DATA ANALYSIS OF TRANSACTIONS PRE AND POST DEMONETIZATION

PROJECT REPORT

Submitted by

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ABSTRACT

On 08 November 2016, the government of India officially declared the demonetization drive in which it was announced that higher denomination currency notes of Rs.500 and Rs.1000 would be demonetized with effect from that day's midnight. The drive went on till 30 December 2016. The 3 main objectives of this demonetization drive were fighting black money, corruption and terror funding. The government encouraged the citizens to go cashless and transact through digital mediums like mobile banking, payment apps, NEFT etc. The economy in the initial months after the demonetization drive slowed down. There was a significant variation in the pattern of monetary transactions, both in volume as well as value, via modes like RTGS, card payments, retail electronic clearing, PPI (Prepaid Payment Instruments like m-wallet, paper vouchers etc.), mobile banking etc. This project report reflects our efforts to capture the trends across the different transaction mediums and analyze them to answer our objectives. Our analysis is based on the data provided by the Reserve Bank of India over the period of Apr 2004 to Oct 2018, though we are more concerned with the trends prevailing around the demonetization drive carried out by the government.

Keywords: Demonetization, black money, corruption, terror funding

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LIST OF ABBREVIATIONS USED

1. **IDS:** Income Declaration Scheme
2. **UID:** Unique Identification Number
3. **RBI:** Reserve Bank of India
4. **KYC:** Know Your Customer
5. **eKYC:** electronic Know Your Customer
6. **UIDAI:** Unique Identification Authority of India
7. **RTI:** Right To Information
8. **RTGS:** Real Time Gross Settlement
9. **NEFT:** National Electronic Funds Transfer
10. **AEPS:** Aadhaar Enabled Payment Systems
11. **DBIE:** Database of Indian Economy (*data warehouse of the RBI*)
12. **UPI:** Unified Payments Interface
13. **VPA:** Virtual Payment Address
14. **NPCI:** National Payment Corporation of India
15. **TRAI:** Telecom Regulatory Authority of India

CHAPTER 1

INTRODUCTION

The main objective of the demonetization of Nov 2016 was to impress upon the population the benefits of electronic payments and digitalization. Prior to that, the Government of India devised an Income Declaration Scheme (IDS), which opened on 01 June 2016 and ended on 30 September 2016. Under the scheme, the black money holders could come clean by declaring the assets, paying the tax and penalty of 45% thereafter. Broadly speaking, demonetization of high currency notes has two-fold objective; first, cutting off the militancy funding, & second, fight corruption. Digitalizing the financial transactions in the country ensures greater transparency for both the customer and government, and also proper tax collection by the government which is then used for various developmental schemes.

Understanding the developments in the Indian economy after demonetization of Nov 2016 requires the deeper understanding of questions like:

1. What drives the spending pattern of an average Indian citizen?
2. What may be the reasons for the fluctuations observed in the transaction data in the RBI data set which forms the basis of this work?
3. Is it possible to identify the increase/decrease in the withdrawals/deposits made through the transactions? What could be the factors responsible for it?
4. How do we even identify if the transaction is depositing or withdrawing the money in genuine accounts?

In the subsequent chapters, we have tried to figure out the reasons for various objectives similar to those mentioned above by plotting trends & graphs and after perusing research papers of other reputed authors to derive conclusions.

The factor that plays the pivotal role, that forms the basis for the analysis of data gathered from various sources for this project, is the Aadhaar number or the UID

(Unique Identification) number. It is a random number allotted to demographic and biometric data submitted by private parties. It has never been verified or audited to confirm the identity, address or even existence of a real person associated with the number. This means that the existence of ghosts (non-existing persons), fakes (real persons with fake identities) and duplicates cannot be denied. Using this number as the basis to open bank accounts, as enabled by the Reserve Bank of India (RBI) in January 2011, on-boards virtual customers. The use of the UID number as the basis for KYC, therefore, allows the creation of bank accounts for ghosts, fakes and duplicates.

Now, if ghost, fake or duplicate accounts can be created, then it is certain that black money is still present there in the system in such accounts. There is nobody to take the responsibility of providing guarantee for the veracity of an Aadhaar based account, so it is quite obvious that one can create multiple fake accounts to store money which is not accounted for. You can never trace the source of such amount of money back to its actual depositor or withdrawer.

For those who believe biometrics will prevent such a scenario, the banks never use the biometrics of a person in the process of verifying the identity of the customer during opening his/her account. Even if it were required, there is no verification or audit of the biometric ever having happened. Furthermore, if it was the biometric that uniquely identified you, making it the safest identifier, why would your UID number ever be needed to query the UIDAI database? Your biometric would have been the sole requirement to open your bank account, not your UID number.

The UIDAI eKYC procedures require that no data is kept by those initiating the eKYC other than the response from UIDAI. This response from the UIDAI is to be kept for at least six months for audit purposes. The complex network of agencies providing eKYC, the absence of audit processes being in place and the complete absence of permanent record of customer information leave no means to verify and audit the existence of real persons in whose name millions of bank accounts may have been

opened. In other words, you do not know whose money is it in all those accounts. You do not know that into whose accounts the money, as the budget allocated to the implementation of any government scheme, has been deposited. This is the digital black money.

Bank accounts opened solely with the UID number or with documents obtained on the basis of an UID number are indistinguishable from mule accounts, or accounts that are controlled by third parties for the purposes of money laundering. Those in control of such bank accounts can, therefore, use them to distribute income and accumulate black wealth to keep it out of the tax radar.

Jan Dhan bank accounts are the tip of the iceberg in terms of bank accounts opened with UID as the sole KYC. However, they are visible as a category of accounts opened solely with UID. 76% of Jan Dhan accounts were zero balance till one rupee was added to many accounts to bring down zero balance accounts to 23% so that the concentration of money deposits would not be noticed. There has been a rise Rs 32,000 crore in Jan Dhan deposits in the two weeks since demonetization. The RBI does not publish statistics of the number of accounts with balances more than Rs5000 … 25,000, 35,000 and 45,000. If it did, it may tell some stories.

It might be interesting to note that the UIDAI has stated, in response to an RTI query, that it is not responsible to certify the biometric or demographic data, or even the use of this data. It does not certify the identity, address or date of birth of anyone. It has also stated that it cannot retrieve a unique record with a biometric. It has no idea of the number of unique biometrics in its database. It has also stated, under RTI, that it does not identify anyone. It merely authenticated the biometric or demographic data associated with an Aadhaar number. The UIDAI has also reiterated, under RTI, that it is not responsible for any transactions undertaken with Aadhaar. In other words, the transactions done through an Aadhaar account are untraceable to the true customer.

The Aadhaar data, in legal terms, are completely useless. Those monetizing Aadhaar recognized its unprecedented power to create ghost, proxy or benami transactions, including financial transactions, property transactions, and for delivering subsidies, benefits or services. That is precisely why, driven by Aadhaar, exclusion, identity frauds and associated crime have grown the black economy exponentially.

In the chapters ahead we shall see the general mannerism of money flow, identify some patterns in the data sets we have obtained from credible government sources, seek for the discrepancies and contradictions to our objectives as reflected in those data sets and finally, we shall ponder over for possible remedial measures for some of the issues left unresolved by the demonetization.

CHAPTER 2

SCOPE OF THE PROJECT

As the demonetization drive has affected all the Indian citizens irrespective of the classes, the work in this project has been accomplished considering the RBI data set on the monetary transactions, in general, as carried out by the Indian citizens.

The data set contains transaction data from different categories of banks viz. public sector banks, private sector banks, regional rural banks, foreign banks etc. done via different modes like mobile banking, payment apps of the banks, NEFT, RTGS, CTS, PPI instruments etc. Since it has been only 30 months after the demonetization, we have considered month wise data, and not annual data. This has provided us detailed insights about the trends (as we shall see in later chapters) spanning over the last two and a half years. We have tried, through this project, to find out the answers to few of our objectives, and even if not the answers, we have tried to derive logical inferences from the past to predict the future course. The project of this type requires considerable amount of time and deep research at various levels of granularity, though we have tried to do justice to the efforts put into the project in only the few months we have had at our disposal.

CHAPTER 3

MONEYFLOW

The following figure shows the layout of general money flow in the system. There are various modes of deposits and withdrawals. Our main concern here will be the money flow through AEPS (Aadhaar Enabled Payment Systems).

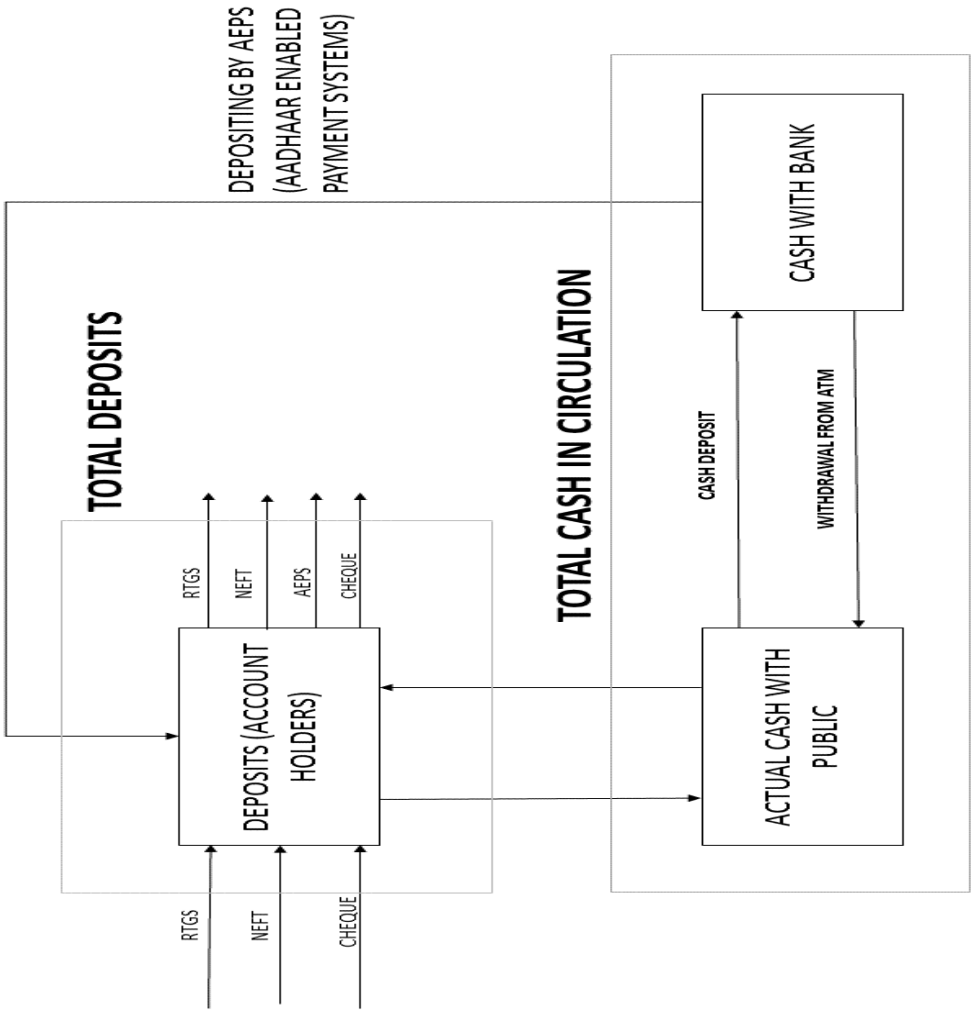

Fig 3.1 Flowchart for Money Flow

The diagrammatic representation of the money flow on the previous page shows majorly two aspects:

1. **Deposits:** The deposits can be made into the customers' accounts (which can be accounts in banks or post offices etc.) via different modes of transactions which could be NEFT. RTGS, CHEQUE, Demand Drafts etc.
2. **Cash in Circulation:** This is the actual cash in circulation among the people and the bank. The public deposits cash in bank as currency notes and withdraws the same through bank's ATMs.

CHAPTER 4

DATA FOR THIS WORK

The data for the purpose of this work has been gathered from various government websites, chiefly the Reserve Bank of India (RBI) website, and a list of these websites has been provided in the section titled references. Few research papers have also been gone through who references will be provided wherever the work derives something from them.

Following is the list of data files, their respective sizes, followed by their structures.

1. Payment System Indicators Table (Main Data Set)

MonthYear	1 RTGS		1.1 Customer Transactions		1.2 Interbank Transactions	
	Volume (Million)	Value (Rupees Billion)	Volume (Million)	Value (Rupees Billion)	Volume (Million)	Value (Rupees Billion)
2018-19						
Oct-2018	11.86	142,152.55	11.58	97,944.08	0.28	13,912.67
Sep-2018	10.40	131,257.97	10.14	91,806.84	0.26	12,230.50
Aug-2018	11.01	138,236.20	10.74	97,993.53	0.27	11,220.57
Jul-2018	10.97	138,628.54	10.69	99,646.35	0.28	12,366.56
Jun-2018	11.43	142,541.58	11.14	101,133.89	0.29	13,065.14
May-2018	11.49	132,353.84	11.19	93,765.34	0.30	11,955.59
Apr-2018	10.66	120,758.20	10.37	82,457.44	0.29	11,588.31
2017-18						
Mar-2018	12.69	158,779.65	12.36	112,498.68	0.32	13,841.62
Feb-2018	10.63	114,123.57	10.34	82,134.80	0.29	9,630.83
Jan-2018	11.16	133,665.22	10.85	95,866.37	0.31	11,622.03
Dec-2017	10.90	128,098.85	10.58	90,557.83	0.31	10,349.96
Nov-2017	10.83	123,579.36	10.51	87,550.13	0.32	10,860.36
Oct-2017	10.00	115,808.00	9.71	82,084.42	0.29	9,971.68
Sep-2017	9.61	127,730.70	9.32	91,521.65	0.29	10,826.48
Aug-2017	9.46	113,827.58	9.16	79,157.81	0.30	10,005.58
Jul-2017	9.38	110,562.10	9.07	77,675.80	0.31	9,473.46
Jun-2017	9.83	116,200.57	9.51	83,330.95	0.32	9,481.63
May-2017	10.43	113,312.69	10.09	80,716.62	0.35	9,453.90

Report 1 | RBI RelevantCols | RBI DemonetPeriod | RBI Demo

Table 4.1 Payment System Indicator

The actual size of this table is 193 X 80 i.e. 193 rows with 80 columns.

Table 4.1 shows the information about the 'Volume' & 'Value' of different modes of transactions like RTGS, Paper Clearing (like Cheque Truncation System etc.), Retail Electronics clearing, Debit Cards, Credit Cards, Prepaid Payment Instruments, Mobile Banking etc. Each of the aforementioned modes of transactions has further sub-categories.

2. Notes & Coins in Circulation

	A	B	C	D	E	F	G	H	I	J
1	Year	Re. 1 Notes (Rs bn)	Re. 1 Coins (Rs bn)	Rs. 2 Coins (Rs bn)	Rs. 5 Coins (Rs bn)	Rs. 10 Coins (Rs bn)	Rs. 2 Notes (Rs bn)	Rs. 5 Notes (Rs bn)	Rs. 10 Notes (Rs bn)	Rs. 20 Notes (Rs bn)	Rs
2	2017-18	3.43	49.63	65.71	83.24	50.49	8.53	35.80	306.45	200.32	
3	2016-17	3.21	45.14	64.11	78.91	52.04	8.53	36.45	369.29	203.15	
4	2015-16	3.09	41.78	59.26	70.45	37.03	8.53	36.80	320.15	98.47	
5	2014-15	2.99	38.63	54.07	63.80	27.50	8.54	37.02	303.04	86.99	
6	2013-14	2.99	38.42	49.65	57.89	20.17	8.51	37.14	266.48	85.69	
7	2012-13	2.99	32.89	44.23	53.38	12.67	8.51	36.87	251.68	76.50	
8	2011-12	2.99	31.42	36.40	49.90	6.48	8.51	36.43	230.02	70.20	
9	2010-11	2.99	29.68	30.68	45.35	3.00	8.51	34.30	212.88	60.40	
10	2009-10	2.99	26.47	26.40	38.80	1.49	6.98	22.33	185.36	46.81	
11	2008-09	3.00	23.96	22.36	35.70	0.00	6.65	22.71	122.22	43.99	
12	2007-08	3.00	22.14	19.07	32.49	0.00	6.36	21.11	93.33	41.08	
13	2006-07	3.01	20.29	14.88	28.80	0.00	4.47	18.87	71.55	41.78	
14	2005-06	2.99	18.94	13.65	27.35	0.00	4.51	19.80	62.74	40.77	
15											

Table 4.2 Currency in Circulation

The data size of the original table was 50 rows and 17 columns. After cleaning the main data set, the above table was obtained for our purpose. The structure of the above table is straightforward and thus self-explanatory.

3. Money Stock: Component & Sources

Date	1.1 Currency with the public	1.1.1 Notes in Circulation	1.1.2 Circulation of Rupee Coins	1.1.3 Circulation of Small Coins	1.1.4 Cash on Hand with Banks	1.2 Dep of th
Apr 12, 2019	20,943.17	21,487.09	250.98	7.43	802.33	
Mar 31, 2019	20,521.88	21,108.83	250.98	7.43	845.36	
Mar 29, 2019	20,550.69	21,137.64	250.98	7.43	845.36	
Mar 15, 2019	20,638.09	21,156.92	250.98	7.43	777.25	
Mar 1, 2019	20,279.10	20,802.12	250.98	7.43	781.43	
Feb 15, 2019	20,294.55	20,798.92	250.80	7.43	762.60	
Feb 1, 2019	19,841.55	20,355.77	250.80	7.43	772.46	
Jan 18, 2019	19,867.40	20,392.60	250.55	7.43	783.19	
Jan 4, 2019	19,516.93	20,030.20	250.55	7.43	771.25	
Dec 21, 2018	19,509.95	20,041.83	250.43	7.43	789.74	
Dec 7, 2018	19,317.78	19,881.88	250.43	7.43	821.96	
Nov 23, 2018	19,244.46	19,850.08	249.54	7.43	862.59	
Nov 9, 2018	19,388.26	19,966.35	249.54	7.43	835.06	
Oct 26, 2018	18,751.35	19,355.66	249.54	7.43	861.28	
Oct 12, 2018	18,761.63	19,309.85	249.54	7.43	805.19	
Sep 28, 2018	18,429.36	18,995.47	249.54	7.43	823.08	
Sep 14, 2018	18,701.61	19,228.51	249.54	7.43	783.86	
Aug 31, 2018	18,468.44	19,019.37	249.54	7.43	807.90	
Aug 17, 2018	18,663.87	19,171.29	249.54	7.43	764.39	

Report 1

Table 4.3 Money Stock: Component & Sources

Table 4.3 shows the details about currency with public, currency with bank etc. This table provides critical details for drawing inferences about how the black money problem has not been resolved by the demonetization of Nov 2016. Hence, this is a critical table.

4. Reserve Money : Components & Sources

Reserve Money : Components and Sources

Rupees Billion

Components and Sources>	Components			Reserve Money	
	Currency in circulation - Total	'Other' deposits with RBI	Bankers' deposits with RBI	Reserve Money (Liabilities/Components)	RE
26 Apr 2019	21,799.57	276.60	5,604.62	27,680.80	
19 Apr 2019	21,880.64	281.69	5,770.14	27,932.48	
12 Apr 2019	21,745.96	278.40	5,407.23	27,431.60	
05 Apr 2019	21,482.29	285.24	5,437.18	27,204.71	
31 Mar 2019	21,367.70	317.42	6,019.69	27,704.81	
29 Mar 2019	21,396.05	404.34	6,054.34	27,854.73	
22 Mar 2019	21,479.63	269.73	5,255.06	27,004.42	
15 Mar 2019	21,415.33	277.63	5,951.68	27,644.64	
08 Mar 2019	21,318.41	271.99	5,178.96	26,769.36	
01 Mar 2019	21,060.53	276.08	5,318.41	26,655.02	

Table 4.4 Reserve Money : Components & Sources

CHAPTER 5

METHODOLOGY FOR ANALYSIS OF THE DATA

The methodology of analyzing the raw data for drawing the inferences and identifying the significant indicators about our objective, has the following steps taken by us:

1. **Identifying the credible sources of data:** We have had gone through a lot of data about the demonetization of Nov 2016, in newspapers like The Times of India, The Hindu, The Indian Express etc. but it was too nebulous and its authenticity could not be guaranteed because its sources were not mentioned there more often than not. My mentor Dr. Anupam Saraph, in our sessions of interactions, directed us to go through the RBI website and fetch the data.

2. **Cleaning of the data sets:** The original data files had a lot of formatting issues, missing values, redundant columns, data type mismatch between the source file and the data type supported by the software tool of analysis (***Tableau Public 10.4***).

    - We merged sub-columns under one category in single columns.
    - We had to change the data type of columns e.g. YEAR column's data type was 'Text' in the original file which was later changed to 'Date' type to match with that of the Tableau Public 10.4 tool's data type. Many other similar changes were made.
    - We ensured consistency in the cells of excel files of our data. Cells having hyphens in them were replaced with 0.00 for making the data consistent with the other entries.

3. Separate sheets were created in the same data set file, where only the relevant rows and columns from the raw & cleaned data was stored.

4. **Feeding the data files into tool:** The data files were then fed into the Tableau Public 10.4 tool to generate trends and graphs (shown in subsequent chapters and sections). Different sheets were inner-joined in the tool to fetch common results.

5. **Clubbing of information identified to answer objectives:** The charts and graphs presented the pattern of transactions and patterns about the currency in circulation. These trends were then clubbed with the statistical information available to us in the tables to shed light on the meaning of the information produced, with regards to the digital black money and *benami* accounts.

CHAPTER 6

DATA ANALYSIS & INFERENCES

In this chapter, we shall discuss about the objectives of our work one at a time.

1. **Did the demonetization of higher currency notes in Nov 2016 wipe out the issue of black money?**

If we refer to the table 4.4 (*Reserve Money: Components & Sources*) in Chapter 4, we have the following information about the currency in circulation:

MONTH & YEAR	CURRENCY IN CIRCULATION(₹ Billion)	% Total
Nov-16	₹ 17,879.00	11.16%
Jan-17	₹ 9,508.00	9.62%
Apr-17	₹ 13,897.00	10.45%
Aug-17	₹ 15,654.00	10.80%
Jan-18	₹ 17,049.00	11.08%
May-18	₹ 19,355.00	11.53%
Oct-18	₹ 19,687.00	11.62%
Dec-18	₹ 20,139.00	11.71%
Apr-19	₹ 21,799.00	12.04%
TOTAL CURRENCY IN CIRCULATION	**₹ 154,967.00**	**100.00%**

Table 6.1 Trend of Currency in Circulation

One of the goals of demonetization was to reduce the currency with public and increase the digitalization of financial transactions at every level. The thing worth noticing is that the currency with public has **NOT DECLINED** over the years. The total currency with public from the month of demonetization till the month of Apr 2019 is ₹154,967.00 (approximately) and instead of declining, it has only risen.

Now, following are the few graphs & trends that have been prepared from the RBI datasets using the tool Tableau Public 10.4. Let us go through them and then try to draw inferences, taking into consideration the point expressed above about the currency in circulation.

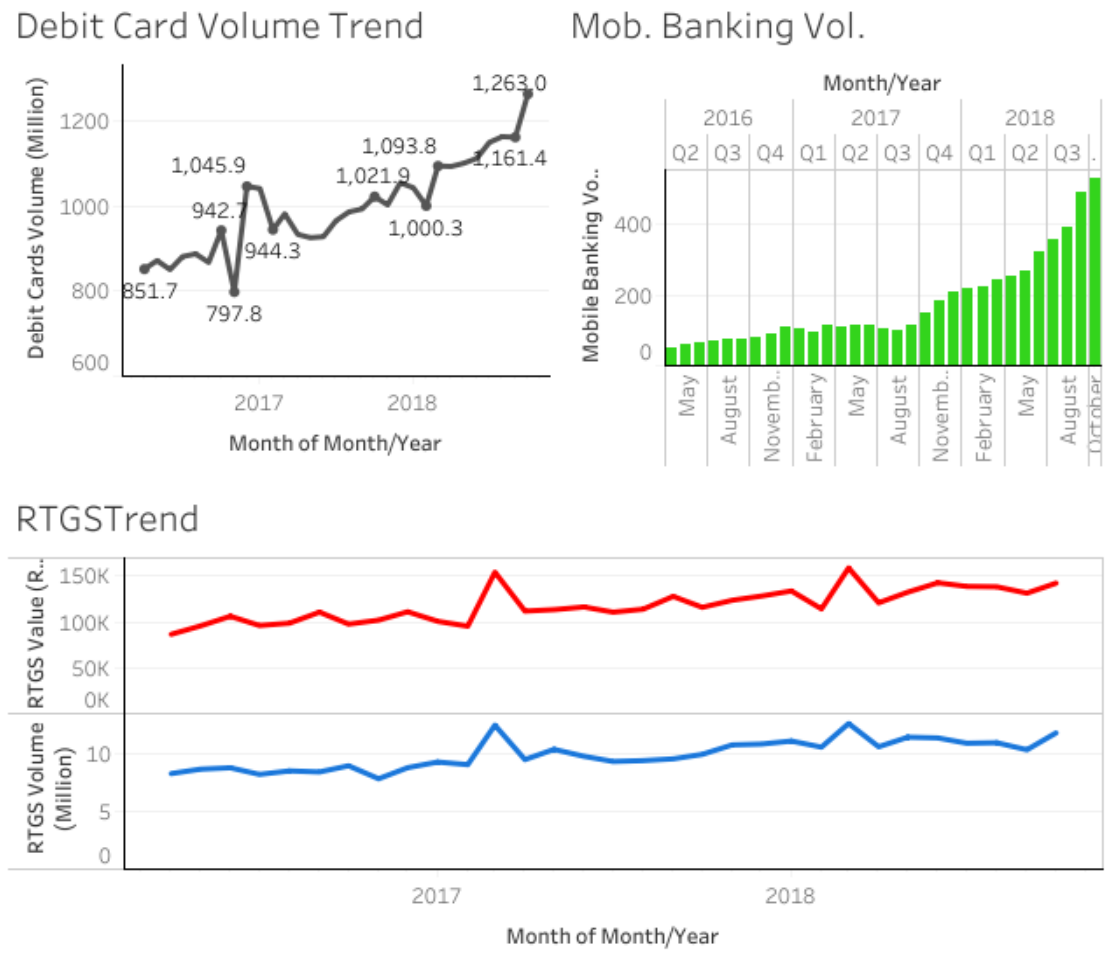

Fig. 6.1 Dashboard of Trends for Various Digital Modes of Transaction

Fig. 6.2 NEFT Transactions (Volume & Value Over The Years)

The trends for the digital modes of transactions like RTGS, NEFT, debit cards, mobile banking has **RISEN** over the period after demonetization, no doubt, but the rise in currency in circulation over the same period is a contradiction to the goal of digitalization.

Finally, let us observe the following graph:

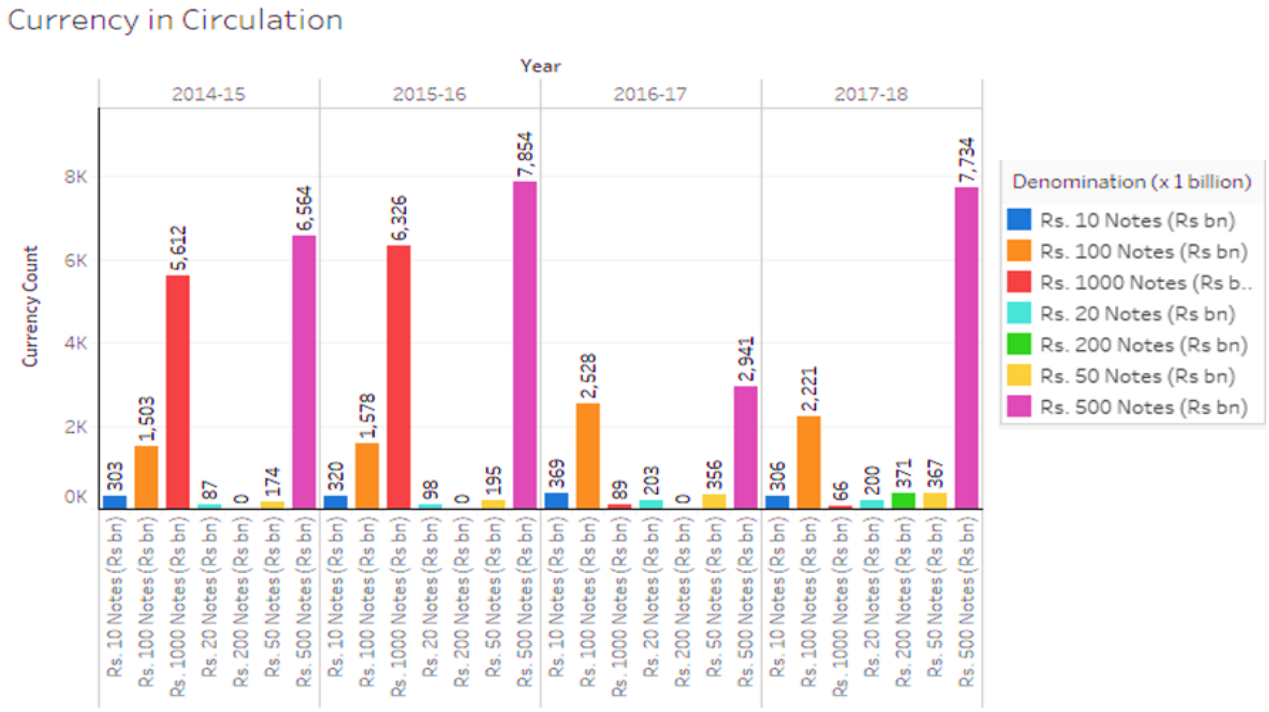

Fig. 6.3 Count of Denominations in Circulation Over The Years

The above figure shows the variation in the count of currency produced for different denominations between the years 2014-15 and 2017-18.

INFERENCES:

- The count of denominations of ₹50, ₹100 & ₹500 (the most common denominations in usage by the public) has been increasing continuously over the years. The volume of digital transaction via different modes is also increasing over the years.
- There is the contradiction between the two facts as mentioned in the above inference. If the digital transactions have increased, then the count of

denominations of currency should go down gradually over the years, but it has not happened. Consequently, there is more cash in circulation among the people than it was during the period of demonetization.

- In view of the above inference, why is there an increase in the currency with public and what does it signify? As mentioned in Chapter 1, the Aadhaar number has never been verified or audited to confirm the identity, address or even existence of a real person associated with the number. This means that the existence of ghosts (non-existing persons), fakes (real persons with fake identities) and duplicates cannot be denied. The use of the UID number as the basis for KYC, therefore, allows the creation of bank accounts for ghosts, fakes and duplicates. In other words, there are virtual customers of a large number of bank accounts.
- Now, if a ghost, fake or duplicate account can be created, then it is certain that black money is still present there in the system in such accounts. You can never trace the source of such amount of money back to its actual depositor or withdrawer as the identity associated with a particular Aadhaar number cannot be verified. The AEPS (Aadhaar Enabled Payment Systems) modes of transaction, hence, cannot be relied for authenticity.
- In light of this, we can say that the black money has only changed the garb to ***digital black*** & the goal of demonetization to curb the black money problem has not been reached.

2. Does the data provide spending pattern of an Indian or simply spending? Does the data distinguish individual deposits or withdrawals from those of corporations?

The dataset provided by the Reserve Bank of India does not distinguish between the deposits i.e. it does not clarify whether the deposit has been made by an individual or a corporation. Though there are deposits and credits data available for scheduled commercial banks till Mar 2018, it still doesn't distinguish between an individual deposit and a corporate entity's deposit. The

following table has been obtained from DBIE (Database of Indian Economy) website of the RBI:

(Amount in ₹ Million)

BANK GROUP	No. of Offices	DEPOSITS		CREDIT	
		No. of Accounts	Amount	No. of Accounts	Amount Outstanding
	1	2	3	4	5
PUBLIC SECTOR BANKS	92,362	1,433,758,420	76460372.1	88,963,657	55432609.0
	(65.1)	(75.0)	(66.9)	(45.2)	(63.2)
FOREIGN BANKS	284	4,354,049	4765325.5	5,632,825	3678303.4
	(0.2)	(0.2)	(4.2)	(2.9)	(4.2)
REGIONAL RURAL BANKS	21,805	238,114,494	3911215.6	24,985,370	2552521.3
	(15.4)	(12.5)	(3.4)	(12.7)	(2.9)
PRIVATE SECTOR BANKS	26,198	233,799,658	29037102.6	69,664,129	25670374.0
	(18.5)	(12.2)	(25.4)	(35.4)	(29.3)
SMALL FINANCE BANKS	1,260	1,476,994	170493.5	7,731,119	335918.2
	(0.9)	(0.1)	(0.1)	(3.9)	(0.4)
ALL SCHEDULED COMMERCIAL BANKS	**141,909**	**1,911,503,615**	**114344509.4**	**196,977,100**	**87669725.8**
	(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**

Table 6.2 Deposits & Credits of Scheduled Commercial Banks

Next, we have the consumer spending (in ₹ million) data as follows:

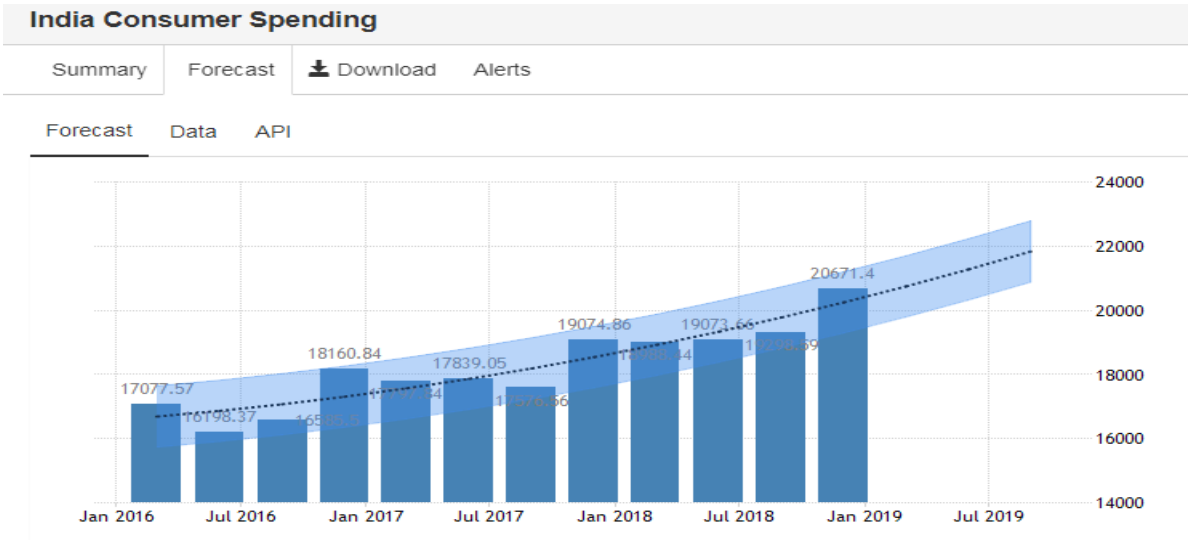

Fig. 6.4 Consumer Spending

Data about only the overall consumer spending is present at the moment. We cannot identify the spending pattern in more granularity unless we have data about the same on weekly or monthly basis. We need to consider festival seasons too for that.

3. Does the dataset reflect anything about increase or decrease in prosperity (or per-capita income) of the average Indian citizen?

- Even though the consumer spending, digital transactions and cash with public - all have increased, we are still in dark about the prosperity of the common citizen. The cash with public has increased but most of the accounts in which cash has been deposited in, cannot be verified for the authenticity of the person associated with that account (*due to using Aadhaar as KYC document*). One cannot tell if the money with the banks belongs really to 10 different persons or only one person with fake accounts in different banks.
- The various government schemes of employment have budgets allocated to them which is to be disbursed as salaries to the people employed under those schemes. Due to a dubious ID like Aadhar taken as KYC for opening bank account, one can never be certain if the account in which the salary is being credited is a genuine account or a *benami* account. In other words, where is the money allocated to such employment schemes actually going? That is the real concern to be addressed.
- Rise in transactions (digital or otherwise) is no guarantee of the trend in per capita income of the common man.

CHAPTER 7

RETROSPECTION & REMEDIES

Let us get back to some facts released by the RBI about the demonetization few months after it was implemented in Nov 2016.

1. The Reserve Bank of India (RBI) came out with its annual report giving a balance-sheet of the implemented demonetization. Of Rs.15.41 lakh crore demonetized currency notes of Rs.500 and Rs.1000 denominations, only Rs.10720 crore did not reach to the banks or the RBI.

2. This means only 0.7 per cent of demonetized currency notes were junked in the exercise. The initial expectation of the government was that approximately Rs.3 lakh crore of demonetized currency notes would not come back to the banking system, thus shedding the substantial weight of black money. While announcing demonetization on November 8 in 2016, Prime Minister Narendra Modi had outlined three broad objectives to fight black money, corruption and terror funding. These objectives have always been debatable for the lack of accurate verifiable data.

3. **Money In Market Post-Demonetization**: Before demonetization, India's money market had the overall circulation of banknotes worth Rs17.97 lakh crore on November 4, 2016. The banned bank-notes constituted 86.4 per cent of the total money in circulation. Today, according to the RBI, overall banknotes in circulation are worth Rs 18.03 lakh crore (March 2018). This means the volume of currency in circulation is 9.9 per cent more compared to March 2016-level.

4. The share of high denomination currency notes was 86.4 per cent at the time of demonetization. The RBI says that the share of the denominations of Rs500 and Rs2000 notes is 80.6 %. This indicates a 5.8% increase in the use of small denomination currency notes.

The issue of black money grows in proportion to the currency in circulation with public increases. Unverifiable *benami* or ghost accounts, fake accounts etc. store money which cannot be traced to a genuine person unless he/she has opened the account NOT by submitting Aadhaar (UID) as a document.

When you link your UID number to your bank accounts, your bank seeds it with the National Payments Corporation of India (NPCI), a non-government Section 8 company under the Companies Act, 2013 (*earlier, Section 25 of the Companies Act of 1956*). The NPCI overwrites the account number associated with your UID with the latest account number you associated with your UID number. If you received money into your SBI account seeded with your UID number and later linked your HDFC account with your UID number, you have made the money transfer untraceable. This can allow multiple accounts to receive money without being traceable by simply associating them transiently with the same UID number.

When you create a Virtual Payment Address (VPA) using NPCI's Unified Payment Interface (UPI), you anonymize your money transfers. Using the VPA your transactions will not reveal your account number to the parties receiving your payments. So money you transfer from your VPA to yourself (or any other person) cannot be traced back to you.

Mobile wallets allow you to receive money into your mobile wallet account. Mobile wallets need a mobile number. As long as you can obtain SIM cards you can charge each with up to Rs10,000 without needing to do any KYC and Rs1,00,000 if you do a KYC. If your mobile number doesn't identify you, your money transfers will not be traced back to you. If you used a ghost, fake, duplicate or third persons UID number to

obtain a SIM card, it does not trace back to you. Unfortunately, TRAI (Telecom Regulatory Authority of India) has been using UID numbers to do KYC for issuing SIM cards. This is a grave matter of concern if the primary objective of demonetization i.e. wiping out the black money problem, is to be said to be achieved successfully.

POSSIBLE SOLUTIONS:

1. **Elimination of Ghost Accounts:** The government needs to eliminate virtual or *benami* accounts. All UID based accounts need to be frozen till they can be confirmed as legitimate accounts of real people through pre-UID KYC with no ID or address proof obtained by using UID numbers. This would be a huge task for the government but in order to tackle the black money (or, now, digital black), something along the line of this is the need of the hour.
2. **Termination of Payment Systems Providing Anonymity:** Next, the government needs to end all payment and settlement systems, digital wallets and payment interfaces that create virtual addresses or anonymize the payer or payee. Digital transfers should be through NEFT or RTGS as the records of such transactions can be verified.
3. **Making Digital Transaction a Choice, Not Diktat:** Transacting digitally should not be a state dictate. Eliminating the choice is exclusion of those who cannot or do not wish to be digital. In a country with 70% people living in rural India, 95% of who are unbanked, and less than 9% of who have access to internet, digital banking is exclusion of the people. Even in urban India, mobiles experience call drops, their data plans don't work, and complaints don't get addressed. Furthermore, there is no constitutional requirement to become a digital republic.

CHAPTER 8

CONCLUSION

Anonymous or untraceable money transfers are considered by bankers as money laundering. Money laundering is used to deposit or transfer black money that may have arisen from corruption, illegal trade or avoidance of tax during transactions.

Digital platforms that anonymize the payments made into bank accounts, accumulate black wealth and hide black income. These platforms allow the income to stay out of the tax radar as it is distributed across multiple bank accounts linked with different identities. These platforms accumulate black wealth as they store the operators' black income and make it indistinguishable from white money in other bank accounts.

Digital platforms offer masking, scale, automation and remote operations, something cash cannot ever provide. It is, therefore, a dream come true for black money hoarders, terrorists and organized criminals. The combination of virtual accounts and anonymizing money transfers creates unprecedented opportunity to launder and hide black money.

Going digital, therefore, does not enforce the Prevention of Money Laundering Act or do away with the responsibilities under the Payment and Settlement Systems Act. It does not automatically ensure that the provisions of the Income Tax Act, Central Excise Act, Central Sales Tax, Customs Act, Service Tax Act, Value Added Tax acts, Property Tax Acts, Road Tax, Toll Tax etc. are complied. It does not eliminate black money.

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