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DEMONETIZATION – AN ECONOMIC ANALYSIS

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Abstract: A lot of observations have been recorded recently on the impact of demonetization on Indian Economy. There have been many studies and opinions of economists like Basu (2016), Chanda (2016), Chandrashekhar (2016), Dasgupta (2016), Rai (2016) among others in formal as well as informal media about the sudden decision of Indian government to demonetize currency notes.
This paper attempts to study the theoretical viewpoint based on money supply and segmentation of markets. It will further analyze the effect of sudden changes in monetary policy and the uncertainty created thereafter on businesses.
Demonetization here refers to deeming of all or some currency denomination ineligible to be used in transaction. Money supply is understood as the sum of currency in circulation, demand deposits with commercial and cooperative banks, interbank deposits, and post office savings deposits.

Key words : demonetization, money supply, currency circulation, uncertainty, market segmentation

Introduction

Money and Money Supply

It is an accepted fact that money supports more trading and improves social welfare of people, than what would be possible without it. According to monetary economists, money is necessary because the total transactions attained with money are more than those attained without use of money (Wallace 2001; Nosal and Rocheteau 2011: 47). When considered from this view point, the demonetization decision of Indian government on 8th November 2016 would impact the economic welfare of Indian citizens negatively and reduce the number of transactions not only one time but in the immediate future as well. The money requirements for market transactions are fulfilled by two means. Where on one hand the current market assists current consumption and investment, on the other hand the credit market facilitates smooth production and consumption over a long period of time. Hence, a decline in liquidity in the short run would unfavorably affect current as well as future consumption and investment choices. This when studied with reference to the Indian market would have a more distinct effect as a huge percentage of transactions in the Indian economy are cash based and depend on informal financial institutions, money lenders and micro finance institutions.

Considering the measures announced by the government, some money provisions are targeted to reduce counterfeiting and other terrorist funding activities. When and if, these allocations become effective and illegal transactions come under the purview of law, it will have a positive impact on the economy. In the long term however, exhausting the supply of cash would not be an effective strategy against curbing counterfeiting etc.

The procedures announced by the Indian government require deposit of cash in banks. This would lead to an increase in cash reserves of banks. But this does not imply an increase in money supply. According to Carpenter and Demiralp.2012, if banks are already holding excess reserves, new deposits would not lead to an increase in money supply. Also, the money multiplier effect may not describe accurately the creation of money by banks. As stated by McLeay et al (2014), money creation through loans in modern economies depends upon the competitiveness of banking industry and availability of profitable investment opportunities. Money creation does not necessarily depend on availability of deposits.

The reserves with RBI are maintained by active lending and borrowing in the call money market or by borrowing from the central bank of the country. It uses facilities like LAF (Liquidity Adjustment Facility) to maintain the required reserves. RBI controls creation of loan deposits by changing the repo and reverse repo rates through LAF. If the theory of McLeay et al is applicable to the Indian Economy, then the money multiplier theory would not be able to explain money creation by banks. Further, if no new investment opportunities arise and with CRR at 100% incremental ratio, the deposits created by demonetization being temporary in nature would not result in creation of new loans and therefore increase in money supply.

Segmented Markets and Demonetization

The effect of response of people on the aggregates discussed above need to be analyzed. The Indian market can be divided into two sets based on the use of electronic means of payment. One set, which majorly uses cash and the other which uses formal modes of payment for transactions.

The study of effects of demonetization on these two sectors is studied with the help of the segmented markets model—based on the work by Grossman and Weiss (1983), Rotemberg (1984) and Lucas (1990).

According to Williamson (2011) the segmented markets model is a flexible, prices and wages model which displays monetary non-neutralities during the short-run. It is a micro-founded model, in which economic decisions are based on optimization.

The decisions and assumptions are as follows (Williamson,2011):

Consumers optimise on two dimensions:

—current consumption and leisure given the wage rate and goods prices. This gives rise to the standard upward sloping labor supply curve (Ns).

—current and future consumption given the real interest rate, r. This gives rise to the savings curve in the market for financial capital and changes in the real interest rate affect (Ns(r)).

Firms optimise to choose two variables:

—current demand for labour taking wages as given. This gives rise to labour demand curve (Nd) for a given capital stock and total factor productivity.

—current demand for capital given the interest rate and its marginal productivity.

Output demand (Yd) comes from equilibrium demand for current consumption, investment goods and government expenditure respectively and is affected by changes in real interest rate through consumption and investment expenditure.

Output supply (Ys) is determined by total employment for a given real interest rate and the production function.

Money demand (Md) is a function of price level and output. Money supply (Ms) is fixed by the central bank. Government balances the budget.

In the standard version of the segmented markets model, it is assumed that only firms and some consumers have access to formal financial markets. If the central bank conducts an open market operation to increase money supply, the interest rate declines and makes it attractive for firms to hold onto money. Since firms are the first ones to get access to money, they decide to hire more labor, after which, all the real effects follow. Segmented market

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South Asia Journal of Multidisciplinary Studies SAJMS July 2017, Vol. 3, No 6
UGC 49956-926

models are characterized by a short-term liquidity effect as the real interest declines because of an increase in the money supply.

The model given by Williamson is modified according to the Indian economy after demonetization. Demonetization resulted in a decrease in money supply not connected to the open market operations of RBI.

Assuming two groups of consumers and firms based on their payment pattern, one group is of those who use formal financial markets and mode of payment. These can be termed as the formal organized sector. The other group represents those who predominantly depend on cash for their transactions and can be categorized as the informal unorganized sector. Presupposing minimum overflow between the two segments, the effect of demonetization can be summarized as shown in the figure given below:

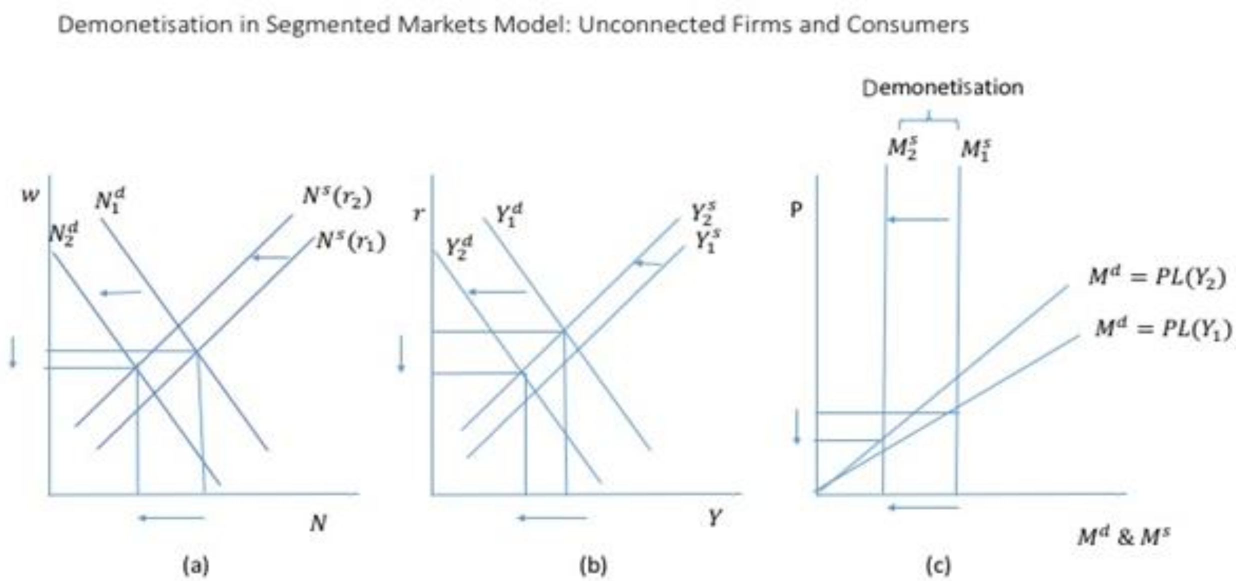

Fig:1 Effect of Demonetization in Segmented Markets Model: Unconnected Firms and Consumers (Waknis P.2017)

Graph (a) represents the labor market; (b) the goods and services market and (c) the money markets:

Due to demonetization, the money supply reduces as can be seen in graph (c) where money supply curve shifts towards the left from Ms1 to Ms2. Due to lesser availability of cash, the demand for goods and services decreases from Yd1 to Yd2 in graph (b). This is aided by the fall in consumption levels and stalling of investment plans. The leftward shift may be decreased by the credit arrangements of consumers with local shops and retailers.

The leftward movement of the output demand curve (graph b) causes a decrease in the real interest rate. This in turn causes the labor supply curve to decline from r1 to r2. This is due to the reduction in opportunity cost of labor as people have to stand in lines to exchange their old currency and skip work. Since the informal sector firms do not enough cash to pay as wages to labor, the demand for labor also decreases. Employment decreases and hence supply curve also moves leftwards from Ys1 to Ys2. As output falls, so does the demand for money.

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According to Waknis, 2017, as output falls, eventually there will be a decline in the demand for money, arresting some decline in the aggregate price level caused by demonetisation. Summing up the analysis we can say that the informal economy goes through a major decrease in employment, production output, interest rate and price levels.

The following graph shows the effect on the formal sector of consumers and firms:

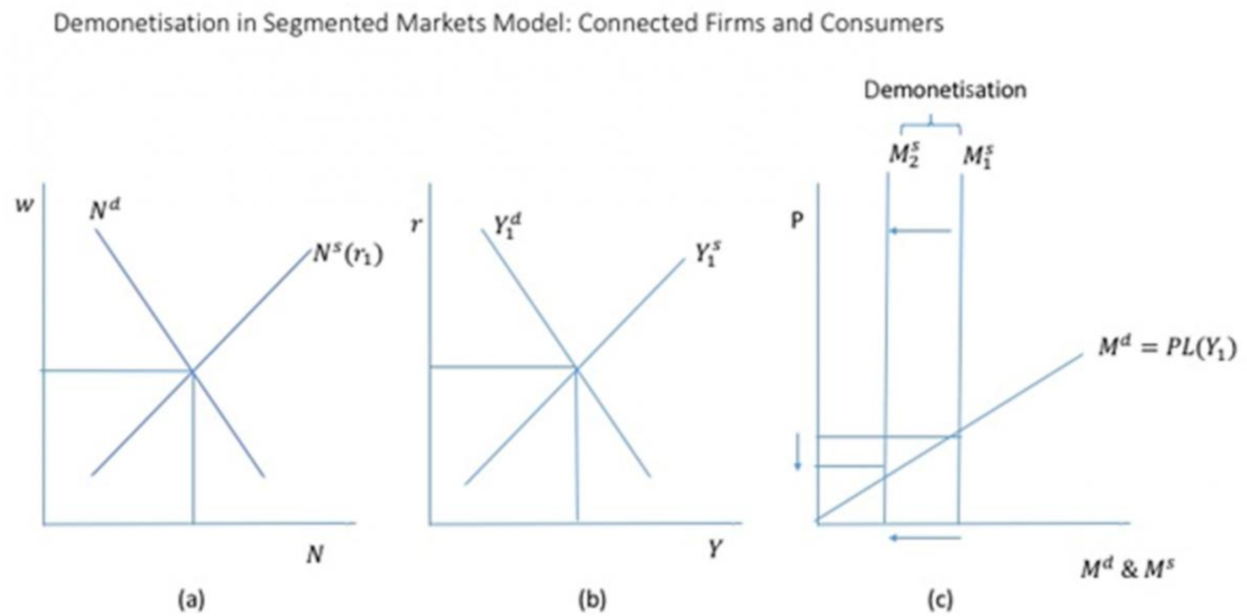

Fig:2 Effect of Demonetization in Segmented Markets Model: Connected Firms and Consumers (Waknis P.2017)

As evident from the figure above, the formal sector is not much affected by demonetization. Even though there is a decline in money supply it is majorly in cash. Through their access to alternate means of payment, these firms and consumers are able to manage shortage of cash with minor hassles. They are able to pay wages and salaries though electronic means and as such there is no affect on the labor market. A decrease in price level may result in increase in output demand in near future.

The total effect of demonetization on the economy depends on the level of contribution of formal and informal segments to the GDP of the country. According to Ghani et al 2013, the unorganized sector employs around 80 % of labor but contributes around 20% of GDP as per Enste and Schneider 2000. Since informal firms are relatively less productive than their formal counterparts, their effect on GDP would be lesser than that predicted.

Legal Implications

Demonetization of currency either all or some may have strong implications for the governance bodies of the country. According to Simon Clarke when economic subjects are not free to convert their commodities into money form, they cannot participate in a competitive market economy. This may endanger many economic transactions of falling under the control of monopolies and criminal structures.

As can be seen from the Russian example that the demonetisation, criminalisation and monopolisation of the economy, which had led to the deepest and longest economic depression in world history, had been a direct result of the government's monetary and financial policies, which severely restricted the supply of money and gave monopoly powers to financial institutions. For the success of demonetization policy, it is imperative that the government expands credit creation and increase supply of money. This would reduce the dependence of informal sector on criminal structures and aid in curbing shadow deals. Apart from money supply increase, it is also as important for the government to address the issue of shadow economy. Increasing the supply of money on its own will not solve the problem because it will just put more money into the hands of the banks which will flow into the shadow economy or out of the country. Firms and consumers in such cases prefer to make barter deals with suppliers and consumers to evade taxes.

Prof. Simon Clarke stressed on the expansion of the supply of money combined with resolute action against the shadow economy and against barter transactions in order to ensure that the money will be used to finance legitimate trading and productive activities.

To facilitate de criminalization of economic activities, the economic reforms must be supported by legal reforms as well. Systematic program of reformed policies put in place to strengthen law based market economy have to be developed by the government. But these reforms cannot be considered in isolation from the wider economic and political situation. The trade unions have a vital role to play in such a program by rallying the support of workers for effective reform, by monitoring the implementation and enforcement of reforms to bring economic and financial activities within the framework of the law.

Lessons for Businesses

Business environment is always in a state of flux but market conditions today have become more dynamic than ever. The referendum in favor of exit of Britain from European Union and election of President Trump caught businesses by surprise. Even though both events were expected, they had an unprecedented impact on business planning and implementation in times of uncertainty. War on terrorism and unrest in most parts of the world and the refugee crisis has worsened the situation for many economies. Such events, expected beforehand but still uncertain, are disruptive events for business and have long lasting impact on business strategy and planning. Comparatively, demonetization was an unanticipated event. It disrupted business plans overnight and affected lives of most Indians making it a Black Swan event. A Black Swan event is unpredictable and impossible to foresee. Companies have faced many such Black Swan events in the past like the 9/11 crisis.

Global economies are interlinked and the effect of events transcends national boundaries quickly, minimizing reaction time for companies. This is the time of the VUCA world, an environment ridden with volatility, uncertainty, complexity and ambiguity. Events like demonetization have a low probability of occurrence but high impact on businesses. Due to their low probability of occurrence, companies are not prepared with precautionary measures to tackle black swan events. This implies availability of lesser time to put in place mitigation strategies and support structures. In black swan events such as demonetization, time is of great essence to deal with the crisis.

In light of the recent events and changed context, leaders need to look into the future along with the present. Past events can no longer be taken as foundation for future strategies. Strategic planning assumes prediction of outcome and control of processes. But with ambiguity prevalent in the environment, there can be no prediction or control. According to Harish Manwani, ex CEO of Hindustan Unilever, business should ensure

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UGC 49956-926

flexibility in its future plans as days of fixed long term plans are over. It has become imperative for businesses to deal with any scenario, any black swan, with flexible and adaptable strategies molded according to situation.

Risk management systems of companies for tackling high impact events like demonetization, play a vital role in business success or failure. An obsolete risk management system would be a major setback for any business. Traditional risk management techniques function on the experience of team members. Their underlying assumptions are usually not challenged enough to make way for new strategies for low probability black swan events. The organizations should be prepared for such events because these events though low in probability have major impact on companies thus paving their way for success or failure.

The future cannot be foretold, but organizations must prepare its next generations of leaders by empowering them to take bold decisions which challenge the status quo and prepare the management in developing new set of assumptions and beliefs for strategic formulation and risk management.

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