Demonetisation and its Impact on Indian Economy

Dr. Tripti Tripathi, Assistant Professor, Amity Business School, Amity University, Madhya Pradesh

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 **Indian rupee** , is the official currency of the Republic of India. The currency is issued and controlled by Reserve bank of India. The 'demon' in demonetization is in the beginning. On November 8, Indian Prime Minister Narendra Modi announced in a broadcast to the nation that Rs500 and Rs1,000 currency notes would no longer be recognized legally as currency. "Great," said Corporate India, economic commentators, foreign investors, international think tanks and global rating agencies. "Masterstroke," echoed the Confederation of Indian Industry (CII).

The aim behind the government's action was to combat tax cheating, counterfeiting and corruption. Eliminating large denominations makes it harder to hide large amounts of cash. Modi noted that the move complements the country's swachh bharat abhiyan (Clean India campaign). "For years, this country has felt that corruption, black money and terrorism are festering sores, holding us back in the race towards development," he said. "To break the grip of corruption and black money, we have decided that the currency notes presently in use will no longer be legal tender from midnight tonight."

Black Money

Any financial transaction kept out of the purview of the authorities, to evade tax, is black money. It can be done for simply hiding one's income to save more, or to indulge in actual illegal activities like terror, human trafficking, drugs and narcotics, corruption and financial crimes. This is what makes black money truly dangerous, and even the most corrupt of politicians realises this ugly side of the hydra-headed monster. Remember, a lot of black money is not unethical but need-driven as the micro-stores of cash with mothers and wives of India prove.

This disease is most prevalent in the developing countries and unless it is eradicated they will remain so. India's efforts to curb the money money has a very long history but never came any bold which somehow could be able to hunt the beast.

Concept of Demonetization

Demonetisation is the legal act of rendering existing currency notes invalid, and replacing them by new currency notes of same or different denominations. it is a shock therapy intended to destroy accumulated illegal cash(which is not legal wealth) and restore the faith of honest taxpaying citizenry. India has witnessed demonetization in 1946, 1978 and now in 2016. but given the 132 crores+ population of India now, and massive scale of the cash economy, it is glaringly apparent that the ATM refilling operations were simply ill-planned, ill-execute and grossly mismanaged. The real danger is not this- it will be when crores of fresh white economy entrants- paying taxes out of hard earned revenues and incomes- will start demanding good quality government services from all the departments and ministries, central and state.

History of demonetisation

first round: it happened on January 12, 1946- for Rs 1000 notes- done by the high denominations bank notes(demonetization) ordinance, to destroy illegal wealth accumulated during second world war.

second round: it was done on January 16, 1978- for all notes above rs. 100 i.e. Rs. 1000, rs. 5000 and rs. 10000 notes- done by the high denominations bank notes(demonetization) act, 1978 by janta party government to destroy black money of smugglers and mafia(rs. 1000 notes were brought back in 2000-01).

third round:this was carried out on late evening November 08, 2016- for rs. 500 and rs. 1000 notes done through a TV announcement by Pm Modi to break the backbone of corruption, illegal election funding, terror financing etc.
though I do think that it is a positive move by the indian government to curb the illegal activities which are directly linked to the accumulation of black money. but as we all know whether the government does sth or not it has to face the critisim. sometimes constructive and other times destructive. leyts see what are differenrt vies on the demonetization.

Limitations:
1. techanically not solid: critics say Modi has pitched a patroitic than the economic line-" there comes a time in the history of a country's development when a need is felt for a strong and decisive step". Modi asked the ordinary person to "put up with difficulties for some days". critics say if this is all he plans, he may be wrong. why? it had been done earlier too but it ws not executed effectively and nothing changed but the hardships for the common man.

2. move is incomplete: building on the first point, people remind that sinha said at that time- " I am sure that the root cause for illegal transaction lies not in the notes of high denomination but elsewhere." on sunday november 13, 2016PM Modi made an announcement to tackle that 'elsewhere' place, relieveing those who thought he was wrongly advised and that the present pain was pointless.

3.new black economy rising: Media outlet http://www.thewire.in says that " knowingly or unknowlingly the modi government has pushed the country into something resembling the soviet era. the whole country is quieing up for hours in front of ATMs in search of few thousand rupees. the unpreparedness has exposed the gross inefficiencies of the indian banking system. with $217 billion(86% of the total currency valuein circulation) currency out of the system, markets are deserted and economic activities are at a bare minimum. if the present chaos continuesfor some more time, there is a danger of parallel black economy. if people continue to exchange in old curriency notes with the faith thatit will be accepted at least within the black economy, it may become a permanent feature of the indian monetary system."

4. general citizens complain: the government has made our cash useless without any alternative system in place. shopkeepers and those providing goods and services do not accept cheque due to fear. credit cards have nearly fees and most of the banks do not sendstatements in time and the holder of the card is made to pay 24% interests on late payment. even shopkeepers charge 2% extra for accepting credit cards. If a debit card is used, there are charges on every transaction. There are other portals through which payment can be made, but they take service charges. Thus, alternative methods which cost extra money and unnecessary expenditure are needed.

1 Under certain circumstances people can exchange their currency at specified offices of RBI till March 31, 2017.

Table 1: Demand for Cash by various agents in the economy

Description of the activity	Unaccounted transactions (legitimate transactions but not tax paid)	Illegal transactions (corruption, crime, etc.)	Informal sector transactions	Accounted transactions
Medium of Exchange	Incomes are earned through exchanges in	Payments for crime	Incomes are earned in cash and spent in	Transaction demand for money

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.

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.

Another sector where one expects to see effects in the very short run is the real estate space. With contraction in demand from one set of agents – say agents who have earned unaccounted incomes and placed them within the real estate space – either prices within this segment would fall or transactions would cease to happen. While of itself, this would be considered a positive development and evidence of a correction in the unaccounted incomes, it could lead to a compression in investments in the construction sector which can have adverse income and employment consequences for the economy.

There are likely to be two spin-offs from this change – one, there would be some increase in tax collections in the short term, and second; various IOUs could emerge as currency substitutes. To the extent people attempt to get rid of unaccounted cash balances through purchase of goods and services and/or payment of property taxes, one should witness a spurt in tax collections in indirect taxes as well as property tax in the month after demonetisation which would disappear thereafter. There is evidence already that property tax collections in some cities are higher than last year. Similarly, in the case of currency substitutes, at MCD tax collection centres at the border, people are being given IOUs in lieu of the balance they were entitled to, which would be valid for six months.

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."4 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 cent5. 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.6 This amount however, will be generated only if there exists an equivalent demand for credit in the economy.

Table 2: Potential credit creation based on Reserve Ratios

Percentage remaining in account	Value in account	Potential credit creation	Potential credit as multiple of stock of debt today
70	992600	24815000	3.082345
60	850800	21270000	2.64201
50	709000	17725000	2.201675
40	567200	14180000	1.76134
30	425400	10635000	1.321005

Transition Issues

There are a number of transition issues that need to be managed for this transition to be effective:

1. **Infrastructure Issues:** There is need for a significant upgrade of the banking system as well as in the telecom infrastructure that would provide the backbone for digital transactions. For people to be able to transact at any time and place as well as for them to consider it a reliable medium of exchange, it is important that not only the banking system is upgraded to ensure that transactions can be completed without a hitch, but the supporting infrastructure too is up to the mark. For instance, in many parts of the economy, there is limited and intermittent supply of electricity as well as mobile connectivity. In these areas, it would be difficult to expect people to shift to electronic medium of exchange.

2. **Consumer behaviour Issues:** Apart from the technological issues, there is a behavioural change that is being expected in people from using cash as a medium of exchange to using other cash substitutes both for making payments and receiving payments. This transition requires individuals to make two changes in their behaviour: one, agents need to move from tangible means which can be seen and felt to forms which are less tangible or not tangible, and second, they have to learn to rely on technologically advanced tools to undertake regular day to day operations. The latter requires agents to be educated to the extent of comprehending the content of transactions. If this transition is not suitably managed, agents might be tempted to move to non-official cash substitutes.

3. **Accessibility in language:** In addition to all of the above, most of the banks and the mobile instruments for transaction are currently adapted to a single to two languages. If the bulk of the population of this country needs to come on board, it might be important to make these facilities available in a myriad of Indian languages to ensure that the user can comprehend the transaction that they are entering into.

4. **Transition issues for banking sector**: There are multiple issues here.

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.

5. Impact on Macro Variables

Apart from the transition issues faced by banks, in judging the impact on the economy, it is important to differentiate between the two changes that the demonetisation can bring about in money supply. The first change, i.e., cash being extinguished, to the extent it was being used as medium of exchange, would result in a compression in incomes, employment and consumption in the economy. On the other hand, the effect of the second change, i.e., cash being only partially replaced in the system would have the opposite effects of expansion in potential credit creation. The potential credit creation would translate into actual credit creation provided there is sufficient demand for credit. If the demand for credit in the economy is large enough, the potential credit can be realised. Of the credit created, other things remaining the same, it can be expected that at least a part of the credit, will be for productive purposes. This would mean expansion in investment in the economy and subsequently an increase in GDP and employment.
If there is increase in investment in the economy, the demand for capital goods rises. If output can expand in this sector, there would be an expansion in the income generation and in demand for goods and services. Sectors that are not operating with excess capacity cannot meet the expanded demand with increased output, leading to increase in prices. This would hold for agriculture as well as any industry with long gestation lags to investment. In other words, in the short run there is a possibility of increase in inflation.
With increase in GDP, since imports are supposed to be related to the size of the economy, it is expected that imports will rise, but the same cannot be said about exports. In other words, the balance of trade could worsen. This could result in pressures on the rupee towards depreciation. Any increase in inflationary pressures too could augment these pressures.
MSME is one segment of the economy which is credit constrained15. Expansion in the potential credit in the economy could expand the credit available to this segment of the economy which is more employment intensive than the organised manufacturing. In other words, if the access to credit for this segment can be improved, it can generate many positive spin-offs. One reason why this segment might get better access to formal sector credit would be if all their transactions move to the digital format, thereby making available to the lending institutions evidence of credit worthiness. However, for this the transactions need to move digital before they can get access to credit. In other words, unless the banking sector is exploring more risky asset categories, they would not be the beneficiaries of the expansion in potential credit.
It should be kept in mind that credit is not the only constraint faced by the MSMEs. There is a cost of compliance with regulation in the formal sector both of tax legislation and other legislation which would increase the cost of operation. In the absence of economies of scale, after incurring all these costs, some of the MSMEs might not be viable in the new environment. In other words, the decision to move from the informal sector to formal sector is a non-trivial decision for the units and merely changing the access to credit might not be adequate to alter the status quo. Under those circumstances, they might explore the use of alternative currencies as a means for survival.
It is, however, not correct to assume that expansion in credit will definitely materialise. In the last two years, the demand for credit in the economy has been sluggish at best. In comparison to a credit deposit ratio of 1.53 in 2011-12, the figures for 2014-15 were as low as 0.54. While there might be many factors that contributed to this outcome, what is of consequence is that the demonetisation has been introduced in this environment where demand for credit is rather low. A compression in demand in the economy would further depress the sentiment

driving investments. In other words, demand for credit would continue to be low and the potential credit will not be realised immediately.
The first consequence of this would be a fall in the interest rates in the economy which could revive some of the sentiment since firms with outstanding debt would have lower interest liabilities and hence, can see improved balance sheets.
The compression in demand would mean a decline in imports while exports might not be adversely affected. This change in the balance of trade would induce an appreciation of the currency. Along with lower interest rates, this could result in inflow of investment by FIIs as well.
If the demand for credit is not very sensitive to interest rates – then the lower interest rates would not bring in sufficient demand and banks would need to explore alternative ways of placing the additional deposits available with them. This could mean that banks take in more risky assets potentially opening up the economy to more volatility and risks. This could include real estate, consumer credit and consumer credit cards. The housing loan bubble of the US economy might be one such example of lending to more risky projects, thereby bringing in more volatility into the system.
Two more extreme possibilities that might follow are: a loss in the confidence of the people in the official currency leading to bank run kind of situations if the current description of waiting for long hours for withdrawing money persists and the caps on withdrawal are not relaxed. Alternatively, they could shift to alternatives to currency. Second, there could be social unrest if the compression in incomes and consumption are severe and persistent.

Alternatives to currency: would they evolve in the face of demonetisation?

A number of agents in the economy would be required to move from the informal sector to the formal sector. For these agents as well as for agents who have been operating through the medium of cash and find the transition difficult, certain informal cash substitutes might emerge. For instance, even at present, there are coupons like the SODEXO coupons which are used for paying for certain purchases. These are accepted by a range of establishments in place of formal currency. It is, therefore, possible to see an expanded use of these coupons. The change might induce the generation of other tokens as substitutes for money as well - the agency collecting MCD's green tax has started issuing tokens in place of change. Similarly, for high value transactions one can think of bitcoins and other such crypto currencies on one side and foreign exchange on the other as a mechanism for settling transactions. Perhaps these would not take on a dimension large enough to challenge the official currency, but it can disturb the expectation that the unaccounted economy would be brought into the formal sector since there might exist alternatives to the formal currency. Here it is important to explore the possibility and acceptability of peer to peer payment instruments – a category which has been evolving in recent times.

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. 16
 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.

Through financing of fiscal deficit: The generation of additional deposits and credit, as a result of the SLR requirements can make more credit available to governments. Given the FRBM (Fiscal Responsibility and Budget Management) limitations, the amount of borrowing that governments can take on may be limited and the additional supply can mean a decline in the interest rate that governments pay on their debt. This could be a positive spin-off for the governments.

6. Conclusions

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.

References

- Braga, F.D., Isabella G and Mazzon J.A., (2013). Digital wallets as a payment method influence consumer in their buying behaviour, Available at http://www.anpad.org.br/admin/pdf/2013_EnANPAD_MKT1209.pdf
- Internet desk. (2016, Nov. 12). Recalibration of ATMs will take up to three weeks, says Jaitley. *The Hindu.* Retrieved from http://www.thehindu.com/news/national/demonetisation-arun-jaitley-on-atms-going-dry/article9338238.ece
- Lee, Jinkook, Fahzy Abdul-Rahman, and Hyungsoo Kim. "Debit card usage: an examination of its impact on household debt." *Financial Services Review.* 16.1 (2007): 73.
- Mercatanti, Andrea, and Fan Li. (2014). "Do debit cards increase household spending? Evidence from a semiparametric causal analysis of a survey." The Annals of Applied Statistics. 8.4: 2485-2508.
- Morewedge, C. K., Holtzman, L., & Epley, N. (2007). Unfixed resources: perceived costs, consumption, and the accessible account effect. *Journal of Consumer Research*, 34(4), 459–467).
- Padmini Sivarajah. (2016, Nov. 11). Demonetisation: Madurai Corporation makes record tax collection on a single day. *The Times of India.* Retrieved from http://timesofindia.indiatimes.com/city/chennai/Demonetisation-Madurai-Corporation-makes-record-tax-collection-on-a-single-day/articleshow/55374378.cms
- PTI. (2016, Nov. 9). Demonetisation will benefit economy in long run: Jaitley. *The Hindu Business Line.* Retrieved from http://www.thehindubusinessline.com/economy/demonetisation-to-increase-eco-size-enhance-revenue-base-says-jaitley/article9324312.ece
- PTI . (2016, Nov. 12). Hyderabad civic body collects Rs 65 crore of property tax. *The Indian Express.* Retrieved from http://indianexpress.com/article/india/india-news-india/demonetisation-hyderabad-civic-body-collects-rs-65-crore-of-property-tax-4372156/
- Prelec, Drazen, and Duncan Simester. "Always leave home without it: A further investigation of the credit-card effect on willingness to pay." *Marketing letters.* 12.1 (2001): 5-12.
- Prelec, D., and G. Lowenstein. (1998). "The Red and the Black: Mental Accounting of Savings and Debt." *Marketing Science.* 17:4–28.
- Raghubir, P., Srivastava, J., (2008). Monopoly money: The effect of payment coupling and form on spending behavior. *Journal of Experimental Psychology-Applied*, 14(3), 213- 225.

- Special correspondent. (2016, Nov. 13). As ATMs run out of cash, RBI 'encourages' public to go digital. *The Hindu.* Retrieved from http://www.thehindu.com/business/Economy/rbi-urges-public-to-adopt-digital-as-atms-run-dry/article9339020.ece
- Soetevent, A.R. (2011). Payment choice, image motivation and contributions to charity: evidence from a field experiment. *American Economic Journal: Economic Policy*. 3, 180–205.
- Soman, D. (2001). Effects of payment mechanism on spending behaviour: The role of rehearsal and immediacy of payment. *Journal of Consumer Research,* 27(4): 460-474. http://dx.doi.org/10.1086/319621.
- ———(2003). The effect of payment transparency on consumption: Quasi-experiments from the field. *Marketing Letters.* 14(3), 173-183.
- Tokunaga, Howard (1993). The use and abuse of consumer credit: application of psychological theory and research. *Journal of Economic Psychology*, 14, 285-316.
- Trütsch, Tobias. "The Impact of Contactless Payment on Spending." International Journal of Economic Sciences 3.4 (2014): 70-98.