Demonetisation 2016 and Its Impact on Indian Economy and Taxation

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DEMONETISATION 2016 AND ITS IMPACT ON INDIAN ECONOMY AND TAXATION

Pratap Singh

Abstract

Demonetisation is a process in which the government withdraws legal tender status of currency issued by it. The first demonetisation happened on 12th January, 1946 and the second on 16th January, 1978. The demonetisation 2016 is the third such decision which took place on 8th November, 2016, in which Rs. 1000 and Rs. 500 currency was demonetised, which was 86 per cent of the total currency under circulation. The present study attempts to understand the scope and reasons of demonetisation and its impact on various sectors of the economy and on taxation. The study is descriptive in nature and uses secondary data taken from various sources like the Reserve Bank of India, Ministry of Finance and other sources. The study concludes that demonetisation had both positive and negative impacts.

Introduction

Demonetisation 2016 was a decision of far-reaching consequences and was taken with a view to clean up the Indian economy and to nudge it towards greater formalisation and digitisation. It was the third such decision; the first two being taken on 12th January, 1946 and 16th January, 1978 with partial success. It was among a series of steps taken by the government to check black money, corruption, terror funding and to expand the tax base and tax collections. The decision to demonetise the high value currency notes of denomination Rs. 1000 and Rs. 500 valued at Rs. 15.44 trillion, which constituted 86.9 per cent of the total currency under circulation, was announced by the Prime Minister himself, considering the importance of the matter. This was apparently guided by the aim of reaping its enormous potential medium-term benefits in the form of reduced corruption, greater digitisation of the economy, increased flow of financial savings and greater formalisation of the economy.

It is believed that the action was necessitated as the currency under circulation was at Rs. 18.54 lakh crore, about 12 per cent of GDP, was too huge and unsustainable and needed reduction, besides a major portion was being used towards real estate transactions and luxury goods like jewellery. The government also hoped that out of the demonetised currency, a substantial amount may not return to the banking system and in that situation, the liability of RBI would be reduced and it would then have to give dividend of equivalent amount to the government, which could be used for social welfare purposes. The public was given time till 31st December, 2016 to deposit these currency notes in their bank accounts, so that this cash could lose anonymity.

Simultaneously, the government also launched a new Income Disclosure Scheme called as IDS-II or the Pradhan Mantri Garib Kalyan Yojana; the first one (IDS-I) ended on 30/09/16 with considerable success, in which the government was able to mop up Rs 65,750 crore of undisclosed income. The purpose of IDS-II was to give another opportunity to the persons having black money to come out clean and disclose ill-gotten money, albeit at a much higher tax rate of 50 per cent, which

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included tax of 30 per cent, Pradhan Mantri Garib Kalyan cess @ 33 per cent and penalty @ 10 per cent, as against a marginal tax rate of 30 per cent and tax rate of 45 per cent under the IDS-I. The new IDS was notified along with other provisions of the Taxation Laws (Second Amendment) Act, w.e.f. 09/011/2016 and it was made clear to the people that if they did not disclose black income even then, they would have to pay a much higher penalty @ 75 per cent apart from facing prosecution on such black income detected later. The government however insisted that the mere act of depositing money in a bank account doesn't convert black money into white money and that people will have to come out clean on the sources and pay taxes wherever it was unexplained.

**Literature Review**

Reserve Bank of India in its report ‘Macroeconomic Impact of Demonetization - A Preliminary Assessment’ in March, 2017 has done an impact assessment of the demonetization drive on different sectors of economy and GDP growth. It says that the informal sector, small and medium enterprises were greatly affected by demonetization and that it caused a decline in GDP growth and employment generation and manufacturing took a huge hit because of lack of demand. The report says that agriculture also suffered because of lack of funds for purchase of seeds and fertilisers, the key inputs, as also payment to labour which happens mostly in cash. The report, however, says that banks were flush with funds resulting in reduction in interest rate on deposits as also on lending and the financial institutions like LIC and mutual funds had been beneficiaries of the drive where deposits increased considerably. There had also been an increase in digital transactions during this period, indicating formalization of the economy. However, GDP growth decelerated to 5.7 per cent.

Abhani (2017) found that Demonetisation 2016 would prove to be more successful than the earlier two demonetisation exercises undertaken by the government. He found that people were increasingly using an online mode of payments. He also concluded that though demonetisation failed to grab the entire black money, it created fear in the minds of hoarders of black money.

Muthulaxmi (2017) concluded that when money (currency) is withdrawn from the system, the country will not get benefitted in the short term. She said that though it had a serious impact on corruption, hawala and counterfeit currency, it also had an adverse impact on various sectors of the economy.

Neeraj (2017) analysed the impact of demonetisation on black money in India and concluded that demonetisation only had a backward effect on black money and it hit only the black cash available and it never impacted the future generation of black money. He, however, stated that it created awareness among the people and also created fear among the black marketers.

Sumathy and Savitha (2017), analysed the impact of demonetisation on the agriculture sector and found that it impacted agriculture, especially small farmers and fruit and vegetable vendors, adversely.

Shah and Yousuf (2017) concluded that demonetisation 2016 was a major step in combating corruption, terror funding and black money. They further concluded that the decision was taken hurriedly without enough preparation, which caused misery to the people. They said that without
printing new currency, 86 per cent of old currency was withdrawn, which had a devastating effect on the economy.

Shukla et al (2018) concluded that people support any steps taken by the government to eliminate black money, corruption, terror and naxal financing.

Tandon and Kulkarni (2017) analysed the impact of demonetisation on black money and corruption and concluded that the drive checked tax evasion and improved the tax collections.

Veerakumar (2017) stated that demonetisation came as a big shock. He further said that it was done to counter the problems of tax evasion, counterfeit currency and financing of terror activities.

**Objectives of the Study**

In view of the discussion in foregoing paras, the following are the objectives of this study:

1. To understand the scope and reasons of demonetisation
2. To examine the positive and negative impacts of demonetisation on various sectors of the economy.

**Research Methodology**

The study is descriptive in nature and attempts to explore the impact of demonetisation on various sectors of economy like agriculture, manufacturing, service sector, and issues like tax evasion, combating black money, counterfeit currency, hawala transactions, terror financing, formalisation and digitisation of economy etc. The study uses secondary data available from Reserve Bank of India publications, Union Finance Ministry data and statistics of Central Board of Direct Taxes. The reports of various experts and findings of other researchers have also been looked into.

**Reasons for Demonetisation**

The demonetisation 2016 decision was taken by the government in consultation with the RBI to tackle:

i) **Black Money**: Black money is available in various forms like cash, investment in property and real estate, luxury goods like jewellery or with foreign currency dealers and private financiers. The target was to bring black cash out so that it can lose its anonymity and it can be mainstreamed. Also, once such cash is out, it cannot be invested in clandestine ways, apart from yielding significant taxes in the process. Black money has become a menace for society and the country is not getting its legitimate taxes which could be used for social welfare.

ii) **Counterfeit Currency**: Counterfeit currency or fake currency was a big problem which was being promoted by our foreign adversaries with a view to weaken the Indian economy. Once old currency was withdrawn, the counterfeit becomes useless. It cannot be deposited in the banks either.

iii) **Terror Financing**: Terror financing for nefarious activities in J&K and maoist and naxalite activities in the central region was being done largely in cash. Once the currency was demonetised, this money kept by such groups would become useless and could not be used in such acts.

iv) **Corruption**: Corruption in public life, illegal gratification for helping someone, is also largely dealt in cash. Once the cash stream is gone, such acts of corruption automatically come down. Also, cash
kept by such persons becomes useless and if the same is deposited in the banks, it loses anonymity and the person may have to pay taxes on the said amount.

v) **Digitisation and Formalisation of the Economy:** A large section of the Indian economy was still being run on the cash system, which does not get captured by the tax department as it does not leave any trail. Therefore, the government thought about promoting digitisation and formalisation of economy through online transactions, e-wallets, various payment instruments like PayTM, Rupay cards and BHIM app for payments. The beauty of these instruments is that the entire economic activity gets captured. It reduces tax evasion and would improve tax collection. The purpose was also to reduce the level of currency under circulation from about 12 per cent to 9 per cent, which is more sustainable.

It is said that the government also hoped that a portion of the demonetised currency would not return to the banking system and in such a condition, the RBI would have to give dividend to the government of an equivalent amount as its liability to that extent would cease and such amount may be used by the government for social welfare purposes.

**Scope of Demonetisation**

Under demonetisation, entire currency notes of denomination of 1000 and 500 of value 15.44 lakh crore were withdrawn by the government. This was about 86.5 per cent of the currency under circulation and immediately caused a cash crunch and liquidity crisis. The decision was implemented from 8th November, 2016 and seeing the importance of the decision, was announced by the Prime Minister himself. The people were advised to deposit the cash available with them in their bank accounts, till 30th December, 2016 and if they failed to do so, it would become illegal to keep any such old currency. A small amount of Rs 2500 per person was allowed as exchange with new currency for emergency needs, which was later reduced to Rs 2000. There were curbs on withdrawal from the bank accounts which was limited to Rs. 10,000 per person per week. Also, certain payments like hospital and pharmacy, electricity and house tax bills were allowed to be paid in old currency for some time. There were long queues before the banks and people faced a lot of difficulties in meeting their day-to-day expenses and many even lost their lives.

**Impact of Demonetisation**

The full impact of demonetisation will be seen in a few years to come, but it had a significant immediate impact on the tax base and on tax collections as also caused a tremendous increase in digital transactions and caused the formalisation of the economy. It is seen that out of a total 15.44 lakh crore invalidated currency, 15.28 lakh crore (99 per cent) has returned to the banking system, leaving aside only 16,050 crore. Thus the government’s theory that a significant portion would not return and its hope of getting some dividend from the central bank was shattered and on the contrary, the RBI paid much lesser dividend of only Rs 32,000 crore in 2016-17, which was much less than the Rs. 52,000 crore paid in 2015-16 to the government because of extra provisioning and expenses on account of the implementation of demonetisation including printing of new currency and its distribution. The GDP growth also declined considerably and the SME sector suffered a lot because of the liquidity crunch,
resulting in job losses. The agriculture sector where transactions mostly happen in cash also exhibited sluggishness. It was also seen that there was marked decrease in terror activities and the naxalite problem during demonetisation period. These issues are examined in greater detail as follows:

i) Impact on Expanding the Tax Base
Demonetisation had a significant positive impact on the tax base and brought in 9.1 million new taxpayers in 2016-17 and 12.8 million in 2017-18. This increase is largely attributable to demonetisation and the enforcement drive and Operation Clean Money launched by the Income Tax Department post demonetisation. It may be stated that only 3.1 million new taxpayers were added in 2014-15 and 3.6 million in 2015-16. Therefore, the figure of 9.1 million and 12.8 million new tax payers in 2016-17 and 2017-18 is considerably higher and is attributable to demonetisation. Though there may be an impact of other initiatives taken by the government like rolling out GST in 2017 and improved administration by the tax department, yet the major factors remain demonetisation, cash deposited in the bank accounts post demonetisation and bringing such people in tax net by the tax department. It is believed that the number of new taxpayers have increased further by 8.4 million in 2018-19, though official figures are yet to be released by the CBDT. In fact, the number of tax returns filed as on 31.03.17 were 5.58 crore and that as on 31.03.18 were 6.86 crore. The total number of returns (electronic + paper) filed during the entire Financial Year 2016-17 is 17.3 per cent more than the returns filed during FY 2015-16. In fact for FY 2016-17, 1.26 crore new taxpayers (return filers + non-filers making tax payments) were added to the tax base as against the addition of about 3 - 3.5 million new tax payers added in earlier years, which shows a significant impact of demonetisation on the tax base. The number of permanent account number (PAN) allotments also increased from 100,000 earlier to 200,000 a day during this period, taking the figure in the PAN directory to 300 million. The rise in figures of return filers (Table 1) amply demonstrates the positive impact of demonetisation and the government’s resolve to fight the menace of black money and to eradicate tax evasion in a non-intrusive manner.

Table 1: New Taxpayers added Post Demonetisation

<table>
<thead>
<tr>
<th>Year</th>
<th>Increase in income tax returns filed</th>
<th>New Taxpayers added</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15</td>
<td>11.78%</td>
<td>31 lakh</td>
</tr>
<tr>
<td>2015-16</td>
<td>9.9%</td>
<td>36 lakh</td>
</tr>
<tr>
<td>2016-17</td>
<td>17.30%</td>
<td>91 lakh</td>
</tr>
<tr>
<td>2017-18</td>
<td>24.7%</td>
<td>128 lakh</td>
</tr>
</tbody>
</table>

Source: CBDT Statistics 2018

ii) Impact on Direct Tax Collections
The effect of demonetisation is clearly visible in the growth in direct tax collections, especially the collections under the head personal income tax during this period. It is seen that advance tax collections under personal income tax showed a growth of 41.79 per cent till August 2017 over the corresponding period in F.Y. 2016-2017. Collection of self-assessment tax also showed a growth of 34.25 per cent over the corresponding period in F.Y. 2016-2017, which has come on account of increased taxes paid by the
people post demonetisation with a view to take care of cash deposited in the bank accounts. As the due date of individual returns was 05/08/2017, a lot of taxes have been paid by the people under self-assessment tax before filing of tax returns, which is shown in Table 2 given below. But even after payment of taxes, these people are not safe from action by the tax authorities.

**Table 2: Growth in Direct Tax Collections**

<table>
<thead>
<tr>
<th>Head</th>
<th>Growth in direct tax collections 2016-17 till August 2016</th>
<th>Growth in direct tax collections 2017-18 till August 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth in Advance tax of Personal Income tax</td>
<td>22.24%</td>
<td>41.79%</td>
</tr>
<tr>
<td>Growth in Self Asstt. tax of Personal Income tax</td>
<td>18.76%</td>
<td>34.25%</td>
</tr>
<tr>
<td>Growth in total Direct tax Collections</td>
<td>14.54%</td>
<td>17.60%</td>
</tr>
</tbody>
</table>

The direct taxes collected over the last six years and growth is presented as Figure 1 and Chart 1 as under:

**Figure 1: Direct Tax Collections in India**

![Total Direct Tax in Crores]

**Source**: Administrative Handbook of Income Tax Department, 2018

**Chart 1: Growth in Direct Tax Collections in India**

![Year to Year Growth]

Compiled from CBDT Statistics 2018

Demonetisation thus had a significant impact on the drive against black money in the form of unaccounted cash and in strengthening the tax administration’s effort to check tax evasion. The direct effect was the amount of black money unearthed from searches and surveys during the demonetisation
period of Rs. 16,000 crore; however, its indirect impact was tremendous in the form of greater voluntary compliance by the people. Demonetisation thus helped in adding more people to the tax net. The Income Tax Department also set in motion Aadhaar-PAN linkage that ultimately led to the recording of black money under multiple PAN by a single person. Thus the government’s steps for transparency, based on Aadhaar identification, will be smooth, given the awareness of the people about the need to create a tax compliant society.

iii) Operation Clean Money and Enforcement by Income Tax Department

Post demonetisation, the Income Tax Department launched Operation Clean Money (OCM) on 31st January, 2017 with a view to analyse the data of cash deposited in the bank accounts and to identify the cases through a data mining software, where such deposits were not in sync with their tax returns. The preliminary analysis of data by the CBDT revealed that during the demonetisation period from 8 November, 2016 to 30 December, 2016, about 36 per cent of cash depositors were not filing tax returns, while 40 per cent of them were running proprietorship businesses, while only 2 per cent depositors were corporate tax payers but deposited about 14 per cent of the total cash. The salaried people constituted about 6.7 per cent of total depositors but their total cash was only about 4.3 per cent. The average cash deposit size varied from 4 lakh in case of small businesses and individuals to Rs. 42 lakh in the case of non-corporate tax payers to Rs. 1.37 crore in the case of corporates, which is shown in Table 3. It can be seen from Table 3 that major cash deposits were by the small businesses and proprietorship concerns to the extent of about 56 per cent, while the corporates constituted about 22 per cent and individuals and others formed the remaining. It may be seen that 12.5 per cent of such depositors were not filing even the tax returns which were tapped by the Income tax department during the years 2016-17 and 2017-18.

Table 3: Segment-wise Cash Deposited During Demonetisation

<table>
<thead>
<tr>
<th>Tax Payer Segment</th>
<th>PANs</th>
<th>Cash Deposits</th>
<th>Average Deposit per PAN (in Rs lakh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proprietor (ITR 4S)</td>
<td>14.7%</td>
<td>6.1%</td>
<td>4.9</td>
</tr>
<tr>
<td>Proprietor</td>
<td>26.6%</td>
<td>35.4%</td>
<td>15.9</td>
</tr>
<tr>
<td>Non-Corporate</td>
<td>4.1%</td>
<td>14.4%</td>
<td>42.3</td>
</tr>
<tr>
<td>Corporate</td>
<td>2.0%</td>
<td>22.6%</td>
<td>137.4</td>
</tr>
<tr>
<td>Non-Business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaried person</td>
<td>6.7%</td>
<td>2.4%</td>
<td>4.3</td>
</tr>
<tr>
<td>Partners</td>
<td>1.6%</td>
<td>1.3%</td>
<td>9.6</td>
</tr>
<tr>
<td>Other Individual/HUF</td>
<td>7.8%</td>
<td>2.8%</td>
<td>4.3</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Profit Organisation</td>
<td>0.5%</td>
<td>1.8%</td>
<td>44.40</td>
</tr>
<tr>
<td>Government</td>
<td>0.1%</td>
<td>0.7%</td>
<td>161.5</td>
</tr>
<tr>
<td>No Return Filed</td>
<td>36.1%</td>
<td>12.5%</td>
<td>4.1</td>
</tr>
<tr>
<td></td>
<td>100.0%</td>
<td>100.0%</td>
<td>11.9</td>
</tr>
</tbody>
</table>

Source: CBDT tax Statistics, 2018 & Press release dated 17/07/2018
Besides, it is noticed that a majority of depositors (about 10 million) deposited cash below 10 lakh with an average deposit size of 5.03 lakh and only 462 people deposited more than 25 crore, as is evident from Table 4.

Table 4: Account-wise Cash Deposited in Demonetisation

<table>
<thead>
<tr>
<th>Cash deposit range</th>
<th>No. of bank accounts</th>
<th>Average deposit size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rs. 2 lakh - 10 lakh</td>
<td>10 million</td>
<td>5.03 lakh</td>
</tr>
<tr>
<td>Rs. 10 lakh - 1 crore</td>
<td>0.9 million</td>
<td>25.06 lakh</td>
</tr>
<tr>
<td>Rs. 1 crore - 25 crore</td>
<td>0.1 million</td>
<td>2.31 crore</td>
</tr>
<tr>
<td>More than 25 crore</td>
<td>462</td>
<td>32.85 crore</td>
</tr>
</tbody>
</table>

Source: CBDT Statistics 2018

The preliminary analysis of cash deposit data also revealed that the corporates which account for 2 per cent of the reported PAN have a share of 22.6 per cent in the reported cash transactions. Proprietors (individual running business) have a share of 41.5 per cent in the reported cash transactions and taxpayers doing business have a share of 78.4 per cent in the reported cash transactions. It was identified that 36.1 per cent of the PAN holders in the reported cash transactions did not file return of income. In the first phase of OCM, 18 lakh suspect cases were identified through use of data analytics where cash transactions did not appear to be in line with the tax profile of depositors. Online verification in these cases was enabled and done quickly in a record time of four weeks. The scale of the operation may be gauged from the fact that the responses of 9.72 lakh persons in respect of 13.33 lakh accounts involving cash deposits of around Rs.2.89 lakh crore, as per pre-defined parameters on sources of the cash deposits, was captured by the Income Tax Department. Online queries were raised in more than 35,000 cases and online verification was completed in more than 7,800 cases. In phase 2 of the Operation Clean Money, enforcement actions were being taken in high risk cases and taxpayer engagement through a dedicated website in medium risk cases and close monitoring in low risk cases. There were 100,000 persons identified under the high risk bracket, wherein the department has initiated enforcement action through verification, search, survey and scrutiny. For 754,000 persons in the medium risk category, the tax department has started a targeted campaign communicating with the assessee and explaining the findings in specific cases, so that similarly placed persons can foresee the consequences. For 595,000 persons in low risk and 341,000 persons in very low risk category, the department will monitor tax compliance in due course. Furthermore, the department has also identified 371,000 new accounts relating to 158,000 taxpayers who made partial declaration of accounts and amounts in responses under phase 1 of Operation Clean Money. The exercise has also unearthed large number of persons and clusters having suspect transactions. These include about 14,000 properties of more than Rs. 1 crore each, where persons have not even filed income tax returns. Actions in all these cases is being taken by the officers of the Income Tax Department, as denoted in Table 5.
Table 5: Risk Assessment of Cash Deposits

<table>
<thead>
<tr>
<th>Category</th>
<th>Persons identified</th>
<th>Action Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Risk Category</td>
<td>100,000</td>
<td>Intensive action- searches, surveys</td>
</tr>
<tr>
<td>Medium Risk Category</td>
<td>7,54,000</td>
<td>Targeted communication and guidance through website</td>
</tr>
<tr>
<td>Low Risk category</td>
<td>5,95,000</td>
<td>Monitoring tax compliance</td>
</tr>
<tr>
<td>Very Low Risk category</td>
<td>3,41,000</td>
<td>Monitoring tax compliance</td>
</tr>
</tbody>
</table>

Source: CBDT Statistics 2018

During the period from November 2016 to March 2017, the Income Tax Department also stepped up its enforcement actions and conducted searches on 1,152 groups, which revealed undisclosed income of Rs 16,398 crore, showing tremendous increase in disclosures over the previous years. The value of assets seized also increased to Rs 1,469 crore, of which Rs 636 crore was in cash. Tax surveys were also conducted in 12,520 cases which led to the detection of undisclosed income of Rs 13,920 crore as exhibited in Table 6.

Table 6: Searches and Surveys Carried out in Demonetisation Period

<table>
<thead>
<tr>
<th></th>
<th>No. of actions in 2015-16</th>
<th>No. of actions in 2016-17</th>
<th>% age increase</th>
<th>Assets valuables seized in 2015-16</th>
<th>Assets valuables seized in 2016-17</th>
<th>% age increase</th>
<th>Undisclosed income detected in 2015-16 cr</th>
<th>No. of actions in 2015-16 cr</th>
<th>% age increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Searches</td>
<td>447</td>
<td>1152</td>
<td>158%</td>
<td>712</td>
<td>1469</td>
<td>106%</td>
<td>11266</td>
<td>15496</td>
<td>38%</td>
</tr>
<tr>
<td>Surveys</td>
<td>4222</td>
<td>12520</td>
<td>183%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9654</td>
<td>13920</td>
<td>44%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>712</td>
<td>1469</td>
<td></td>
<td>20920</td>
<td>29416</td>
<td>42%</td>
</tr>
</tbody>
</table>

Source: CBDT Statistics 2018

It is gathered that on account of demonetisation, the tax base has expanded to 6.86 crore return filers and effective tax payers of 8.2 crore (including the cases where TDS is made). Besides, tax collection figure touched 10.3 lakh crore as on March 2018. It is expected that there will be significant increase in the tax collections in subsequent years as the unaccounted cash has come to the mainstream of economy. Further, because of 360 degree profiling of tax payers and roll out of GST, it will be very difficult for anybody to conceal their actual transactions and consequently avoid or evade the taxes.

iv) Reduction in Currency under Circulation

One of the welcome changes in the demonetization programme was the inseparable link between demonetization and digitalization of transactions. Inarguably, demonetization encouraged people to embrace digital methods of payment. Though its pace has been slow, as there were several hindrances in digitalization, which certainly are getting reduced as newer technology platforms like PayTM, RuPay and Bhim app have been brought in, but demonetization has certainly nudged us towards a cashless society with a bang. The popularization of digital payment methods, instruments and institutions prove that demonetization has facilitated digital transactions. Among the more sophisticated groups, online payments have become common. Demonetization has also reduced the informal economy with the
increased use of digital payments. Pre-demonetization, the currency under circulation was Rs 18.4 lakh crore, about 12 per cent of the GDP, and was too high and unsustainable. Out of this majority, about 15.44 lakh crore constituted Rs 500 and Rs 1000 notes which were invalidated, leaving only about Rs 3 lakh crores, which gave a shock treatment to the businesses and affected normal business transactions. The economy was therefore remonetized with new Rs.2000, Rs. 500 and Rs. 200 notes. However, even after demonetization, the total currency under circulation has come down considerably to Rs 15.32 lakh crore which is lower by over Rs 3 lakh crore before pre-demonetization and works out to about 9 per cent of GDP and appears to be a more sustainable level. This has helped in taming the inflation as well.

Chart 2: Currency in Circulation in India

![Chart 2: Notes in Circulation](image)

Source: RBI

The RBI data (Chart 2) however shows that the amount of currency with the public, which had stood at Rs 17.01 lakh crore just before demonetization was announced, is nearing its older levels. The currency level stood at Rs 15.33 lakh crore as on September 2017, after having reduced to a figure of Rs 7.81 lakh crore as of December 9, 2016, but it continued to be remonetized further. However, the fact remains that even the economy (GDP) is expanding, requiring higher currency levels.

v) Impact on Digital Transactions

In the demonetisation period, digital transactions have taken a huge leap and reached a peak of Rs.1,54,059 crore from a level of Rs. 97,554 crore in the pre-demonetisation period. The government has given it a big push and has announced new Aadhaar-linked apps, like BHIM app and other payment platforms like RuPay cards so as to make India less of a cash economy. However, it is noticed that despite all possible efforts, digital transactions have come down to Rs. 1,13,827 crore level, partly because of remonetisation. It is also seen that across states, digital transaction penetration is varying, which is over 24.5 per cent in southern states like Karnataka, Tamil Nadu and Andhra Pradesh, while it is less than 12 per cent in states like J&K, MP, Bihar and West Bengal. The all-India figures have also gone up from 9 per cent to 18 per cent in this period, showing greater formalisation of economy. This
will help in capturing even those transactions which were somehow not coming under the tax bracket and will thus improve the tax base and tax collections.

The total value of electronic transactions in November 2016 was Rs 94 lakh crore when demonetization was declared. This was increased to Rs 149.6 lakh crore in March 2017 but lost steam thereafter. In April, it came down to Rs 109.6 lakh crore, in July 2017 to Rs 107.3 lakh crore and in October 2017 to Rs 99.2 lakh crore, which was more or less the same level as was before demonetization, negating the government’s theory that demonetization improved digital transactions.

Looking into different modes of electronic transactions also exhibits a moderation in growth for different instruments. The most prominent of these instruments is mobile banking, where the volume of transactions has gone up from 72.3 million in November 2016 to 86.3 million in September 2017, but values have fallen below their older levels. The total value of mobile banking transactions has also come down from Rs 1.24 lakh crore in November 2016 to Rs 1.12 lakh crore in September 2017.

Both RTGS and NEFT transactions were the highest in March 2017, at Rs 123.37 lakh crore and Rs 16.29 lakh crore respectively, but thereafter came down to Rs 102.34 lakh crore and Rs 104.18 lakh crore respectively in September 2017. Steady growth has been only in Unified Payment Interface (UPI) like BHIM app, credit card transactions and Prepaid Payments Instruments (PPI), which includes mobile wallets.

However, most of these instruments had a very low base. Immediate payment services (IMPS) through mobile banking transactions have grown from 36.2 million to 82.9 million between November 2016 and September 2017, but a small fraction of established modes of payment like National Electronic Fund Transfer (NEFT). UPI, and PPI based payments, despite growing, still only accounted for Rs 5,290 crore, Rs 2,760 crore and Rs 3,235 crore worth of transactions in September 2017.

Therefore, it can be said that though most of the digital transaction modes had increased during the demonetization period, as the economy was remonetized, some of the instruments lost sheen. This may be firstly because people are still not very conversant with these modes and do not find it easy to pay through these mediums and secondly the costs charged by the banks and credit card companies etc. is quite high so these modes are not very economical. Most of all, security of transaction and misuse in process is also a threat. It is hoped that the government will try to address these glitches in months to come so as to make the Digital India campaign a real success.

**vi) Impact on Counterfeit Currency**

It is understandable that all the fake currency will not come to the Banking system as organised rackets would never ever come to a bank. However, the demonetisation period received an all-time high amount of fake currency, an increase of over 480 per cent in suspicious transactions post demonetisation. The banks collectively generated 400 per cent more suspicious transaction reports (STRs) at over 4.73 lakh such dossiers during 2016-17. The Financial Intelligence Unit (FIU), that analyses suspicious financial transactions pertaining to money laundering and terror financing as part of
the Union Finance Ministry establishment, reported that counterfeit currency transactions witnessed an increase by over 3.22 lakh instances during 2016-17. As per the RBI report, about Rs 410 crore counterfeit currency was detected in the demonetisation period. However, this figure does not indicate success or failure of the exercise as fake currency was not expected to return in its entirety nor is demonetisation a guarantee that fakes or newly floated currency will not be made.

vii) Impact on Corruption and Black Money

Curbing black money and corruption was one of the important objectives of demonetisation. There are no exact estimates of black money in India. However, it has been a serious problem since the very beginning, so much so that the Wanchoo Committee mentioned that black money is cancerous for India and it will ruin the economy. Global Financial Integrity (GFI) in its 2010 report mentioned that assets worth USD 462 billion were sent outside India on account of tax evasion and corruption. The National Institute of Public Finance and Policy in its 2012 report estimated the level of black money as per Table 7.

Table 7: Estimate of Black Money in India

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimate of Black money (in crores)</th>
<th>% age of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>9958-11,870</td>
<td>15-18</td>
</tr>
<tr>
<td>1980</td>
<td>20,362-23,678</td>
<td>18-21</td>
</tr>
<tr>
<td>1983</td>
<td>31,584-36,780</td>
<td>19-21</td>
</tr>
<tr>
<td>2012</td>
<td>&gt;10,00,000</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: NIPFP Report 2012

According to Transparency International, corruption is “the abuse of entrusted power for private gain.” Corruption has several dimensions, causes and effects. It is a fundamental problem with Indian politics and exhibits the moral decay of society. This problem is quite deep-rooted. Corruption has been quite prevalent in all walks of life, which takes several forms like bribe money, speed money etc. Corruption has paralysed most of the institutions in the country.

Demonetisation severely impacted the existing black money in the form of cash, which was either discovered by depositing it in the bank account when it loses its anonymity. Secondly, it could be destroyed when the owner destroys it rather than depositing it in the bank. There is also a third possibility where a hoarder may adjust it through illegal means either in new currency or some kind of investments. Therefore, the forward and backward effect of any policy action taken by the government needs to be examined. In that sense, demonetisation had only a backward impact as it destroyed or detected the existing black money in the form of cash. It could neither impact future generation of black money nor check its conversion into different forms like property investments etc.

The future of black money will therefore depend upon legal and legislative measures to be taken by the government in years to come. But one thing is sure: that it created a sense of awareness about black money among the masses and also created some kind of fear in the minds of black money hoarders.
viii) Impact on GDP growth

On the negative side, demonetisation had a huge adverse impact on GDP growth and employment in 2016-2018. The economy which was in recovery mode post elections and was growing at about 8 per cent in Q4 of 2015-16, steadily came down to 5.7 per cent in Q2 of 2017-18, which had a huge impact on fiscal deficit and spending of the government for social programmes. However, the slide in GDP growth is not solely attributable to demonetisation alone and rolling out of GST also may have had a significant negative effect on that. It is widely believed that both the major reforms should have been little more spaced by the government to avoid the negative fallout. It is expected that recovery in GDP growth will take at least a few more quarters. The growth in quarter on quarter basis is shown in Figure 2.

Figure 2: GDP Growth Quarter on Quarter

Compiled from RBI report 2017 and CBDT Statistics 2018

ix) Impact on Businesses

It is noticed that because of demonetization, small and medium businesses suffered a great deal, more so the informal sector, primarily because of lack of liquidity. It is seen that many small businesses closed down, affecting employment, and creation of new jobs got badly hit. The micro, small and medium-sized enterprise (MSME) sector, which is the backbone of the economy employing more than 80 million, where wages are largely paid in cash, was adversely affected by the demonetization move.

Unemployment has also been reported owing to decline in demand of various goods because of lack of cash liquidity. It is also found that even the organized manufacturing was adversely impacted as evident from the decline in the sales of fast moving consumer goods (FMCG) and automobiles in the months from November to January.

Further contraction in the manufacturing purchasing managers’ index (PMI) in December for the first time in 2016 and deceleration in export growth during November was also seen. As regards sales of consumer goods, the 2016 festival season was the best since 2012, coming as it did on the
back of a healthy monsoon and the 7th Pay Commission award to government salaried persons. It is gathered demonetization also impacted sales performance of the consumer durables industry. Manufacturers also cut down production due to rising inventories on account of lack of demand.

The adverse impact of demonetization on disposable incomes and hence on consumer spending resulted in slowdown in domestic demand for apparels and other end-products of textile industry. The impact was reportedly most severe for winter-wear retailers and manufacturers focused on the domestic market, who make a significant part of their annual sales during the period October-February. Although from the manufacturers’ end, shipments typically take place by September-October, pressure on sales in the retail space during the subsequent peak season had indirectly affected manufacturers. The new investment proposals dropped to 1.41 trillion in Q3 as against an average of 2.36 trillion in the preceding nine quarters and terms of new investment proposals, Q3 was the lowest in a decade. Some segments in the services sector also appeared to have been adversely impacted.

Production of cement, one of the main indicators for the construction sector, decelerated sharply in November, and contracted by 8.7 per cent and 13.3 per cent in December 2016 and January 2017 respectively. Sales of commercial vehicles - an indicator for transportation activity - also contracted by 11.6 per cent in November, 5.1 per cent in December 2016, and 0.7 per cent in January 2017, as against an average growth of 6.9 per cent during April-October 2016. In February, it increased by 7.3 per cent. Growth in sales of passenger vehicles also decelerated to 1.8 per cent in November and contracted by 1.4 per cent in December, but rebounded sharply to 14.4 per cent in January 2017 and expanded by 9 per cent in February. Organized real estate declined significantly after demonetization. While real estate prices reportedly held up, sales and new launches declined. According to Knight Frank India, demonetization created a real dent in the residential real estate sector, pulling back the last quarter trend of residential sales substantially across the cities. Two major components of the organized sector under services, viz; financial services and public administration, imparted significant resilience to the overall GVA growth momentum. The average growth of deposits and credit (a key indicator for financial services) remained largely unchanged after demonetization. In transportation, domestic air passenger traffic growth was robust at 22 per cent in November and 23.9 per cent in December and 25.6 per cent in January 2017. Service tax collections - a lead indicator for communication and other services - registered a growth of 43.9 per cent in November, but decelerated to 13.1 per cent in December and further to 12.1 per cent in January. However, there have been job losses in labor-intensive sectors like textiles, garments, leather and jewelry. As many as 4 lakh people, mostly daily wagers, either lost their jobs or shunned work temporarily due to the lack of payment. Since consumer demand had slowed and consequently industrial production had declined, employment generation had been adversely impacted by the currency demonetization drive. Since the manufacturing sector which accounts for the highest employment of skilled and semi-skilled laborers, is witnessing slowdown in production, not only fewer jobs are being created but lay-offs are also taking place at a higher rate. These details are shown in Table 8 below:
Table 8: Lead Indicators of Economy
(y-o-y growth in per cent)

<table>
<thead>
<tr>
<th>Macro Economic Indicator</th>
<th>April Oct. 16</th>
<th>Oct. 16</th>
<th>Nov. 16</th>
<th>Dec.16</th>
<th>Jan. 17</th>
<th>Feb.17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>-1.0</td>
<td>-2.4</td>
<td>5.5</td>
<td>-1.7</td>
<td>2.3</td>
<td>-</td>
</tr>
<tr>
<td>IIP</td>
<td>-0.3</td>
<td>-1.9</td>
<td>5.7</td>
<td>-0.1</td>
<td>2.7</td>
<td>-</td>
</tr>
<tr>
<td>PMI Manf. index</td>
<td>52</td>
<td>54.4</td>
<td>52.3</td>
<td>49.6</td>
<td>50.4</td>
<td>50.7</td>
</tr>
<tr>
<td>Mining</td>
<td>-0.2</td>
<td>-0.9</td>
<td>3.7</td>
<td>5.5</td>
<td>5.3</td>
<td>-</td>
</tr>
<tr>
<td>Cement consum</td>
<td>4.8</td>
<td>6.2</td>
<td>0.5</td>
<td>-8.7</td>
<td>-13.3</td>
<td>-</td>
</tr>
<tr>
<td>Steel consum</td>
<td>2.7</td>
<td>0.3</td>
<td>5.0</td>
<td>5.3</td>
<td>3.1</td>
<td>-</td>
</tr>
<tr>
<td>Railway Freight</td>
<td>-1.7</td>
<td>-2.6</td>
<td>5.5</td>
<td>-0.1</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>Civil aviation(int)</td>
<td>9.1</td>
<td>7.4</td>
<td>7.7</td>
<td>7.7</td>
<td>8.8</td>
<td>-</td>
</tr>
<tr>
<td>Civil aviation(dom)</td>
<td>22.5</td>
<td>23.6</td>
<td>22.0</td>
<td>23.9</td>
<td>25.6</td>
<td>-</td>
</tr>
<tr>
<td>Automobile Sales</td>
<td>15</td>
<td>8.1</td>
<td>-5.5</td>
<td>-18.7</td>
<td>-4.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Exports</td>
<td>0.2</td>
<td>9.0</td>
<td>2.4</td>
<td>5.5</td>
<td>4.3</td>
<td>-</td>
</tr>
<tr>
<td>Imports</td>
<td>-9.8</td>
<td>8.3</td>
<td>9.4</td>
<td>0.1</td>
<td>10.7</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: RBI Report March 2017

x) Impact on Agriculture Sector

Agriculture is the largest sector of the economy from the number of persons employed in it and was badly hit by demonetisation. In this sector, most transactions happen in cash and the liquidity crunch affected the purchase of seeds and fertiliser and consequently sowing and agricultural production were impacted adversely.

Fruit and vegetable farmers were terribly hit. They need cash to purchase pesticides, fertilisers and need to hire labour for cultivation, harvesting and also to transport and sell at towns and mandis. Lack of liquidity therefore resulted in lower yields, reduced sales, higher wastage and lower price realisation. Besides, retail vegetable sellers faced another difficulty of lack of demand, and their goods being perishable, ended up wasting a lot of produce. Further, since there was acute shortage of Rs 500 denomination notes and change for the high denomination Rs 2000 notes was not readily available with the vegetable and fruit vendors, it affected their sales. This was also taking the buyers away from the small vendors to big retail markets, thus impacting the livelihood of the unorganised sector. As labour is paid in cash for agricultural work, non-availability of cash with farmers impacted their employment.

Financing for agriculture happens largely through cooperative banks, which were barred from exchange-deposit of demonetised currency, affecting the farmers. Sale, marketing and distribution of agricultural produce happens through mandis, which are mostly cash-dependent and disruptions took place in the supply chain during demonetisation. Further, it is learnt that during the demonetisation period which was at the peak of Rabi crop sowing, no significant lending was done by the banks. Lack of PAN cards with farmers which is necessary for bank transactions above Rs.50,000 also badly affected the farmers who were unable to buy farm machinery. Lack of banking facilities and ATMs in rural areas also affected the availability of cash with farmers and illegal moneylenders and black marketers and middlemen took advantage of the situation.
Demonetisation Costs

The Economic Survey for 2016-17 estimated the loss in economic output arising from demonetisation to have been anything between 0.25 per cent to 1.00 per cent of decline in GDP growth. In fact, GDP growth slowed from 8 per cent in 2015-16 to 7.1 per cent in 2016-17 to 6.7 per cent in 2017-18. There are critics who say that growth lost steam for reasons other than demonetisation, such as the introduction of GST in July 2017 and the twin balance sheet problems of banks not being able to lend because of bad debt/NPA problems. So it is not easy to say as to which factor impacted how much, yet demonetisation remains the single largest factor during 2016-17 and 2017-18 that impacted GDP growth. The Economic Survey puts the loss in GDP arising from demonetisation between 0.25 per cent and 1 per cent of GDP (average at 0.63 per cent) and since GDP of both 2016-17 and 2017-18 were affected, take the average GDP for these two years, which works out to 2.5 trillion USD and at an exchange rate of 70, the output loss due to demonetisation is Rs 1.1 lakh crore. It is also believed that the RBI and the government ended up spending about Rs 17,000 crore in printing new currency, its transportation, security and logistics and other related expenditure. So the total cost of demonetisation to the economy is estimated at about Rs 1.27 lakh crore.

Conclusion

Though it is too early to say with certainty what was the real impact of demonetisation, statistics show that it had a significant positive impact on the tax base and tax collections, even though some people hold the view that it may be partly on account of the GST roll out in 2017. One of the welcome turnarounds in the demonetisation programme was the inseparable link between demonetisation and digitalisation of transactions, which will yield rich dividends in future in terms of increased tax revenue to the government. Inarguably, demonetisation encouraged people to embrace digital methods. However, the biggest contribution of demonetisation has been its campaign value as a nationwide awareness programme against black money. Although several other initiatives in the past like Income Disclosure Schemes may have some impact, the readiness of the people to undergo sacrifices expecting the end of black money through demonetisation has made this programme a ‘mass movement against black money’. This will help India to create a tax compliant and transparent society. Demonetisation also reduced cash flow to terror organisations and led to the dismantling of the counterfeit currency infrastructure.

However, it came at a huge social and economic cost and caused great misery to the lives of common people. Many people lost their lives while standing in queue for exchanging cash before banks. Many people could not fulfil their social obligations because of non-availability of cash and curbs on drawing. Decline in manufacturing, especially in SME sector as also in agriculture, deceleration of GDP growth and job losses impacted the economy severely.

It is widely believed that though demonetisation was a good step, it could have been implemented with better planning and preparation. The availability of sufficient liquidity in new currency with the banks and readiness of digital platforms of payments to the public would have made a lot of difference. General education to the public on how to use the banking mechanism and digital modes of
payments in day-to-day transactions and reducing the charges of banks on such transactions and payments through Aadhaar-enabled other instruments would have made a big difference.

In fact, demonetisation costs are estimated at Rs 1.27 lakh crore to the economy which includes decline in GDP of about Rs 1.1 lakh crore (taking decline in GDP growth on average of 0.63 per cent and GDP size of 2.5 trillion USD and exchange rate of Rs 70) and cost of Rs 17,000 crore towards the government and the RBI for implementing the demonetisation process in India.

Further, cash constitutes only about 6 per cent of the overall black economy and therefore demonetisation as a one-time measure could target only this 6 per cent black money in the form of cash and could not target black money in the form of real estate and property investment, gold and jewellery investment etc.

It is widely believed that demonetisation alone is not sufficient to counter black money and corruption in the country; rather, other measures are needed like action on investment in benami properties, investment in jewellery and gold and other luxury goods and bringing to book offshore tax evaders whose names figure in HSBC accounts, the Panama Papers and Paradise Papers etc. and restrictions on donations to political parties.

So it can be said that demonetisation 2016 had both a positive and negative impact on the economy. However, there is broad agreement that though a little bit of GDP growth was sacrificed and a short-term welfare loss of the unorganised sector had occurred due to the demonetisation drive, yet the initiative helped to clean up the system to a large extent and will go a long way in making India a transparent and tax compliant society.

Shah, Ayash Yousuf (2017) stated that Demonetisation is one of the major steps in fighting against corruption, black money and terror funding. However, this decision was taken without proper preparation and it adversely impacted the public. Without printing enough new currency notes 86 per cent of the currency notes were withdrawn thrashing all market transactions. Only common people had to face problems exchanging their notes, not the people who were targeted. With an intention to rid the country of black money and dig out tax defaulters and black money holders, the government has taken the step to demonetized Rs 500 and Rs 1000 notes. The sudden announcement of demonetisation and failing to plan properly has created chaos among the general public. Common people are facing problems buying with no money in their hands, wasting their time standing in endless queues could have easily been avoided with advance planning.

Veerakumar, K (2017) posits that the announcement of demonetisation of 500 and 1000 currency notes by the government is a big shock to the citizen of India. The highest currency notes are withdrawn from the economy to counter the problem of tax evasion, counterfeit currency and financing of terror activities. It is shown that huge money is being deposited into the bank accounts which are more than specified limits and are subject to penalties and taxes. Usage of e-wallets, debit and credit card has been increased tremendously and this will create better cashless infrastructure.
References


Website of Ministry of Finance, Govt. of India, www.finmin.nic.in

Website of Income-Tax Department, Govt. of India, www.incometaxindia.gov.in

Website of CBDT, www.irsofficersonline.org.in.


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