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Demonetisation: Impact on Indian Economy and Leads to Cashless Banking Activities

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Abstract: *The argument posited in favour of demonetisation is that the cash that would be extinguished would be "black money" and hence, should be rightfully extinguished to set right the perverse incentive structure in the economy. While the facts are not available to anybody, it would be foolhardy to argue that this is the only possibility. Therefore, it is imperative to evaluate the short run and medium-term impacts that such a shock is expected to have on the economy. Further, the impact of such a move would vary depending on the extent to which the government decides to remonetise. This paper elucidates the impact of such a move on the availability of credit, spending, level of activity and government finances.*

Keywords: Demonetization, cashless transactions, credit, tax evasion.

Introduction

The government has implemented a major change in the economic environment by demonetising the high value currency notes – of Rs 500 and Rs 1000 denomination. These ceased to be legal tender from the midnight of 8th of November 2016. People have been given upto December 30, 2016 to exchange the notes held by them.1 The proposal by the government involves the elimination of these existing notes from circulation and a gradual replacement with a new set of notes. In the short term, it is intended that the cash in circulation would be substantially squeezed since there are limits placed on the amount that individuals can withdraw. In the months to come, this squeeze may be relaxed somewhat. The reasons offered for demonetisation are two-fold: one, to control counterfeit notes that could be contributing to terrorism, in other words a national security concern and second, to undermine or eliminate the "black economy".

There are potentially two ways in which the pre-demonetisation money supply will stand altered in the new regime: one, there would be agents in the economy who are holding cash which they cannot explain and hence they cannot deposit in the banking system. This part of the currency will be extinguished since it would not be replaced in any manner. Second, the government might choose to replace only a part of the currency which was in circulation as cash. In the other words, the rest would be available only as electronic money. This could be a mechanism used to force a transition to cashless medium of exchange. The empirical extent of these two components will be unravelled only over the next six months. These two would have different effects on the economy in the short term and in the medium term, as will be explored below.

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To understand the effects of these dimensions, it is important to first understand what is it that cash does in the economy? There are broadly four kinds of transactions in the economy: accounted transactions, unaccounted transactions, those that belong to the informal sector and illegal transactions. The first two categories relate to whether transactions and the corresponding incomes are reported for tax purposes or not. The third category would consist largely of agents who earn incomes below the exemption threshold and therefore do not have any tax liabilities.

Turning to the effects of demonetisation, the first major and sustained effect of demonetisation would follow from the extent to which the currency is extinguished and what this currency was being used for. It is being assumed that all currency which will potentially be extinguished would be currency being used as a store of value in the first and second category of transactions in the table above. If this assumption is correct, then the impact of extinguishing this currency would be limited. On the other hand, if the currency is used for any of the other transactions in the economy, either as a store of value or more importantly, as a medium of exchange, then the impact on the economy and the agents in the economy could be substantial. If, for instance, the extinguished cash was used as a medium of exchange in financing unaccounted income generation or income in the informal sector, demonetisation would result in these activities closing down and a corresponding reduction in the incomes and employment associated with these activities. The spillover effect would be felt by the organised sector as well since the consumption from the incomes generated would extend to the formal sector as well. The next question to ask would be: would these activities/agents choose to come within the folds of the formal sector as a result of the changed economic environment or would they remain outside or worsen the activities and would be extinguished along with the losses generated from the cash that was extinguished.

The second change as discussed above, from demonetisation would arise if only a part of the currency deposited in the banks is returned to circulation as cash. This change, if it is executed, would dramatically change the economic environment in the country by forcing agents to move from using cash as a medium of exchange to using cash substitutes. This appears to be a real possibility given that the Finance Minister as well as the Governor of the Reserve Bank of India have repeatedly emphasised that agents should be moving to the use of cashless medium where there are no problems in comparison to the cash based medium. For instance, The Hindu reported that "Reserve Bank of India (RBI) has urged citizens to switch to alternative modes of payments such as pre-paid cards, credit and debit cards, mobile banking, and Internet banking." In a press conference on November 12, the Union Finance Minister too said that "Those in businesses should start using digital payment gateways, cards and banking system. Life will become simpler in the new financial system that is the only viable option." The effect of this change too would be felt differently across the different segments of the economy – agents operating within the formal sector and agents who are familiar with the modern technology would be placed on different footing compared to other agents who need to make the transition.

In what follows, an attempt is made to present a discussion of the likely effects classified into very short term as in the next two months, the short term as in a six months to a year and the rest as medium term. Within these, an attempt is made to distinguish between the effects if there is full remonetisation to the extent of deposits made in banks and a scenario of partial remonetisation.

Objectives of the Study

- To Study the Conceptual aspects on Demonetization and its impacts.
- To Know about Cashless banking activities in India.

Short-Term and Medium-Term Impacts

Very Short-Term Impact

The demonetisation, by removing 86 per cent of the currency in circulation, has resulted in a very severe contraction in money supply in the economy. This contraction, by wiping out cash balances in the economy, will eliminate a number of transactions for a while, since there is no or not enough of a medium of exchange available. Since income and consumption are intrinsically related to transactions in the economy, the above would mean a severe contraction in income and consumption in the economy. This effect would be more severe on individuals who earn incomes in cash and spend it in cash. To a lesser extent it would also affect individuals who earn incomes in non-cash forms but need to withdraw in cash for consumption purposes, since a number of sectors in the economy still work predominantly with cash.

In terms of the sectors in the economy, the sectors to be adversely affected are all those sectors where demand is usually backed by cash, especially those not within the organised retailing. For instance, transport services, kirana, fruits and vegetables and all other perishables, would face compression in demand which is backed by purchasing power. This in turn can have two effects: while it is expected that supply exceeds demand, there would be a fall in prices, however, if supply too gets curtailed for want of a medium of exchange, prices might, in fact, rise. Thus, while generally people seem to expect prices to fall, it is quite possible that prices would instead rise.

Alternatively, to keep the flows going, people might take recourse to credit - both the retailers and other agents in the economy might make supplies on credit in the hope that when the liquidity status is corrected, the payments can be realised. In these cases, the price of commodities might rise instead of falling. In other words, the impact of an incremental reduction in money supply where the demand and the supply chain remain unaffected would be different from a case where there is a drastic reduction in money supply and outputs might adjust rather than the adjustment being in prices. In other words, the expectation that inflation would decline might be belied.

A further impact would be a compression of the demand for non-essentials by all the agents in the economy in the face of uncertainty in the availability of cash. The demand from segments which have access to digital medium of exchange would remain unaffected, but that from the rest of the economy would get compressed. This would transmit the effect to the rest of the sectors in the economy as well.

Short-Term Effect with Complete Replacement

The short-term effect on the economy would depend on the speed with which and the extent to which the cash is replaced by the authorities. If the entire cash is replaced within a short duration of time, the effects beyond the very short term of 1-2 months might be little. But a few sectors are likely to be seriously affected. To give an example from two sectors which are supposed to have large employment effect on the economy, we can talk about agriculture, automobiles and construction. This is the sowing season for the Rabi crop in some parts of the country and the harvesting season for the Kharif crop. Most of the purchases and sales in this segment of the economy are carried out through cash. With the elimination of cash from the economy, sale of kharif crop would be difficult unless the crop is sold on the promise of payment in future. Given the limited bargaining power of the farmer, the price they can realise for the crop can be adversely affected. On the other hand, in the sowing activity, people would not get access to the inputs required since most of the inputs are now purchased from the market unless they seek access to credit from the supplier. In other words, with demonetisation, there would be a significant strengthening of the informal sector credit market in the rural economy. Further, if there are agents who do not get access to credit from the informal sector agents, their sowing activity and hence their incomes in the next season would be adversely affected. Thus, in spite of a good monsoon in large parts of the country, the farmer might not get the benefits. The second sector which could be adversely affected would be the construction sector. The sector, it is often argued, works with a significant amount of cash. Payments to workers as well as a variety of purchases might be carried out in cash. So, on the supply side, this sector can be adversely affected. On the other hand, on the demand side, the demand for houses and buildings would appear as a demand for non-essentials and might be pushed on to the back burner until the economic situation normalises. Thus, to the extent there are agents in the economy whose demand was backed by savings from unaccounted incomes held in the form of cash which got extinguished on demonetisation, there would be a compression of demand.

Short-Term Effect with Incomplete Replacement

If, on the other hand, the authorities choose to replace only a fraction of the total cash that was surrendered by the people to the banking sector, then one would witness some other changes/effects in the economy. For transactions to be restored to the pre-change level, a number of agents who are using cash as a medium of exchange have to move to using digital versions of money as the medium of exchange. While this change is gradually happening in the economy, if it is forced by making cash inaccessible, the compression in demand as well as in income generation in the economy would continue for a longer period until people get familiar with the functioning and use of these media.

Medium-Term Effects

In the medium term, the effects would be related to the extent to which the currency is not replaced within the economy. If the entire currency is replaced, there would not be any major effects on the economy. However, it is to be expected that the entire currency would not be replaced – to the extent currency is extinguished and to the extent some of the currency remains as bank deposits, there would be some impact on the economy. The first effect would be a compression of the economy to the extent the extinguished currency was working as a medium of exchange. The currency that is placed in the banks but not withdrawn, it is argued, would generate an expansion in deposits in the economy. In the discussions on demonetisation, there is a consistent reference to the resultant increase in credit creation in the economy. Like Finance Minister Arun Jaitley says, "Bank deposits will increase and they will have more capacity to support the economy." The total cumulative credit that can potentially be generated is defined in terms of the reserve ratio. Total credit potential = incremental deposit generated*(1/reserve ratio).

In India, the cash reserve ratio is 4 per cent while there is a statutory liquidity ratio of 22 per cent. In determining the credit creation, it is important to take into account only the CRR and the additional credit creation can be 25 times the amount of money deposited in the banks as a result of the proposed demonetisation. This amount however, will be generated only if there exists an equivalent demand for credit in the economy.

Transition Issues for Banking Sector

a. The banks too might have a transition issue to deal with. Banks would have a model of the fraction of deposits that they can safely lend without an excessive risk of withdrawal of the amount. This is important since, while banks can borrow money from the call money market, the costs of such borrowings can be large. These models, however, might need to be altered in the new regime since the character of the new deposits that come into the bank would be different from the pre-existing deposits. In the latter, while a fraction of the deposits would be for transactional purposes – e.g. salary earners – another fraction would be depositing only savings into the account. By eliminating high value currency notes, these agents who were operating through cash, would now have to move to non-cash instruments and hence, the balances in their accounts would not be savings but transaction values which will be retained in the account for shorter durations of time. The banks therefore would need to re-model their decisions on how much of the deposits can be lent out and for what duration. It is, for instance possible, that a larger proportion of the deposits would be retained for short-term lending and can even be dedicated to the call money market.
b. Second, while 1/reserve ratio defines the potential maximum amount of credit that can be generated in the economy, the actual credit generation would be defined both by the demand for credit and the extent to which cash intervenes in the functioning of the economy. For instance, if people who receive credit from the bank make payments through cheques alone and they in turn make payments through cheques, then the potential credit creation can be realised. However, if on receipt of payment, the agent withdraws the money to cash and makes payments, only a fraction of the credit/deposit will return to the banking system. Thus, larger is the extent to which cash is used as a means of transacting, smaller is the total credit that can be generated. With a withdrawal of cash from circulation, the deposits will continue to remain in the bank, it would merely shift from account to account or from bank to bank. Thus, even on the earlier deposits, the amount of credit that can be generated would be larger. This is another reason why the banks would need to remodel their investment decisions corresponding to a given level of deposits.
c. A third issue that might arise as a transition issue is because of the mismatch between people's preferences for cash and the availability of cash. In the interim, until people adjust to the use of non-cash instruments, there would be an increased demand for the cash that is available and that might generate a situation where the agents have to pay a premium to access legal tender. In periods of scarcity of coins for instance, it is commonly known that people pay a premium to get the change. While this can be considered a transition issue, there are two different implications of such a development:
    i. If the premium on cash is high, it would encourage both the shift to non-cash instruments on one hand, and to informal substitutes of cash on the other.
    ii. This might undermine the confidence that people have in the currency and hence, encourage move to other currencies.

Mode of Payment and Spending Behaviour

There is growing literature that points out to the possibility of changes in spending behaviour as a result of moving to instruments other than cash. There are many substitutes for cash in the modern economy ranging from cheques, debit cards, pre-paid cards, credit cards and mobile wallets. When compared to cash, these instruments differ in a number of key characteristics. Temporal separation or degree of coupling is the extent to which a purchase and the payment for the transaction from resources are separated in time. If the two are de-coupled, people may not perceive a sense of separation from money at the time of incurring the expenditure and hence may overspend. The second characteristic is related to the pain of payment flowing from salience. It is argued that people perceive the pain of payment depending on the tangibility or salience of the outflow. A third feature is the stringency of budget constraint – while cash limits one's ability to spend to the amount of cash in hand, a debit card expands it to the balances available in the account and a credit card further relaxes it to include future earnings as well.

Features of Payment Systems

Payment Mechanism	Salience of Form	Salience of Amount	Transparency	Temporal Separation	Temporal Orientation
Cash	Very High	High	High	No, Do not exist	Perception of present-present
Cheque	Medium	High	High	Low	Perception of present-present/future
Credit Card	Medium	Medium	Medium	High	Perception of present-future
Debit Card	Medium	Medium	Medium	No, Do not Exist	Perception of present-present
Store Value Card	Low	Low	Low	Medium	Perception of present-present
Auto Pay	Very Low	Very Low	Very Low	Low	Perception of present-present
Digital Wallet	Medium	Medium	Medium	High	Perception of present-present/future

Source: Braga et al. (2013)

We summarise the results of some of these studies which compare the behaviour of consumers using alternative instruments as follows:

a. In a comparison of debit cards with cash, studies suggest that with the use of debit cards, the level of consumption tends to be higher.
b. In a comparison of credit cards with cash, this effect is more pronounced.
c. Credit cards often are associated with more spending resulting in an increase in debt as well.
d. Further, spending with cards seems to encourage spending on non-essentials.

These changes in consumer behaviour can have long-term consequences on the economy as well as on the budgets and lifestyles and priorities of agents in the economy. It could, for instance, lead to a ballooning of consumer debt which in turn could push the financial system towards a crisis if not suitably managed. Further, if available debt in the economy is channeled towards consumer debt, while at the same time lowering saving in the economy, it could adversely affect the investment within the domestic economy.

Effects on Government Finances

The effects of demonetisation on government finances can be divided into three categories: the impact through RBI's finances, the impact through taxes and the impact through credit available to finance deficits.

Through RBI's Finances

The RBI earns seigniorage through the printing of currency. In the demonetisation, a part of the currency will be extinguished. For this part of the currency, the RBI can print the notes given the assets on its books, but there would be no takers. In other words, this part of the currency would be like new money that can be introduced into the economy and hence yields seigniorage to the RBI once again when released into circulation. RBI, however, cannot lend this to the government since that would involve additional liability buildup on its balance sheet. So, this currency can only be released when foreign exchange is being converted to rupees for instance and not sterilised thereafter. At this point there would accrue some dividends to the government as well. However, to the extent the government and the RBI seek to move the economy towards digital instruments, this option might not be exercised and the dividend might not accrue.

Impact through Taxes

There are multiple channels through which taxes will be affected:

- At the point of transition to the new regime, people have attempted to convert cash balances into commodities like gold or luxuries. On these transactions the governments would have a spurt of taxes. This would however not last beyond the transition phase.
- In the subsequent period, the impact on indirect taxes would be negative because of the compression in demand.
- On property taxes, some local bodies have given people a window of opportunity to pay old as well as current taxes in the scrapped notes. This would result in an increase in revenue collections in property tax.
- On income tax there can be two potential effects: first, with compression in the economy, there could be a reduction in the tax collection. In the unlikely event of people choosing to deposit unaccounted balances in the bank and pay taxes and penalty on the same, or if the tax department through investigation, finds that some of the deposits are not explained income tax collections would increase. For any individual depositing balances above Rs 10 lakhs, the tax and penalty together would absorb the over 90 per cent of the deposited amount. This would serve as a disincentive for people with large balances to come and deposit the same into accounts. In other words, the government cannot expect to get major collections in terms of the tax and penalty on unaccounted incomes revealed.

Conclusion

The demonetisation undertaken by the government is a large shock to the economy. The impact of the shock in the medium term is a function of how much of the currency will be replaced at the end of the replacement process and the extent to which currency in circulation is extinguished. While it has been argued that the cash that would be extinguished would be "black money" and hence, should be rightfully extinguished to set right the perverse incentive structure in the economy, this argument is based on impressions rather than on facts. While the facts are not available to anybody, it would be foolhardy to argue that this is the only possibility. As argued above, it is possible that these cash balances were used as a medium of exchange. In other words, while the cash was mediating in legitimate economic activity, if this currency is extinguished there would be a contraction of economic activity in the economy and that is a cost that needs to be factored in while assessing the impact of the demonetisation on the economy and its agents.

It is likely that there would be a spurt in the banking deposits. While interpreting the phenomenon, however, one has to keep in mind that a large part of their deposits were earlier used for transactional purposes. For example, if a small trader deposits 2 lakh Rupees in the Jan Dhan account since the currency in which he held these balances in for transactional purposes has been scrapped, it would be incorrect to interpret this as success of the programme in bringing in people who were hiding black money. Nor can they be interpreted as additional balances that the banking sector can lend out on the same basis as earlier deposits, since the deposits now would remain in accounts for much shorter periods that deposits based on savings would be.

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