5	826.8	550.6
18	ICT-A/Cs-BC- Total amount of transactions ( in ₹ billion) *	6.9	1,686.9	1,199.2

Figure 8: Progress made under financial inclusion plans - as of September 2016

(Scheduled commercial banks including RRBs)

(Source: RBI)

Furthermore, Figure 8 shows the progress of financial inclusion plans. With focus on the branchless mode of banking in rural locations, bank outlets grew exponentially from 34,316 units (year ended March 2010) to 534,477 units in March 2016. Basic savings and deposit functions under BCs also grew from INR 10.7 million in 2010 to INR 181.1 million in 2016. In addition to the banking facilities, the Government and RBI have prepared a framework to ‘grade’ and provide a ‘certification training program’, to improve financial literacy. BCs who have a good track record would ‘undergo advanced training and receive certification’ to be ‘entrusted with

more complex tasks such as handling/delivery of financial products that go beyond deposits/remittances<sup>40</sup>.

## **2.3 Current Infrastructure: Aadhaar Based Systems and Payment Systems**

India is an emerging market, that is attempting to minimize the use of cash transactions, by winning support from the industry participants to continue the war on cash, and remove the impediments towards using it. The industry participants are looking to ‘create a digital trail’ for financial transactions, to better assess the creditworthiness of borrowers<sup>41</sup>. In truth, there is an equivalent need of financial literacy, to certainly assess the sensitivity of such disruptions in banking and for institutions in order to measure adoption. The Task Force of the Aadhaar Payment Infrastructure prepared a report in 2012, leading to the preparation of the Payments Vision documents (2012-2015) after which corresponding business models have emerged to redefine unserved markets, keeping up with, and leveraging the available technology and infrastructure.

### A. Aadhaar Payments Bridge System (APBS)

A standardized “electronic benefit transfer system to undertake direct mandates from respective sponsor or accredited bank attached to various government departments for the purpose of disbursing entitlements using Aadhaar numbers” (NPCI, ABPS Overview, 2016). The objective of the National Payments Corporation of India (NPCI) to use APBS, was to narrow the

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<sup>40</sup> RBI. (2016, December 29). Report on Trend and Progress of Banking in India 2015-16, Chapter V: Financial Inclusion: Policy and Progress (India, Reserve Bank of India). p. 40-41 Retrieved February 4, 2017,

<sup>41</sup> Companies like Funds-Tiger, Faircent, Indifi and Credit Mantri are credit evaluators who leverage the data trail created by individuals to catch fraud, outliers etc. from Verma, V. (2017, January 17). Why the ban on Rs.500 and Rs 1000 is great news for FinTech in India? Retrieved March, 2017.

gap between the beneficiary and the institution to be able to route transfers and support benefit schemes like NREGA, Social Security Pensions, and even PMJDY Account products: payment/remittance services to migrant labors, and other unorganized sectors, through ‘online and real-time’ biometric authentication (Ramesha, Bapat et. al. 2014, 13).

### B. Aadhaar Enabled Payment System (AEPS)

This system allows interoperable transactions at Business Correspondent (BC) outlets, giving a customer the liberty to walk in, using biometric authentication (provided by UIDAI) to conduct the following:

- Withdraw cash
- Deposit cash
- See balance inquiry
- View mini statement

This payment system is managed by the NPCI.

### C. Mobile Banking

There are various kinds of mobile payment systems. Most are usually operated by private players in the market. Kenya’s M-PESA payment system was launched in 2007 by Vodafone through a public-private partnership. Operating under a branchless model, M-PESA transactions represented ‘roughly two-thirds’ of national payment volume, at a low transaction cost<sup>42</sup>. The Task Force on an Aadhaar-Enabled Unified Payments Infrastructure makes recommendations based on past success stories to adopt Mobile Banking faster in India. In 2009, the Government permitted banks to offer this service ‘subject to a daily cap of INR 50,000 on funds transfers, and

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<sup>42</sup> McKay, C., & Mazer, R. (2014, October 01). 10 Myths About M-PESA: 2014 Update [Web log post]. Retrieved October, 2016

transactions involving the purchase of goods and services'<sup>43</sup>, liberalizing the possibilities of 'high volume-low value transactions in deposits and payments/remittance services in a secured technology driven environment' (Larquemin, 2015, 13). In 2014, the World Bank reported that low-income populations benefit the most from technological innovations such as mobile payments, mobile banking and borrower identification based on fingerprinting and iris scans<sup>44</sup>.

The NPCI operates a service called Inter-bank Mobile/Immediate Payment System (IMPS), founded in 2010, followed by RuPay after the advent of the PMJDY which initiated the possibility of peer to peer transfers. In 2016, the NPCI launched the 'Unified Payments Interface' (UPI). The UPI serves the following purposes:

- It leverages the IMPS architecture for immediate payments<sup>45</sup>.
- Customers receive a better experience through primary device binding, meaning that they may enter a secondary level of personal credentials.
- Ability to receive payments based on a beneficiary's Virtual Payment Address (VPA)

India has seemed to skip the 'plastic' phase (credit/debit cards), and cut into searching for opportunities in the app-enabled potentiality of the smartphone.

#### D. Payment Wallets (Telco-bank led model)

The mobile has been able to create financial access 'at a low cost', except it has still not been adopted as the 'preferred channel for the delivery of financial services', based on the slow growth of the volume of banking transactions through mobile banking. Payment wallets have

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<sup>43</sup> In 2014, the RBI removed the cap for all 'application based encrypted transactions

<sup>44</sup> "World Bank. 2014. Global Financial Development Report 2014 : Financial Inclusion. Overview. Washington, DC. © World Bank.

<sup>45</sup> Privacy note: The customer need not publish the account number, but use a Virtual Payment Address (VPA)

been able to create inroads through an easy interface (mobile app), minimum KYC requirements and instant transactions through a single factor authentication (biometric data) and cash backs.

Some examples of Payment Bank Wallets are: 'Paytm', 'Jio Money', 'Airtel Money' and 'Vodafone m-Pesa'.

### **Chapter Three: Financial Inclusion post-Demonetization**

The Demonetization exercise clearly undermined the 'special efforts' at tackling financial exclusion, through erratic policy issuances. Emerging economies till date, are striving to build an economically inclusive system to improve economic growth. It stands both as a priority and a challenge for all developing nations around the world. According to Demirg-Kunt et. al (2014), they assessed the Global Findex Database, and found that 62% of adults worldwide have an account at a bank or another type of financial institution or with a mobile money provider. Account penetration on the other hand, has its differences in low-income, high-income groups: 89% in high-income countries and 24% in low income countries.

India has reached a common ground on the importance of Financial Inclusion. After the struggling efforts of RRBs , MFIs and SHGs, the financial regulators of the country, along with relevant public stakeholders, have been proactive in the creation of tailor-made systems, as state-specific exercises. Past initiatives focused on India's agro-centric growth potential<sup>46</sup>, but over the years, it has moved to a central, more standard format. The launch of the Pradhan Mantri Jan Dhan Yojana has been a pillar of urgent implementation of Financial Inclusion, to meet the objectives post-Demonetization of converting the Indian economy into a 'cashless society'.

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<sup>46</sup>Agriculture plays a vital role in the Indian economy with more than 70% of rural households depending on agriculture as their principal means of livelihood.

This chapter is organized as follows: Section 3.1 introduces the current situation of Financial Inclusion in India, the current institutional framework and the PMJDY initiative: objectives, progress, challenges with adoption (Literature review), followed by Section 3.2 which introduces the emergence of an electronic payments system in the Indian Economy and its relationship with current financial inclusion measures and potential to bring the informal sector under the radar of regulated banking.

### **3.1 Financial Inclusion: An Identity & Technological Disruption in an Ocean of Credit**

*“Poverty and exclusion continue to dominate socio-economic and political discourse in India as they have done over the last six-decades in the post-independence period”. - K.C Chakrabarty*

As introduced in Chapter One, after the economy was liberalized, credit markets became more inclusive, and created a long-drawn discourse amongst the financial regulators of the country, post-financial liberalization. Financial Inclusion is indeed a strong pre-requisite to achieve ‘greater economic and social equity’. As of 2014, in a country of 1.2 billion people, the population that held a debit card was only ‘155 million out of 800 million bankable individuals’. (Mazzotta and Chakravorti 2014, 61).

The biggest challenge for the financial authorities in India, and the world so far, has been to be able to provide financial products at a ‘low transaction cost’ (Joshi 2016). The outreach of formalized financial products in transition economies like India, have been backed by nationalized private banks, that stipulated interest rate ceilings while extending credit to low-income households. Additionally, many legislative bodies even defined the ‘right of access

to formal banking services' (Ghosh 2008, 1) and enacted policies relevant as such. Figure 9 represents the 'Dimensions of Access Problems' in the rural banking system. Joshi (2016) writes that there is 'enormous untapped growth potential' that can be indicated by the percentage of the population holding bank accounts, insurance protection and debit /credit cards to 'distribution of availability' of banking infrastructure across many states in India. She proceeds to say that these areas have still not been exploited, due to 'lack of access to finance at a reasonable cost'. Many countries have formulated reforms within the existing structure of 'credit delivery and extant institutional infrastructure'. For example, Indian post offices have credit accounts that have been able to promote community-based savings and credit society structures, making the financial facility more accessible, and 'bringing banking to the doorstep'.

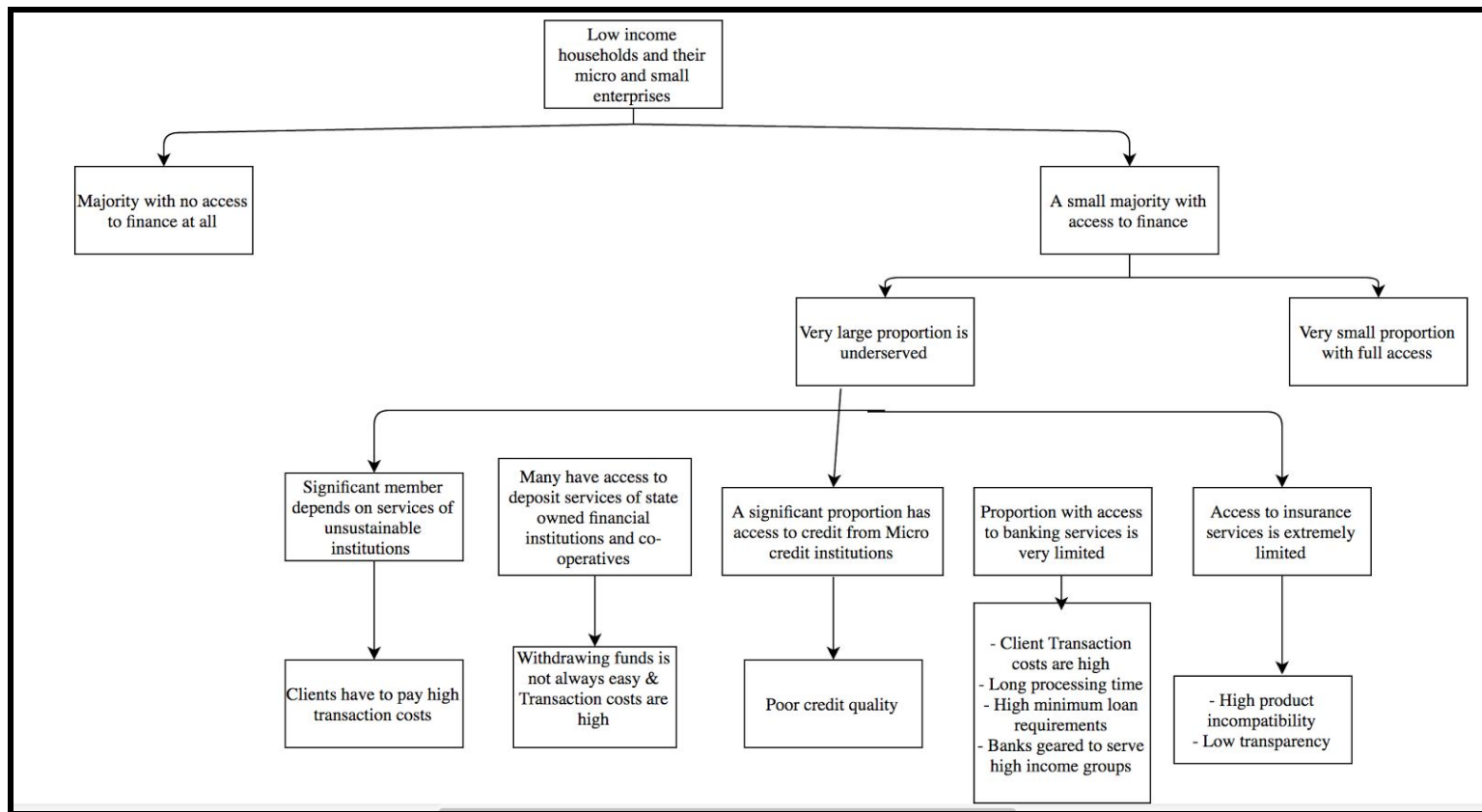


Figure 9: Dimensions of Access Problems (Source: Joshi, 2016, 58)

*“There is a striking correlation between the level of economic development, such as measures by GDP per capita, and various measures of what can be termed as ‘good institutions’—the basic infrastructure needed to support a reasonably efficient market economy”. (Ravallion 2016, 539)*

With a similar intention of building a good institution, the government of India has been conceiving steps to provide banking services at an affordable cost. To be termed, a ‘good institution’ to execute such activities, the financial regulators of India have motivated institutions to take the right steps. Taking into account the current status of financial inclusion indicators in India, an RBI Press Release on November 12, 2016 promised the population the ‘sought to

transfer the problem of ensuring a smooth payments system' to alleviate the public's inadequacy of currency (Ghosh, Chandrasekhar, Patnaik, 2017, 95). It stated that:

*"...the public are encouraged to switch over to alternate models of payment, such as pre-paid cards, Rupay/Credit/Debit cards, mobile banking, internet banking. All those for whom banking accounts under Jan Dhan Yojana are opened, and cards are issued, are urged to put them to use. Such usage will alleviate the pressure on the physical currency and also enhance the experience of living in the digital world."* (RBI Press Release, 2016)

According to the RBI, as of 2014, 41% of India is absolutely unbanked and only 14.6% of the population possesses a debit card (Mazzotta and Chakravorti 2014, 61). This is certainly in line with the obstacles faced by the supply-side of the banking system's infrastructure. Corruption holds as the highest percentage of constraint for financial infrastructure in India, according to an article published by the World Economic Forum by Vangelis Papakonstantinou. In 2013, less than 130,000 ATMs and 1 million POS Terminals<sup>47</sup> were operational unevenly in both rural and urban areas. This translates to the statistic, that 6% of 15 million merchants dealing in business related activities, are ineligible to hold a terminal (6% dealt in cash-based transactions). Therefore, it is apparent that debit cards are used for ATM withdrawals (92% transaction volume) more than ten times as frequently as for purchases of commodities (8%) (Mazzotta and Chakravorti, 2014, 61). However, India currently seems to be skipping the

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<sup>47</sup> POS Terminals: Point of Sale Systems

‘plastic’ phase, due to high volume cash withdrawals via debit cards, and moving to the digitized circle via mobile.

There have been many exploratory initiatives to reduce the high cash usage in the Indian economy by the Government, with the intention of bringing down the cost of currency operations<sup>48</sup> by the private sector and the government (It takes INR 4.13 billion to route INR 2.93 trillion in diverse subsidies) among other objectives. The cost of handling currency is characterized by ‘inordinate delays, leakages, and heavy reliance on manual labor, mainly because of India’s inclination towards cash payments (Mazzotta and Chakravorti, 2014, 61). These initiatives were commenced stringently, by the Government of India in a structured manner since the mid-70s by NABARD through the creation of Regional Rural Banks. Today, the ‘main actors’ of financial inclusion policy are the Government of India and the Reserve Bank of India, who have put technology at the center of the initiatives, ‘believing in its role to foster financial inclusion’ (Larquemin, 2015, 8). In 2014, the Governor of the RBI, Mr. Raghuram Rajan made a declaration that financial inclusion was about<sup>49</sup>, (i) “the broadening of financial services to those who do not have access to financial services, (ii) the deepening of financial services for people who have minimal financial services and (iii) greater financial literacy and consumer protection”.

In 2013, when the ‘National Mission for Financial Inclusion’ (PMJDY) was announced, PM Modi emphasized in an email to CEOs to all banks that declaring a bank account ‘for each household was a national priority’. The RBI saw the ‘lack of identification documents’ among customers who were unable to open bank accounts due to inadequate personal information.

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<sup>48</sup>See Ehrbeck, T., Lochan, R., Tahilyani, N., & Zainulbhai, A. (2010, October). Inclusive growth and financial security (Rep.).

<sup>49</sup>Rajan, R., Dr. (2016, July 18). The changing paradigm for financial inclusion. Retrieved March, 2017.

Before understanding the guidelines of this scheme, it is imperative to re-read the functions of the Unique Identification Authority of India (UIDAI) and the National Identity Card Program (Aadhaar) that was launched in January 2009, that was an easier of the KYC norms that was set in stone earlier.

### 3.1.1 Recent Approaches by the RBI for Private/Public Sector Banks and Regional Rural Banks: Pradhan Mantri Jan Dhan Yojana

On August 28, 2014, the most ambitious and recent scheme announced by Prime Minister Modi called 'Pradhan Mantri Jan Dhan Yojana' (PMJDY), was launched in the historic Red Fort in Delhi, for 'comprehensive financial inclusion' (Shettar, 2016, 17). It was designed to ensure universal access to banking services starting with basic bank accounts. The aim of the scheme was to have the lower and weaker sections of the unbanked/but bankable Indian society access to banking facilities, financial literacy and access to credit, insurance and pension facility. Starting with 'Basic Banking Accounts (Basic Saving Bank Deposit or BSBD) with an overdraft facility of INR 5000 after six months and a 'RuPay' Debit card with inbuilt accident insurance cover of INR 100,000. The slogan for the PMJDY was: 'Mera Khata Bhagya Vidhaata' which translates to 'People's Wealth Scheme'. The underlying principle was based on the previously mentioned condition of the unbanked household population in 2011, before the scheme was announced: "about 2/5 of households" (105 million out of 250 million households) did not have access to basic banking services. With the spirit of inclusive growth in mind, the government scheme has undertaken the right efforts, and put in place the favorable regulations. Kaur & Singh (2015, 26) highlight the RBI initiatives in the scheme as the following:

- (i) Opening of no-frills accounts with overdraft facility;
- (ii) Relaxation on know-your-customer (KYC) norms;
- (iii) Engaging business correspondents (BCs) or 'Bank Mitras'<sup>50</sup>;

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<sup>50</sup> "preferably a lady from amongst the community who is provided with the knowledge of doing subsidiary banking works like documents preparation of SHG's for account opening, credit linkage, receipt filling in the bank when the members reach the bank premises either for withdrawing or depositing the amount and supporting the bank with such similar works as required by the branch". - Team, I. (2015, June 20). The functions of a bank mitra in Financial Inclusion. Retrieved March, 2017.

- (iv) Use of Technology;
- (v) Simplified branch authorization;
- (vi) Opening of branches in unbanked rural areas.

### 3.1.2 PMJDY Objectives

The financial inclusion policy devised by the Government of India and the Reserve Bank of India is based on six core objectives that were ‘scheduled to be achieved in two phases’ (PMJDY Circular, 2014):

*Phase I (15 August 2014 - 14 August 2015):*

- 1) Universal access to banking facilities (within 5km distance of each village)
- 2) Providing basic banking accounts ('no frills account') for saving and remittance and 'RuPay'
- 3) Debit Card with in-built accident insurance cover of INR 100,000
- 4) Financial Literacy Program

*Phase II (15 August 2015 - 15 August 2018):*

- 1) Overdraft facility of up to INR 5000 after 6 months of satisfactory performance of saving/credit history (a credit guarantee fund would be created for coverage of defaults in overdraft accounts);
- 2) Micro-insurance;

### 3) Unorganized sector pension schemes like Swalamban<sup>51</sup>

The authorities relied on previous Anti-poverty initiatives (see Chapter Two under bank Nationalization) to conceive the new scheme, and appointed BCs (Bank Mitras) in underbanked locations. The implementation considered the positive externalities of financial inclusion: 'it leads to increase in savings and investment and thereby spurs the processes of economic growth' (Divya and Abirami, 2016, 36-37) and that financial inclusion through PMJDY would 'commence the next revolution of growth and prosperity' (Kaur & Singh, 2015). Additionally, all relevant stakeholders were involved in stitching this scheme towards the process of 'improving and deepening financial inclusion'.

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<sup>51</sup> pro-poor initiative by PM Modi with shram-yogi: self reliance (swavalamban), self independence (swashray) and self-dignity (swabhimaan) mantras imbibed by the scheme to fight poverty

### 3.1.3 Progress of PMJDY Scheme

The scheme was implemented with an introductory target of 75 million new accounts ‘within five months with insurance and pension facilities’ (Shettar, 2016, 21). It was informed that 76.4 million bank accounts were open under the PMJDY scheme on November 18, 2014 (Press Release, Ministry of Finance, 2014), which is almost 14% more than they had anticipated within just three months. As for the scheme’s adoption, it has been moderately successful, especially since an emphasis was laid on ‘key sectors like agriculture and Small-Medium Enterprises (MSMEs) consisting of self-employed workers.

The two figures below show differences in account uptake from the year 2014 (Four months after PMJDY scheme announcement) to 2017 (Demonetization effect). There was an exponential growth in terms of successfully opening PMJDY accounts for individuals who fit the newly generated KYC-norms. As of February 28, 2015, a total of 136.8 million accounts (Singh & Sadana, 2015) had been opened within just six months after the announcement of the scheme, receiving attention from the 'Guinness Book of World Records' for "the most number of bank accounts opened in one week"<sup>52</sup>.

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<sup>52</sup>India makes financial world record as millions open new bank accounts. Guinness World Records (2015, January 20). Retrieved May 02, 2017.

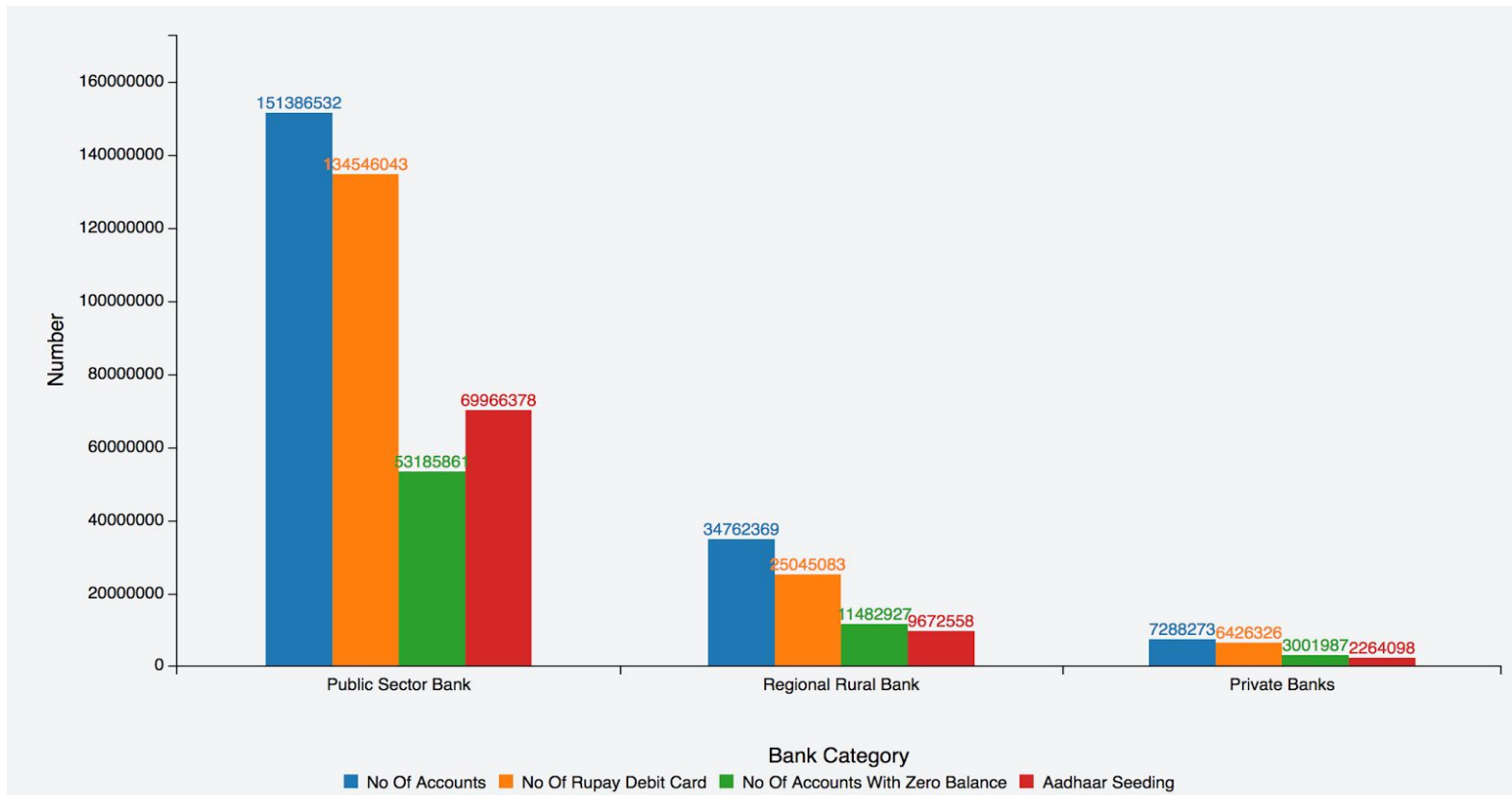


Figure 10: Month-wise Progress Report of PMJDY by Public Sectors Banks/Regional Rural Banks/Private Banks upto 25-Nov-2015 (Source:OGD Platform)

Figure 10 shows that public sector banks outperformed (based on the number of zero balance accounts, number of RuPay Cards issued and average deposit per account) both regional rural banks as well as private sector banks. The total number of accounts opened in the public sector are 151386532, RRBs are 34762369 and private banks at 7288273. Bhandari (2015, 179) finds that in 2015, 61% of the accounts were opened in urban areas and 39% of the total accounts were present in rural areas (The total number of accounts on January 1, 2015 were 110062417).

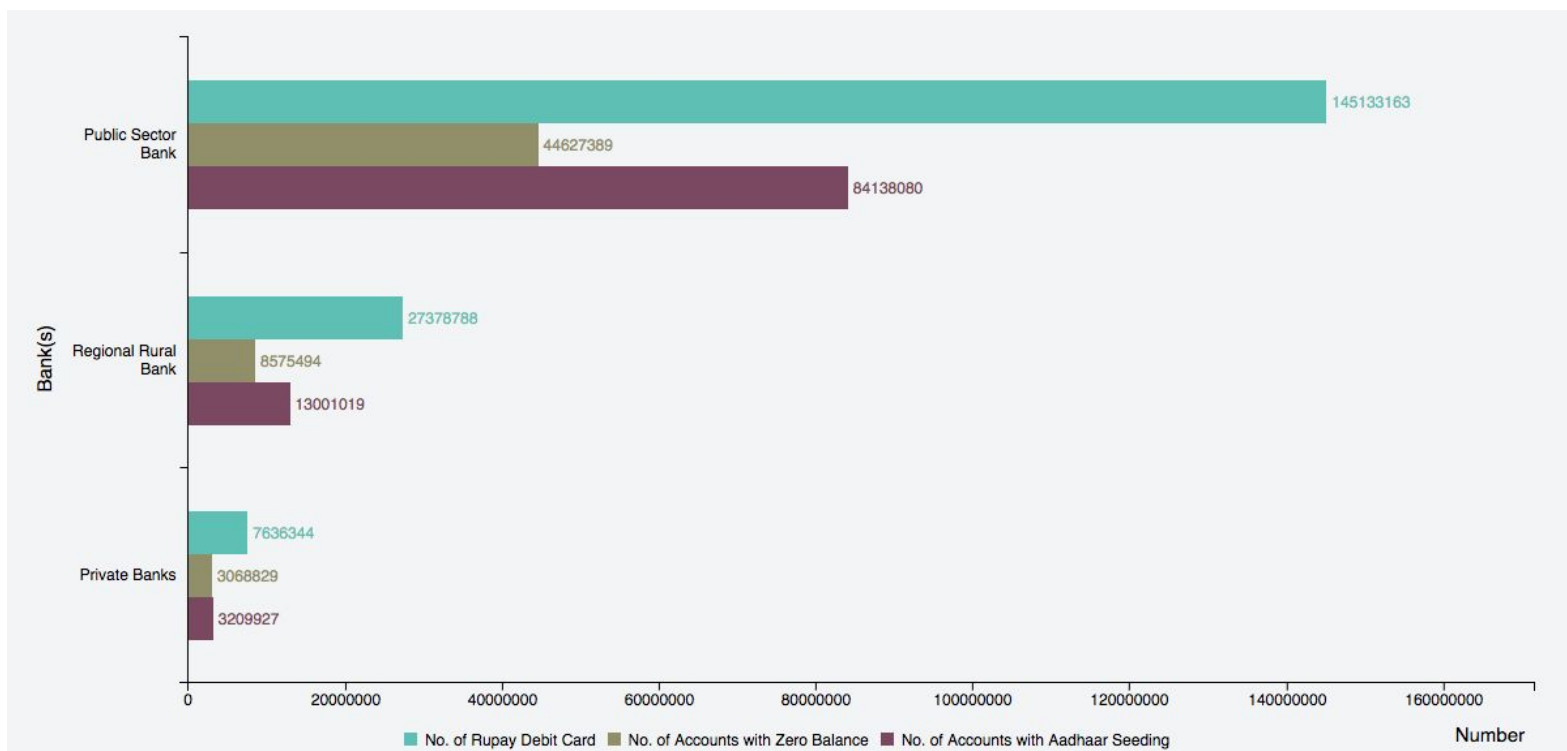


Figure 11: Month-wise Progress Report of PMJDY by Public Sectors Banks/Regional Rural Banks/Private Banks upto 25-May-2016 (Source: OGD Platform)

Figure 11 shows progression in the number of accounts opened in 2016, as compared to the statistics in Figure 10. Additionally, the number of accounts opened with an Aadhaar seeding for all banks (public, RRBs and private) were higher in 2016, versus the accounts opened with a zero balance in 2015. More beneficiaries in 2016 engaged in the use of BCs (See growth of BCs: Figure 7), and availed the Aadhaar to facilitate payments in various deposit and withdrawal activity. In 2017, This showcases the public's perception of Demonetization, in terms of adopting new methods of transaction.

### 3.1.4 Challenges with Duplicate Accounts and Adoption

In the fiscal year of 2014, the 'spearheaded' RBI initiative assisted in opening sixty million new bank accounts (PMJDY website). It was not mandatory for an individual to link their Aadhaar Identification number to the PMJDY bank accounts<sup>53</sup>.

**Kochhar (2014)** argues against the duplicacy account issue, promoting the Aadhaar based authentication system, to 'eliminate duplicate accounts and fake identities at the point of delivery'. He also argues that the 'fool proof identity authentication' makes sure that people weed out the invalid or 'downright bogus' beneficiaries.

**Gupta (2015)** states that there was a discrepancy between the KYC norms set by the RBI in reality, versus the KYC norms listed in the conventional plans of the scheme. In reality, the KYC norms were 'significantly diluted' as they permitted bank customers to produce 'any document' to open the account, and this resulted in a large chunk of duplicate accounts, resulting in the account holders to be entitled to avail the benefits of the scheme (INR 5000 overdraft facility, free insurance facility and a free debit card).

**Bhatia & Singh (2015)** highlight the challenges of the PMJDY Scheme in terms of its spread—both demand side and supply side challenges. They theorize that “the supply factors are to a great extent, expected to reduce the supply side constraints with the help of the implementation of a few central government policies”. The demand side challenges are: low

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<sup>53</sup>PMJDY Frequently Asked Questions

literacy levels, lack of awareness about financial products and services, and lack of trust in formal banking mechanisms. The supply side challenges are: limited service providers, higher levels of regulation and non-availability of rural branches.

**Shettar (2016)** sheds light on the fact that there were many cases of individuals opening more than one account in various banks, due to fragmented KYC norms by banks, that made 'duplication unavoidable'. She identifies that BCs (Business correspondents or Bank Mitras) should be properly trained with 'accurate knowledge, skill and attitude' and that the outcome of the training program will be visible in terms of accomplishing the target.

**Dasgupta and Anklesaria (2015)** have also highlighted the key challenges that could potentially hinder the success of the scheme in India, mainly infrastructural issues and the ability to fight account dormancy, while managing the 'ecosystem of business correspondents' by having the relevant stakeholders-- RBI, central and state government, banks, local bodies and other government agencies like NABARD and NPCI to build a 'sustainable eco-system' to keep these accounts from escaping dormancy.

**Bhatt and Pawar (2015)** found that more than 50% of the unbanked/underbanked population was not aware of the PMJDY scheme and the reason why accounts were dormant after being opened, was due to 'low connectivity to banking facility'.

### 3.1.5 Discussion

The literature expressed by the economists above, are individuals represented by reputed educational institutions and/or personnel associated with the banking policy making bodies of India. The RBI has recently showcased progressive moves, to help improve the landscape for financial inclusion in India. As of 2014, India had a working population of 600 million people, with only 200 million bank account holders. The Jan Dhan model achieved substantial inclusion in terms of coverage. They were successful in creating an effective regulatory ecosystem, and its leverage on technology towards 2017 elevated the effects of the program. The Business Correspondents in rural areas serve as regional drivers of the scheme, where there is opportunity to open the resource base in each state, by developing a culture of savings among large sections of the poor population. The National Payments Corporation of India (NPCI) is a 'system developer' organization appointed by the Government and the RBI (See Section A1 and A2 under 2.3). It facilitates the standard business process for all payment systems in the nation. Section 3.2 will cover the emergence of an electronic payments system in India, and the customized products and services offered through the mobile phone, expanding the channels of financial inclusion in India. Figure 12 is a flowchart on recent RBI initiatives.

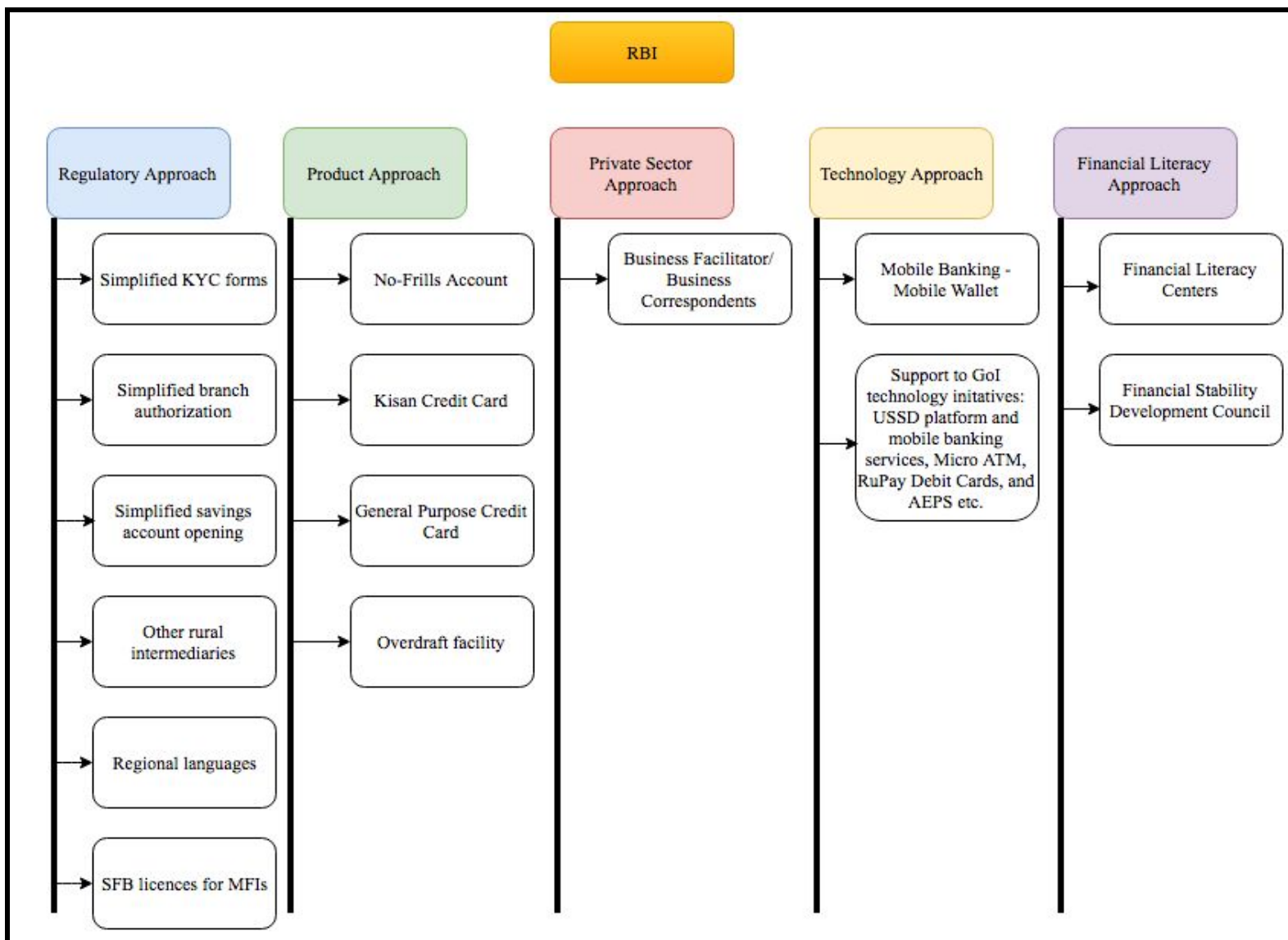


Figure 12: Synopsis of Recent Initiatives by the RBI (Source: Larquemin, 2015)

### 3.2 Digital Payments: Relation to Financial Inclusion and the Informal Economy

The "Payments infrastructure in India is evolving rapidly" (Mazzotta and Chakravorti 2014, 61). The National Payments Corporation of India (NPCI) is the umbrella 'not-for-profit' institution (regulated by the Government of India) which was founded in 2008. From 2008-2016, the RBI spelled out the keywords when they formulated policy prescriptions: "to ensure that all the payment and settlement systems operating in the country are safe, efficient, accessible, inclusive, interoperable and authorized" (RBI Payment Vision document, 2012-15). Chandrasekhar, Ghosh and Patnaik (2017) refer to the digitization of transactions, (post-demonetization) and its ratification, that it "seems to have become a magic wand to deliver solutions to all problems, from fighting corruption, to ending poverty, to modernizing society, even to ensuring sustainable development". After emphasizing the country's war on cash, the financial regulators in the country have;

- adopted a 'bank-led model' for financial inclusion 'which leverages technology for optimization of results'<sup>54</sup> by setting up 'payments banks' and 'small finance banks' payment and clearing systems were implemented in India's agro-centric economy, with the onset of 'real-time gross settlement' (RTGS), national electronic clearing services (NECS), national electronic funds transfer (NEFT), check truncation, and payment cards' for high value business payments for SMEs (EY Rep. 2015, 10).
- Implemented the inclusive potential of the Aadhaar card (launched in 2010), 'RuPay' card (launched in 2012), 'Kisan' card (launched in 1998) and the 'Immediate Payment Service (IMPS, launched in 2010 by the NPCI). The rise of Business Correspondents (private

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<sup>54</sup>Joshi (2016, 114)

extension of banking services) led to the rise of a bank-led model of enabling customers to avail basic banking services through the unique identity, and the Business Correspondent (BC) of any bank. BCs or Bank Mitras allowed the “online interoperable financial inclusion transaction at POS (Micro ATM)” (Ramesha and Bapat, 2014). The Payments ecosystem would serve as a platform for innovating the BC banking space.

- Mobile Banking and Payment Wallets based on ‘supportive regulations’ (like M-Pesa in Kenya)—allowing Indian market to disrupt the ecosystem with digital consumer payments.

The assumption made by majority of the ‘Fintech’ (Financial Technology) companies in India is that better financial governance equates to better tax collection, which would mean that the informal economy would be under the radar, thus forcing the shadow economy to alleviate its cash dominant activities. This is in line with exactly what the government of India set out to do: ‘Catch the Corrupt’.

Section 3.2.2 of this chapter will expand upon the current adoption of the Payments system: Mobile phone adoption, barriers to entry such as current privacy issues and cyber security post demonetization, externalities in payment system networks, based on the strict guidelines posed by the RBI and the interdependency of the public-private landscape of payments in India through the e-KYC integration of the ‘Unique Identification Number’ (Aadhaar), as an indicator of financial inclusion developments in the banking system. This would provide more clarity in answering the bigger question of whether the financially deprived societies in India, will be able to combat cash transactions and incentivize the demand for ‘white money’. (as per the government’s autonomous decisions).

Below is the summary of Payment Bank guidelines from the Nachiket Mor Report<sup>55</sup> (Committee on Comprehensive Financial Services for Small Businesses and Low Income Households, summary by Larquemin [2015, 12]):

- Provide each Indian above 18 with an individual, full-service electronic bank account,
- Setup widely distributed Electronic Payment Access Points offering deposit and withdrawal facilities at a reasonable cost.
- Provide each low-income household, convenient access to formally regulated providers.

The RBI approved eleven entities (telecom giants and tech companies<sup>56</sup>) to structure 'payment banks' in 2015. These banks are not allowed to undertake any lending activities (It is to be kept in mind that payment banks digitize payments, not loans but transactions), and in accordance with the guidelines (Nachiket Mor Report), payment banks will be able to accept deposits with a cap of INR 100,000 per customer. They would be allowed to issue ATM/debit cards (not credit cards). Among other channels to simplify payments and remittances, special attention has been given to Business Correspondents (BCs), who would also be avid players in financial literacy interfaces for application development to assist the unorganized sectors of society.

On September 16, 2015, The RBI also granted licences to 4 MFIs to open small finance banks (SFBs), helping to digitize SHGs (later in 2016)<sup>57</sup> with the cooperation of current commercial banks, RRBs and Cooperative banks, with efficient deposit facilities, through the payment system. It had the potential to bring accountability, after digitizing the information of

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<sup>55</sup> Guidelines for Licensing of Payments Banks issued on November 27, 2014

<sup>56</sup> Licenses were given to Aditya Birla Nuvo, Airtel MCommerce Services, Cholamandalam Distribution Services, Department of Posts, FINO PayTech, National Securities Depository, Reliance Industries, Sun Pharmaceuticals, Paytm Tech, Mahindra, Vodafone M-Pesa

<sup>57</sup> Chatterjee, S. (2016, September 12). Digitizing Self-Help Groups in India. Retrieved February, 2017.

members of self-help groups, to also 'promote self-reliance in bookkeeping and group level decision making' (Chatterjee, 2016).

### 3.2.1 Adoption and Barriers to Entry

The only driver for the rise of payments on digital platforms is the increase in user base and acceptance. According to the BCG-Google report on Digital Payments, India ranks 2nd place (1 billion mobile subscriptions) in the world. The vision of a State Bank of India (SBI) report was to 'gradually move in a direction where every poor person is able to operate his bank account from his mobile, as mobile penetration is higher than financial services penetration' (Knowledge@Wharton, 2014).

The real roadblock for the Government and RBI is that, India would have to move past the plastics for a card-less digital infrastructure that will lower the costs for the consumers, merchants. As mentioned in Chapter 3.11, debit cards are used for cash withdrawals, more than merchant payments. Figure 13 on the next page (data from the Telecom Regulatory Authority of India) shows the increase in mobile subscription with a monthly growth rate of 2.53% for wireless connections, and Figure 14 (data from BCG-Google Study) shows the barriers to entry when engaging with digital payments. The biggest adoption challenges are the habit to use cash, and the complexities that arise in using digital payments. Although, for the rural population, the Government has ordered Fintech companies to create interfaces for financial applications on mobiles in every regional language in India. This would also urge the educationally literate beneficiaries of rural India to transition into mobile payments, tailored in a comprehensible manner.

Particulars	Wireless	Wireline	Total (Wireless+ Wireline)
<b>Total Telephone Subscribers</b> (Million)	<b>1,127.37</b>	<b>24.40</b>	<b>1,151.78</b>
Net Addition in December, 2016 (Million)	27.86	-0.04	27.82
Monthly Growth Rate	2.53%	-0.16%	2.48%
<b>Urban Telephone Subscribers</b> (Million)	<b>662.60</b>	<b>20.55</b>	<b>683.14</b>
Net Addition in December, 2016 (Million)	24.14	-0.02	24.11
Monthly Growth Rate	3.78%	-0.11%	3.66%
<b>Rural Telephone Subscribers</b> (Million)	<b>464.78</b>	<b>3.86</b>	<b>468.64</b>
Net Addition in December, 2016 (Million)	3.72	-0.02	3.71
Monthly Growth Rate	0.81%	-0.45%	0.80%
<b>Overall Tele-density*</b>	<b>88.00</b>	<b>1.90</b>	<b>89.90</b>
Urban Tele-density*	165.04	5.12	170.15
Rural Tele-density*	52.84	0.44	53.27
Share of Urban Subscribers	58.77%	84.19%	59.31%
Share of Rural Subscribers	41.23%	15.81%	40.69%
<b>Broadband Subscribers</b> (Million)	<b>217.95</b>	<b>18.14</b>	<b>236.09</b>

Figure 13: Highlights of Telecom Subscription data as on 31 Dec. 2016 (Source: Telecom Regulatory Authority of India data)

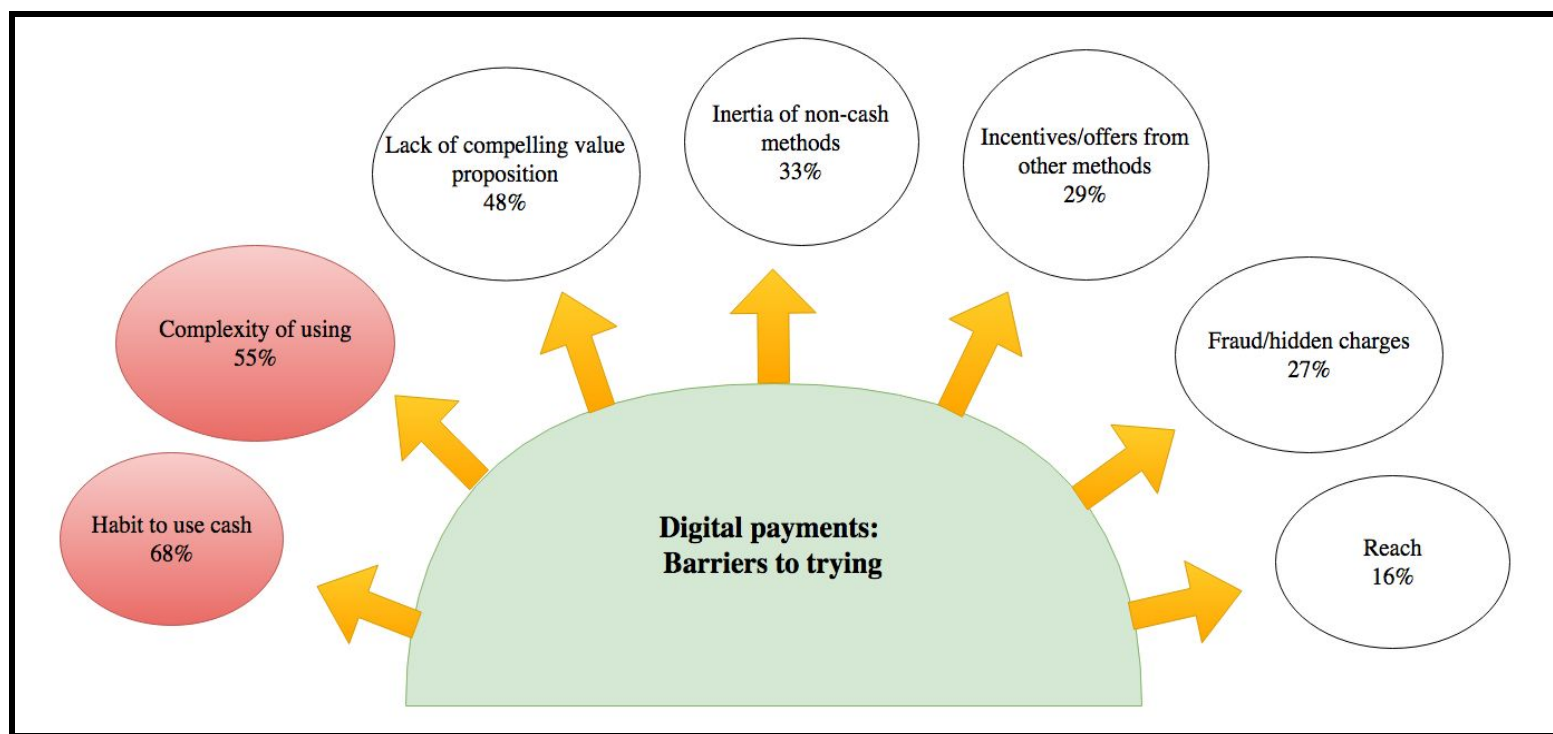


Figure 14: Barriers to Entry in using Non-Cash Payments (Source: BCG market study based on Nielsen consumer survey of 1,515 consumers, 2016, )

On the infrastructural side for MFIs, at this juncture, there are multiple roadblocks with the attempt to achieve full financial inclusion, through the integration of digital payments for Self-Help Groups. Among several challenges, the constraints that prevent the full actualization of digitization include:

1. **Quality of Data:** poor practices in collection of data by institutions (The World Bank is unable to guarantee the accuracy of the data included in NABARD's work<sup>58</sup> )

<sup>58</sup>See Srivastava, Pradeep. 2004. Scaling-up access to finance for India's rural poor. Washington, DC: World Bank. <http://documents.worldbank.org/curated/en/728301468751535430/Scaling-up-access-to-finance-for-Indias-rural-poor>

2. **Delays in recording beneficiary process**, given the staggering flow of data is often slowed down due to poor connectivity to the internet, and keeping up with customized products to meet issues with the regional disparity in India
3. **Low proliferation of mobile utilization**: low ownership of tablets and mobiles causes beneficiaries to rely on 'Bank Mitras' (BCs) and loan collection officers, slowing down the loan collection procedure.
4. **Cooperation of BCs and relevant stakeholders**: Sparse levels financial literacy exists among SHG beneficiaries and Bank Mitras themselves<sup>59</sup> (psychological barriers, relevance).

In India, the relationship between the access to finance and the cost of building relevant infrastructure, is complex, due to a jeopardy in the data collection practices and time constraints for institutions when dealing with beneficiaries.

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<sup>59</sup> See Param, P. B. (2016, May 31). Does financial inclusion really include?. The Hindu Businessline. Retrieved February, 2017.

## Chapter Four: Perspectives

### 4.1 Outweighing Access Cost Benefits in a Financially Inclusive Ecosystem

There are major benefits to an e-payment that outweigh its costs. As we discussed in the first chapter, the cost of currency operations are high in the country (See Figure 5). According to a World Bank Development Report 2014<sup>60</sup>, it is studied that payment transactions through an electronic mode will help save 1.6% of the country's GDP, i.e save INR 1603.2 billion<sup>61</sup> (Kochhar 2014, 293). The report also discusses that individuals and small firms will benefit from using such mediums, easy online authorizations and efficient recording at low transactions costs improving transparency and accountability. However, in the case of India, the relationship between the access to finance and the cost of building relevant infrastructure, is complex.

Figure 4 in Section 1.4 of Chapter One, illustrates the financially included consumers, with a low income, who face a lower monthly cost in terms of cash fees, than those individuals without bank accounts. On the other hand, individuals with a high level of income, have easier access to payment accounts, but do not have cheap access to cash. Mazzotta B, Chakravorti B et. al (2014) point out that the explanation for this is 'willingness to pay for convenience'. The D2 individuals who did not possess a bank account, would pay a higher fee than everybody else except the A1 banked individuals. The authors suspect that this fee originates from the cost of borrowing, in order to access cash. The reason for a high fee to access cash, is because low-income consumers do not have access to the formal banking system. Mentioned in a previous statistic in Section 2.2.2 (under Aadhaar), the 456 million people work in the

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<sup>60</sup> World Bank, 2014. World Development Report

<sup>61</sup> Kochhar (2014)

unorganized sector, earning uncertain incomes (cash wages of a maximum of INR 25000 a year). If the unorganized sector is successfully integrated with the mainstream banking system, the 456 million (85% of the population), it would drive down the cost of cash fees for transactions, based on the argument above.

As we know, India is cash intensive, and a number of factors like demographics: gender, age and employment status would affect each of these findings. The self-employed workers (single) who are provided with financial access, pay a lower access fee than other poor households with family workers and employers. “Men pay higher costs than do women on both a monthly basis and a per-transaction basis” according to a study conducted by the IMF (Das, Chandra et. al 2015). A second statistic shows that “Indian women are 8% less likely to own a formal financial account and 12% likely to use digital services offered by these accounts” (Chatterjee, 2016). Moreover, women in rural areas tend to “save” currency by hiding it in tin cans and secret cabins, “away from the eyes of the men of the households” (Sharma, 2016). Moreover, this is more true for women living in low income households.

The costs of e-payments combined with the infrastructure and connectivity concerns, will be a barrier to rise in adoption. Private sector investments are increasing and are beginning to be engaged in setting up payments systems, enhancing data connectivity coverage in remote areas, and implementing cyber-security and associated infrastructure. As we saw in Section 3.2.1, smartphone adoption is rising at 2.53% per month, and wireline subscribers (landlines) are falling at a monthly rate of -0.16%.

BCs as we know, will drive down transaction costs both for the demand and the supply side, because the ‘financial services value chain is getting disaggregated and newer specialised

participants are entering the landscape’ such as technology service providers (Kochhar 2014). Even after PMJDY was announced, and ordered to take care of ‘residual issues: inadequate remuneration to BCs, financial literacy, insurance linkages, amongst others, remain largely unaddressed’. (Kochhar 2014).

The collaborative process of Microfinance institutions and the payment system has conceived a ‘less-cash’ model for self-help groups, providing members with a digital platform to expand their reach to government schemes such as the National Rural Livelihoods Mission (NRLM) and Pradhan Mantri Jan Dhan Yojana (PMJDY), with a consistent underlying philosophy (that MFIs promoted from their inception), of driving greater financial inclusion.

There are more opportunities in the MFI sector, after four (out of 22) MFIs received licenses to open Small Finance Banks (SFBs), who manage large portfolios of Small and Medium Enterprises, and the self-employed. To drive financial inclusion further, the country would benefit from digitizing more MFIs, while promoting a ‘less-cash’ ideology to help drive down the cost of currency operations (both demand and supply side), while bringing the assets of the unorganized sector, into the banking system.

## 4.2 Privacy Implications

The emphasis placed on digital payments by the financial regulators was aggressive, and served as an ‘immediate provocation’ to recognize the currency shortage in the economic system (Ghosh, Chandrasekhar, Patnaik, 2017, 95). The government’s focus on cashless transactions also created a new source of ‘financial vulnerability’ among Indian citizens, and has forced individuals to ‘part with the meagre funds’ to improve the profitability of banks and financial technology companies, rendering them vulnerable to a loss of privacy and data theft (Ghosh, Chandrasekhar et. al. 2017, 102), compromising the digital identity of beneficiaries, without consent.

In October, 2015, a Supreme Court order allowed the Aadhaar card to be used on a ‘voluntary basis’<sup>62</sup>, and announced that no person will be deprived of financial benefits, based on possession of the Aadhaar. After this, the government informed the Supreme court that a mechanism ‘exists under which a cardholder can choose to block the biometric information linked to his Aadhaar card’<sup>63</sup>. A successful mobile money service would be one that is able to track mobile transfer payments, and provision of robust login systems to meet regulatory demands.

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<sup>62</sup>Anand, U. (2015, October 16). Supreme Court allows Aadhaar card use on voluntary basis for government schemes. Retrieved February, 2017

<sup>63</sup>Anand, U. (2015, October 15). Right to privacy concerns: Aadhaar holder can block his biometric info, Govt tells Supreme Court. Retrieved February, 2017

#### 4.3 Demonetization: A Boon or Bane to Financial Inclusion?

The use of coercion (due to the physical absence of currency during demonetization), to ‘nudge’ the Indian population into using electronic means of payment was not enough (Ghosh, Chandrasekhar et. al. 2017). Unfortunately after the ordinance, the rhetoric to mitigate cash a shortage through the incentive of transitioning to an e-payments system was a autonomous decision by the Prime Minister, and it carved the new nationalism road, that India is currently treading. The goal of eliminating black money, without knowledge of the size of the informal markets in India (varied statistics from The White Paper, The Wanchoo Committee, and the National Institute of Public Finance and Policy), made the removal of high denomination currency futile. The second futility in the ordinance was that “black money is not synonymous with corruption; it is rather one of the several symptoms of corruption” (See Chapter One). The emphasis laid by the RBI on achieving the primer financial inclusion goals, and of creating tailored solutions (high regional disparities), should have been the norm from the beginning.

Demonetization was not necessary to begin the war on cash, given the liberalized commodity and trade markets, that consist of cash-heavy businesses. It was an unfair decision that caused significant damage to the Indian economy, and was unsuccessful in meeting its initial, declared goals of eliminating black money and terror financing. Although, its revised goals of going cashless, has delivered results of pushing digital payments. Moreover, the large scale exercise will not bring the informal economy and the unbanked to use digital platforms, overnight. The inclination toward using currency has been ingrained in the rural and urban poor, but the new utopia of e-payments is increasing through its convenience and affordable cost. The demonetization exercise indirectly helped in modifying the public’s financial well-being by

promoting digital payments, creating an integrated form of financial inclusion. Furthermore, declaring 85% of the nation's currency without prior notice might have been the wrong step for the right reasons.

The impact of Demonetization on digital payments, presented the market players of the payments ecosystem with opportunities. The dependent statistics to prove its success are mobile subscription growth (See Figure 13), the growing volume of digital payments, merchant willingness to accept non-cash models along with government incentives issued by the RBI.

The Government of India and the RBI need to engage in delivering benefits of digital/digitizing payments, so that all of the country's currency is under the banking radar. The roadblocks present, such as the jump from cash to mobile, can be overcome through government incentives, with the intention of lowering cost (both to the institution and the customer), by regulating the same, so that financial participants can benefit, such as the provision of a Merchant Discount Rate (MDR) while engaging in digital collections. Recently, the Press Information Bureau of the Government of India announced a 'Package for the promotion of digital and cashless economy'<sup>64</sup>. It covers the cash benefits of transitioning to digital payments, such as discounts on railway tickets, monthly and seasonal passes, and benefits to low-income railway personnel who would be able to avail services such as 'catering, accommodation, retiring rooms'. Full inclusion can only be achieved if all cash gets into the banking system, and the challenges of adopting such methods must be overcome in order to bank the unbanked.

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<sup>64</sup> See Government of India, Press Information Bureau. (2016, December 8). Package for Promotion of Digital and Cashless Economy [Press release]. Retrieved March, 2017.

## **Conclusion**

### **Can we make the unbanked bankable?**

Digitization has certainly helped in routing transactions through the banking system, contrary to the cash that is outside the same. Money constitutes a liability of the banking ecosystem as we observed in chapter One (It is a 'legal tender' offered in the payment of debt). 'Currency' today, is the liability of the Reserve Bank of India, and other 'non-currency' instruments are a liability of other banks (and BCs). A cheque payment simply transfers the claim upon a signature to the bank from the beneficiary's name, to that of the cheque recipient. If the beneficiary engages in a digital payment, it is identical to the act of transferring a claim held by the beneficiary, to someone else's name i.e the method of payment, regardless of being a cheque or a digitized payment. In order to receive credit from a bank, these institutions monitor the 'creditworthiness' of these individuals i.e he/she must be viewed as adequate earners, during the loan period in order to repay.

In addition, the idle money stored in pillowcases and tin cans (See 2.1 and 4.1) become more accessible for individuals in low income households, which they may use at their disposition. Although currency loses its value over time due to inflation and high supply in the economic system, (See 1.1.2) the spread of banking and payment systems will assist in creating further cash flows and bringing all the money into the mainstream economy. Low cost digital payments are a vehicle to collect the aforementioned idle money.

The current infrastructure and policy objectives are favorable circumstances for more ad hoc micro-credit institutions, waiting to be granted licences to open more Small finance banks (SFBs) to carry forward financial inclusion in the country, by digitizing beneficiary information

through efficient bookkeeping practices. The positive impact following the long-term establishment of an efficient and extended financial sector will encourage economic growth and development in the country.

A vast majority of the poor are not considered creditworthy because of their ambiguous economic activity. With regard to digital payments, it will be revolutionary in banking the unbanked, while creating micropayment opportunities for the poor, thus incentivizing savings, and in the long run, empowering the rural and urban poor. This, in turn, will allow for the concerned groups to hold a credit history. The digital payments will, concomitant to the establishment of a credit history, help them maintain a stable income (with the assumption of self-employment or SME activities that produce income). This would push the weaker sections of Indian society to graduate to more formalised financial products, while maintaining their creditworthiness, succeeding in banking the unbanked, whilst making them 'bankable'.

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