Demonetisation: To Deify or Demonize?

I. Introduction

- The aim of the action was fourfold: to curb corruption;
  - Counterfeiting; the use of high denomination notes for terrorist activities; and
  - Especially the accumulation of "black money", generated by income that has not been declared to the tax authorities.
- It followed a series of earlier Pefforts to curb such illicit activities, including the creation of the Special Investigative Team (SIT) in the 2014 budget;
  - The Black Money and Imposition of Tax Act 2015; Benami Transactions Act 2016;
  - The information exchange agreement with Switzerland; changes in the tax treaties with Mauritius, Cyprus and Singapore; and the Income Disclosure Scheme.
- In the wake of the **Global Financial Crisis (GFC)**, advanced economies have used monetary policy to stimulate growth, stretching its use to domains heretofore considered heretical such as negative interest rate policies and "helicopter drops" of money.
- In fact, India has given a whole **new expression to unconventional monetary policy,** with the difference that whereas advanced economies have focused on expanding the money supply, India's demonetisation has reduced it. This policy could be considered a "reverse helicopter drop", or perhaps more accurately a "helicopter hoover".
- There have been reports of job losses, declines in farm incomes, and social disruption, especially in the informal, cash-intensive parts of the economy but a systematic analysis cannot be included here due to paucity of macro-economic data.

II. Background Facts

- Cash can be understood along two dimensions: its function and its nature/origins. In terms of function, cash can be used as a medium of exchange (for transactions) or as a store of value like other forms of wealth such as gold and real estate. In terms of nature, cash can be illicit or not.
- Cash used as a store of value could be white (the savings that all households keep for an emergency), while cash used for transactions could be black (if it was earned through tax evasion and/or corruption).
  - Moreover, categories are fluid. Cash held as black money can be converted to white through laundering and other means, or by declaring it to the authorities and paying the associated tax/penalty.
- India's economy is relatively cash-dependent, even taking account of the fact that it is a relatively poor country. Studies show that on average the use of cash does indeed decline with development. India's level is somewhat higher than other countries in its income group (central panel).
- This might seem to suggest that some of the cash holdings were not being used for legitimate transactions, but perhaps for other activities such as corruption. This presumption is especially strong because across the globe there is a link between cash and nefarious activities: the higher the amount of cash in circulation, the greater the amount of corruption, as measured by Transparency International.

- In this sense, attempts to reduce the cash in an economy could have important long-term benefits in terms of reducing levels of corruption. Yet India is "off the line", meaning that its cash in circulation is relatively high for its level of corruption. This suggests two possibilities. Perhaps India's level of corruption is much worse than the index shows Or cash is being used for other, presumably legitimate purposes.
- But even if high levels of cash are needed this doesn't mean high denominations are needed. It is usually the case that high value notes are associated with corruption because they are easier to store and carry, compared to smaller denominations or other stores of value such as gold
- The higher a note is relative to income, the less likely it is to be used purely for transactions purposes. In India's case, the **denomination/income ratio** has fallen sharply over the past quarter century because incomes have been growing rapidly relative to the prevailing highest denomination notes. This suggests that the high denomination notes have become increasingly useful for transactions over time.
- Perhaps the most conclusive evidence on the extent to which Rs 500 and Rs 1000 notes are used for transactions comes from data on "soil rates," that is the rate at which notes are considered to be too damaged to use and have been returned to the central bank.
- RBI data show that in India low denomination notes have a soil rate of 33 percent per year. In contrast, the soil rate for the Rs 500 note is 22 percent and the Rs 1000 just 11 percent. One way to estimate black money is to assume that all these notes should soil at the same rate, if they were really being used for transactions.
- But this assumption would be extreme since the lower soil rates for the high denomination notes could arise if they are used in the same way, but just less frequently because there are fewer high value transactions.

III. Analytics

- Analytically, demonetisation should be seen as comprising the following:
  - a money supply contraction but only of one type of "money"—cash;
  - a tax on unaccounted private wealth maintained in the form of cash - black money; and
  - a tax on savings outside the formal financial system.
- The money supply contraction effects are discussed later as these are likely to be transitional in nature, focusing first on the benefits.

IV. Benefits

a. Tax on black money

- Perhaps the most important way to view demonetisation is as a tax administration measure, one designed to tax holdings of black money
- Accordingly, the scheme included **a screening mechanism, aimed separating "white" income from "black"**. Cash holdings arising from income that had been declared could readily be deposited at banks and ultimately exchanged for new notes. But those with black money faced three difficult choices. They could:
  - declare their unaccounted wealth and pay taxes at a penalty rate;
  - continue to hide it, not converting their old notes and thereby suffering a tax rate of 100 percent; or

  - Launder their black money, paying a cost for converting the money into white.
- Anecdotal evidence suggests there was, indeed, active laundering. One laundering mechanism seems to have been to "re-time" the accrual of income, **by constructing receipts**

that made it seem as if the black money had just been earned in the period immediately before November 8th, 2016. Such schemes might have allowed black money to have been deposited in bank accounts -- but only if the income was reported and taxes paid on it. In this way, demonetisation would have brought black money into the tax net.

- Other schemes would have required black money holders to pay a percentage to private intermediaries as a price for converting it into white. For example, some holders reportedly paid individuals to queue up at banks to exchange or deposit money for them. It was also widely reported that Jan Dhan accounts witnessed a surge in deposits during the 50-day window between November 8 and December 30 – though the amount of this increase was relatively small, around Rs 42,000 crore.
- In all these cases, black money holders still suffered a substantial loss, in taxes or "conversion fees". Moreover, bank accounts are still being screened for suspicious transactions, which means that those who engaged in laundering run the risk of punitive taxes and prosecution, in addition to the fees or taxes already paid.
- More to the point, the amount of unreturned high denomination notes is not the proper measure of the amount of black money that has been "taxed" away from holders of illicit wealth. In addition, one needs to add the taxes collected on money declared under disclosure scheme (Pradhan Mantri Garib Kalyan Yojana, PMGKY), as well as the "taxes" paid to intermediaries who laundered money.

b. Tax compliance

- These two sanctions – financial penalty and social condemnation – could have a powerful and long-lasting effect on behavior, especially if they were combined with other incentive-compatible measures, described in Section X.
- In this case, evaders might decide in the years to come that it would be better to pay a moderate regular tax, rather than risk having to pay a sudden penal tax. Corruption and compliance could be permanently affected.
- Demonetisation could also **aid tax administration** in another way, by shifting transactions out of the cash economy and into the formal payments system. With large denominations eliminated, households and firms have begun to shift from cash to electronic payment technologies.
- As a result, the tax-GDP ratio, as well as the size of the formal economy, could be permanently higher.

c. Tax on informal savings

- It will channel savings into the formal financial system. Without doubt, much of the cash that has been deposited in the banking system will be taken out again, as the cash withdrawal limits are eased and the note supply improves. But some of the new deposits will surely remain in the banks, where they will provide a base for banks to provide more loans, at lower interest rates.

V. Early evidence for potential long-term benefits

a. Digitalization

- FACTS: The Watal Committee has recently estimated that cash accounts for about 78 percent of all consumer payments. According to Price water house Coopers (2015) India has a very high predominance of consumer transactions carried out in cash relative to other countries
- Cash has many advantages:

  - It is convenient, accepted everywhere, and its use is costless for ordinary people, though not of course for society at large.
  - Cash transactions are also anonymous, helping to preserve privacy, which is a virtue as long as the transactions are not illicit or designed to evade taxation.
- In contrast, digital transactions face significant impediments. They require special equipment, cellphones for customers and Point-Of-Sale (POS) machines for merchants, which will only work if there is internet connectivity. They are also costly to users, since e-payment firms need to recoup their costs by imposing charges on customers, merchants, or both. At the same time, these disadvantages are counterbalanced by two cardinal virtues. Digital transactions help bring people into the modern "wired" era. And they bring people into the formal economy, thereby increasing financial saving, reducing tax evasion, and leveling the playing field between tax-compliant and tax-evading firms (and individuals).
- Digitalisation can broadly impact three sections of society: the poor, who are largely outside the digital economy; the less affluent, who are becoming part of the digital economy having acquired Jan Dhan accounts and RuPay cards; and the affluent, who are fully digitally integrated via credit cards. One simple measure that illustrates the size of these three categories is cell phone ownership.
- There are approximately 350 million people without cellphones (the digitally excluded); 350 million with regular "feature" phones, and 250 million with smartphones.
- The government has taken a number of steps to facilitate and incentivize the move to a digital economy. These include:
  - BHIM (Bharat Interface For Money) app for smartphones. This is based on the new Unified Payments Interface (UPI) which has created inter-operability of digital transactions.
  - Launch of Aadhaar Merchant Pay, aimed at the 350 million who do not have phones. This enables anyone with just an Aadhaar number and a bank account to make a merchant payment using his biometric identification. Aadhar Merchant Pay will soon be integrated into BHIM and the necessary POS devices will soon be rolled out.
  - Reductions in fees (Merchant Discount Rate) paid on digital transactions and transactions that use the UPI. There have also been relaxations of limits on the use of payment wallets. Tax benefits have also been provided for to incentivize digital transactions.
  - Encouraging the adoption of POS devices beyond the current 1.5 million, through tariff reductions.

b. Real estate

- Demonetisation could have particularly profound impact on the real estate sector. In the past, much of the black money accumulated was ultimately used to evade taxes on property sales.
- It is too early to assess whether there will be permanent effects, An equilibrium reduction in real estate prices is desirable as it will lead to affordable housing for the middle class, and facilitate labour mobility across India currently impeded by high and unaffordable rents.

VI. Short-term impact

a. Impact on cash/money

- Headline numbers suggest that the currency decline after November 8, 2016 amounted to 62 percent by end-November, 2016 narrowing to 41 percent by end-December, 2016. Our comparable numbers are 25 percent and 35 percent, respectively. In other words, the true extent of the cash reduction was much smaller than commonly perceived, and the true peak of the monetary – as opposed to the psychological – shock occurred in December, rather than November.

- Summary
  - *Second half of 2016-17 (average)*: -12.5 percent (cash) and +3.5 percent (cash plus demand deposits)
  - *2016/17 (average)*: + 1.2 percent and + 9.1 percent.

VII. Impact on GDP

- It is first important to understand the analytics of the demonetisation shock in the short run. Demonetisation is potentially:
  - an aggregate demand shock, because it reduces the supply of money and affects private wealth
  - an aggregate supply shock to the extent that cash is a necessary input for economic activity;
  - an uncertainty shock because economic agents face imponderables related to the impact and duration of the liquidity shock as well as further policy responses

- We are interested in a macro-assessment and hence focus on five broad indicators:
  - Agricultural (rabi) sowing;
  - Indirect tax revenue, as a broad gauge of production and sales;
  - Auto sales generally, as a measure of discretionary consumer spending, and two-wheelers in particular as it is the best available indicator of rural and demand of the less affluent;
  - Real estate prices; and
  - Real credit growth
- Contrary to early fears, as of January 15, 2016 aggregate sowing of the two major rabi crops—wheat and pulses (gram)-- exceeded last year's planting by 7 percent and 15 percent, respectively. Whether this will lead to a commensurate increase in production will depend on the extent to which farmers' access to inputs—seeds, fertiliser, credit, and labour—was impeded by demonetisation.
- Agricultural sowing, passenger car sales, and overall excise taxes bear little imprint of demonetisation; and sales of two wheelers show a marked decline after demonetisation; credit numbers were already looking weak before demonetisation, and those pre-existing trends were further reinforced after November 8.
- Indirect tax performance stripped of the effects of additional policy changes in 2016-17 looks less robust than the headline number, but growth rates remain strong.
- It would be reasonable to conclude that real GDP and economic activity has been affected adversely, but temporarily, by demonetisation.
- The question is: how much? The short answer is between ¼ and ½ percentage points relative to the baseline of about 7 percent.
- Over the medium run, the implementation of GST, follow-up to demonetization and other structural reform measures should take the trend rate of growth of the economy to the 8-10 percent range that India needs.

a. Framework

- A distinction needs to be made between the informal and formal economies. Clearly, the cash crunch must have affected the informal economy, which depends heavily on bank notes for its transactions and has been estimated to account for nearly half of the overall economy (Sen, 2016). This may even be an underestimate if consumer payment transactions were in any way indicative of the extent of cash-dependence of the economy in production.

- Equally clearly the cash crunch would have had little direct impact on the formal economy, which depends instead on the banking system, where liquidity has actually improved. So once again, it makes sense to think about things separately, assuming that the cash shortfall affects the informal economy, but has had no impact on the formal economy.
- This is not literally true, for there are important second-round effects. As workers in the informal economy have been laid off, they have bought fewer products (such as fast-moving consumer goods or two-wheelers) from the formal economy.
- Conversely, some participants in the informal economy have shifted into the formal payments systems (such as kirana shops installing POS terminals). Also, in the cash intensive economy, the liquidity shortage has led at least transiently to a greater recourse to informal credit (such as kirana shops allowing regular customers to pay at a later date).
- Based on all of the above and given the uncertainty, a range is provided and not a point estimate. For nominal GDP, the impact would be lower growth between ¼ percentage points and 1 percentage point relative to the baseline of 11¼ per cent. For real GDP the impact would be between ¼ percentage points and ½ percentage points relative to the baseline of 7 per cent. Over the medium run, the implementation of GST, follow-up to demonetization and other structural reform measures should take the trend rate of growth of the economy to the 8-10 percent range that India needs.
- A final and important point to make is that the adverse impact of demonetisation on GDP growth will be transitional.
- A few concluding observations on the impact of demonetization on economic activity. It is clear that recorded GDP growth in the second half of FY2017 will understate the overall impact because the most affected parts of the economy—informal and cash based— are either not captured in the national income accounts or to the extent they are, their measurement is based on formal sector indicators.
- For example, informal manufacturing is proxied by the Index of Industrial Production, which includes mostly large establishments. So, on the production or supply side, the effect on economic activity will be underestimated. The impact on the informal sector will, however, be captured insofar as lower incomes affect demand for formal sector output, for example, two wheelers.

c. Validation exercise: *Cash and demand deposits are perfect substitutes versus cash as the binding constraint*

- A validation exercise is conducted, focusing on the growth estimates for the second half. The implied velocity both for money (cash and demand deposits) and cash is calculated to see how they compare with historical behavior. This exercise is carried out for two scenarios. In the first, the money velocity is computed (shown in Figure 18). The underlying assumption here is that cash and demand deposits are perfect substitutes, so that it did not matter that cash was reduced as long as other forms of money replaced it, as indeed happened. This is one extreme assumption. Here the implied velocity for each scenario is found to be slightly higher than historical trends.
- In another scenario (shown in Figure 19), the implied velocity for cash is examined. Here the assumption is that during the period of demonetisation, cash was the binding constraint for transactions. Under this assumption, the implied cash velocity would be very different from that observed historically.
- The reality, of course, is expected to lie somewhere in between. The plausibility of these estimates then depends on the degree of substitutability between cash and non-cash during

demonetisation. The more substitutable they are, the more plausible are the growth estimates; the less substitutable they are, the greater will be the adverse impact on GDP.

d. Supply-side effects

- Demonetisation could also affect supplies of certain agricultural products, especially milk (where procurement has been low), sugar (where cane availability and drought in the Southern states will restrict production), and potatoes and onions (where sowings have been low). Vigilance is essential to prevent other agricultural products becoming in 2017-18 what pulses was in 2015-16 in terms of supply deficiencies and consequential higher inflation.

VIII. Redistribution to the Government

- Demonetisation will also redistribute resources. For example, to the extent that black money holders have laundered their money by employing people to stand in queues there could be a positive wealth effect because cash would go from agents with a low propensity to spend to those with a greater propensity to spend. But perhaps the most important redistributive effect is that it will shift resources from the private sector to the government. The impact on the overall economy will then depend on how the government responds.
- Demonetisation will affect the fiscal accounts in the following ways.
- Wealth gain: The RBI/government may receive some gains from the unreturned cash.
- Short-term flow impact: The net impact is difficult to discern, as there are many cross-cutting effects. Income taxes could go up as black money was deposited in bank accounts (as discussed in Section IV above). There are also reports of increases in tax payments at state government levels and accelerated payments to discoms. Against this are three negative effects:
    - Costs of printing new notes over and above normal replacement.
    - The costs of sterilizing the surge in liquidity into the banking system via issuance of Market Stabilization Scheme bonds.
    - If nominal GDP growth declines, corporate and indirect tax revenues of the centre could decline but so far there is no clear evidence.
- Overall, the total cost will be clear at the end of the full year.

IX. Markers of Success

- Demonetisation can have long term benefits. These may not necessarily become manifest in the next six months but evidence should start trickling in over a one-year horizon and beyond. And it is not difficult to identify the future markers of success.
- First, changes in the use of digital payment methods across the three categories of digital access identified earlier, namely, smart phone users, regular phone users and the phoneless, respectively. The early signs are encouraging.
- Second, the cash-GDP ratio, which should decline as more saving is channelled through the formal financial system and black money falls. On one estimate of black money, the cash-GDP ratio could decline permanently by about 2 percentage points.
- Perhaps the most important marker of success will be taxes. The number of new income tax payers as well as the magnitude of reported and taxable income should go up over time. The situation as of 2013-14 is given in Table 3 below. Over time, each of these numbers should rise significantly. That will be the surest sign of success.

- To the extent that demonetisation has also raised the costs of non-compliance with indirect taxes, we should also expect to see an increase in registration under the service and excise taxes and under the states' VATs. These should drift up steadily in the future.

X. Maximizing long-term benefits, minimizing short-term costs

- On the latter, the most important effort must be to replenish the cash shortage as quickly as possible. The faster remonetisation takes place, the shorter and less severe will be the overall impact of demonetisation.
- One point bears emphasis. Supply of currency should follow actual demand and not be dictated by official estimates of "desirable demand". In other words, the RBI should re-establish internal convertibility, guaranteeing to give the public the amount of currency that the latter wants. The early elimination of withdrawal limits will help build confidence. By the same token, there should be no penalties on cash withdrawals, which would only encourage cash hoarding.
- Internal convertibility is a bedrock of every single financial system in the world, for some very practical reasons. Unless people have confidence that money deposited in bank accounts is freely convertible into cash, and vice versa, they will be reluctant to deposit their cash in the first place. Instead, they will hoard it, starving the formal financial system of resources and the informal economy of the currency it needs for transactions. And this would affect the poor most, not just because they are more likely to work in the informal economy, but because the affluent will likely corner the limited currency available. Gradually, of course, the proportion of low denomination notes should certainly rise at the expense of higher ones. But there should not be any restrictions on aggregate supply.
- The government windfall arising from unreturned notes should be deployed toward capital-type expenditures rather than current ones. And since the windfall will be one-off its use should be one-off and not lead to entitlements that create permanently higher expenditures.
- In the medium term, the impetus provided to digitalization must continue. A few principles must guide this effort going forward. Digitalisation is not a panacea, nor is cash all bad. Public policy must balance benefits and costs of both forms of payments. Second, the transition to digitalisation must be gradual; take full account of the digitally deprived; respect rather than dictate choice; and be inclusive rather than controlled.
- Incentivisation should be strictly time-bound because as volumes increase digitalisation should become privately profitable. To increase trust in digital payments, cyber security systems must be strengthened considerably. One key need is to ensure inter-operability of the payment system, which will be at the heart of increasing digitalisation going forward, building upon the newly created UPI.

- Demonetisation was a potentially powerful stick which now needs carrots as complements. A five-pronged strategy could be adopted:
    - A GST with broad coverage to include activities that are sources of black money creation—land and other immovable property—should be implemented;
    - Individual income tax rates and real estate stamp duties could be reduced;
    - The income tax net could be widened gradually and, consistent with constitutional arrangements, could progressively encompass all high incomes. (After all, black money does not make fine sectoral distinctions);
    - the timetable for reducing the corporate tax rate could be accelerated; and
    - Tax administration could be improved to reduce discretion and improve accountability.

- Finally, it is imperative that the effort to collect taxes on newly disclosed (and undisclosed) wealth does not lead to tax harassment by officials at all rungs of the hierarchy.
- There must be a shift to greater use of data, smarter evidence-based scrutiny and audit, greater reliance on on-line assessments with correspondingly less interaction between tax payers and tax officials.
- At a time when the GST will be providing so much more data on individual transactions, greater information sharing between the direct and indirect tax departments at the centre, along with coordination with the states, could lead to greater compliance through non-punitive means, not just in relation to indirect but also direct tax collections. Big Data and the digital age, and the promise they offer, should also be embraced by the tax administration.