

## **Demonetization and Remonetization: Macroeconomic Issues and Implications**

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### **ABSTRACT**

*The paper has examined the impact of demonetization and remonetization on price, output and use of e-payment for the purpose of transactions. The theoretical rationale based on Fisher's Equation of Exchange suggests that reduction in the quantity of money in circulation in a substantial way must curtail output and average price level. However curtailment of money in circulation on account of abrupt demonetization in the Indian economy on November 8, 2016 has only a marginal impact in the reduction of the average price level but gross value of output instead of falling has increased. Besides it has been found that demonetization is an extremely useful short run measure in promoting e-payment system in the economy, but as remonetization takes place e-payment transaction has dropped in the country. This is indeed a reflection of strong desire among people to make cash payment in the economy since it hides many of the corrupt practices of generating black money which otherwise is not possible in case of e-payment system.*

**Keywords:** Demonetization, Remonetization, e-payment system, Fisher's Equation of Exchange.

### **INTRODUCTION:**

Demonetization of a currency implies ceasing of different denominations of currency from its use in the country as a legal tender and replacing it with a new currency which may be of different denominations. Remonetization on the other hand is to put in circulation different denominations of currency in the economy to fill the void created on account of demonetization of the currency which was in circulation earlier. The first demonetization in Indian economy took place on January 12, 1946 when the government promulgated the two ordinances for declaring Rs.100, Rs.500, Rs.1000 and Rs.10000 to be non legal tender money and people have to exchange these high denomination notes till February 9, 1946 and was subsequently extended till April 26, 1946. The second demonetization took place on January 16, 1978 in which Rs.1000; Rs.5000 and Rs.10000 notes were demonetized to curb black money. On November 8, 2016 third demonetization took place when government announced Rs.500 and Rs.1000 notes would not remain as legal tender money. The major difference between current demonetization and past demonetizations is that in case of current demonetization only negligible amount of exchange was allowed at the beginning and bulk has to be deposited in the account whereas in the previous demonetization full exchange was allowed in place of the demonetized currency.

It is a natural outcome that an abrupt move by the government to demonetize the currency notes it stifles the growth of output and scale down the rate of inflation especially when the denomination of currency notes of Rs.500 and Rs.1000 constitute 86.9% (Rs. 15.4 lakh crore) of the value of total currency in circulation. The siphoning –off of such a sizeable amount of currency notes has a direct bearing on the transaction by the people as the same amount cannot be remonetized immediately. The extent to which Demonetization has impacted the inflation rate and output growth needs empirical investigation. The purpose of this paper is to theoretically as well as empirically assess the impact of demonetization on both these macroeconomic variables and to find out the short run and long run implications of it on the e-payment system.

## REVIEW OF LITERATURE:

Syansundar Palanisamy (2017) made a comparative study on demonetization with special reference to India has compared and analyzed the impact of demonetizations and their significance in the economic development of India by comparing with other countries namely Nigeria, Ghana, Pakistan, Zimbabwe, North Korea, Soviet Union, Mynamar and Australia and revealed that India will be able to achieve growth by adopting the strategy of demonetization and it will create a positive impact in the long run.

Ms. Yashna Samuel and Prof. Anoop k.Saxsena (2017) in their study on demonetization and its impact on India has examined short run and long run impacts of demonetization with reference to different sections of Indian economy and found that demonetization will create liquidity crunch in the short run which may cause inconvenience to general public in the short run but it will definitely prove beneficial in the long run.

K. Veerakumar (2017) has analyzed the impact of demonetization on the public by considering 100 respondents from Coimbatore district and the sample study revealed that demonetization facilitates in destroying black money followed by corruption and terrorism.

Tax Research Team (2016) in their study on demonetization and its impact on economy has specified the impact of demonetization on credit availability, expenditure, level of economic activity and government finances. It has been found that there would be contraction of economic activity in the economy, increase in deposits while credit activity may be moderated.

E Kanatchi Muthulakshmi and Dr G.Kalaimani (2017) has assessed that demonetization is a tool for eradicating parallel economy from the country and suggested that demonetization is a useful tool to curb black money to a great extent.

## OBJECTIVES, SCOPE AND METHODOLOGY:

There have been different studies related to demonetization but there is hardly any study that have analyzed the behaviour of different quarters of the year 2016-17, the year which has witnessed the phenomenon of demonetization as well as remonetization.

1. Thus the first objective of the paper is to theoretically as well empirically assess the impact of demonetization on inflation and output growth.
2. Another objective is to find out the short run and long run implications of demonetization and remonetization on the e-payment system.

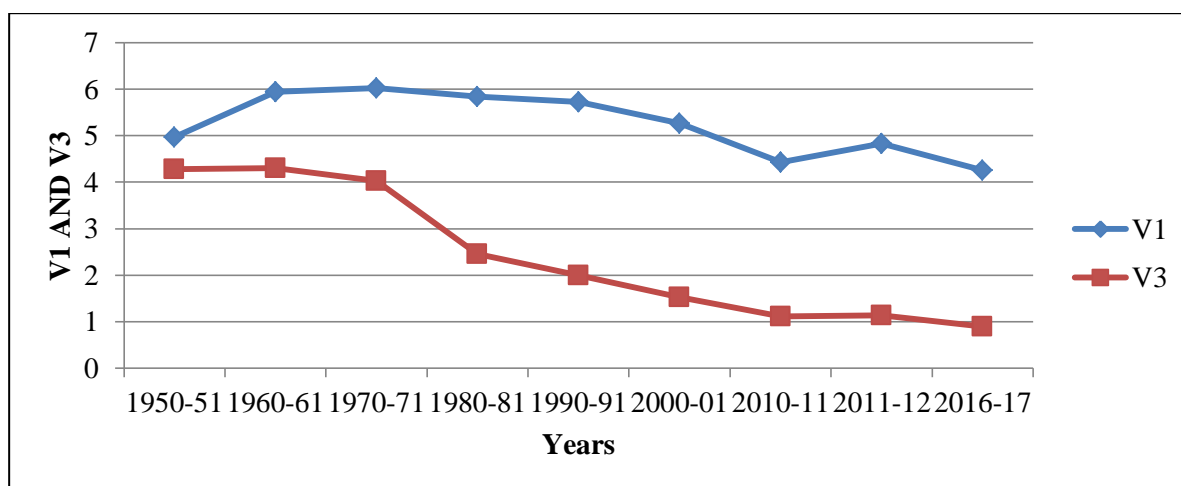
As outlined earlier the scope of the study is confined to third and fourth quarter of the year 2016-17.

The methodology of the study is that the theoretical and empirical analysis of the study is based on Fisher Equation of Exchange. For the purpose of empirical analysis the secondary data is collected from Reserve Bank of India bulletin and the estimates of Gross Value Added (GVA) provided by the Central Statistical Organization (CSO).

## ANALYSIS:

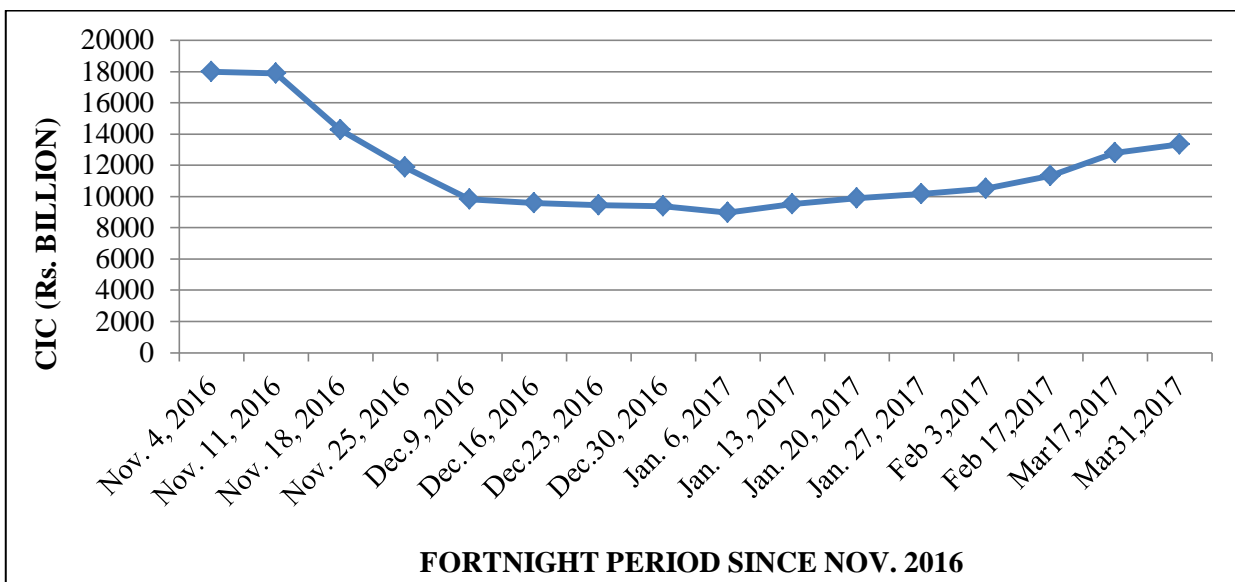
The behaviour of velocity of circulating money as depicted in Fig I shows that it has the tendency to decline overtime since 1950-51 to 2016-17.

Figure I: Velocity of Circulating Money in India



This indicates growing monetization of the Indian economy and preferences of the people to make cash transactions rather than use of e-payment system for the purpose of transactions of goods and services. Our observations is based on the inference drawn by the Bordo and Jonung (1957) in their study of about 100 countries where they have found that velocity of circulating money specially in five developed countries namely follow U-shaped. According to them the following part of velocity of circulating represents growing monetization of the economy while the rising part indicates increasing financial sophistication i.e. growing use of financial innovative instruments for the purpose of transactions in India because velocity of circulating money has declined overtime indicating increasing use of monetary transactions in the economy. Thus the fact that Indian economy is mainly based on cash transactions and just prior to demonetization bulk of the currency in circulation (86.9%) consisting of Rs.500 and Rs.1000 notes merely signifies that abrupt demonetization of higher denomination of currency should adversely impact the output growth and inflation rate is a natural inference that one could draw from Fisher’s Equation of Exchange ( $MV=PY$ ) where M is currency in circulation, V is velocity of circulating money, P is average price level and Y is output. The movement of currency in circulation during the period after demonetization is shown in the figure II:

**Figure II: Currency in Circulation (CIC) In India**



It is evident from the figure that currency in circulation after demonetization has declined significantly from Rs. 17975 billion on November 4, 2016 to Rs. 8980 billion on January 6, 2017. This decline is little over 50% of the currency in circulation just before demonetization and as per Fisher’s Theory this decline must result in decline in the price level as well as of output. However the available data of consumer price index (CPI refer figure III) and gross value added of output at constant prices (refer figure IV) shows that consumer price index (CPI Combined rural +urban) has declined marginally while output as measured by gross value added (GVA) at basic prices (2011-12) has increased.

**Figure III: Consumer Price Index Combined (Rural + Urban)**

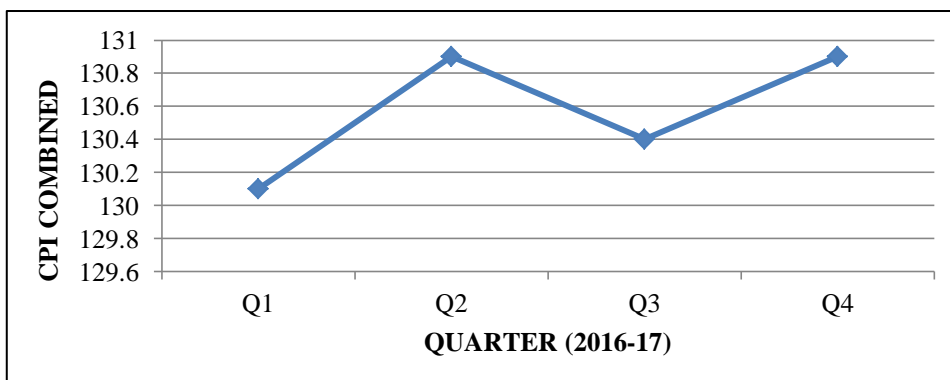
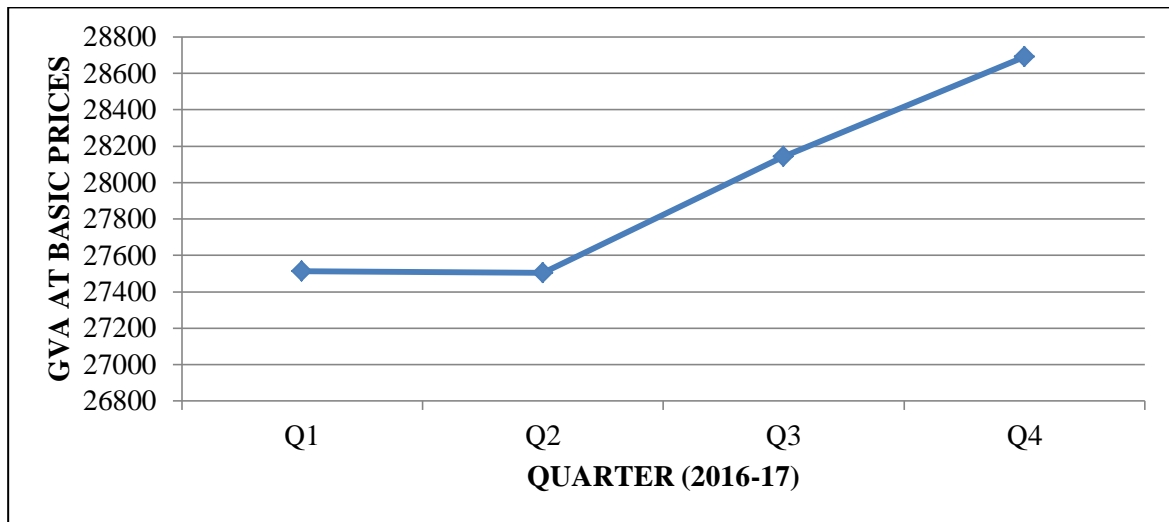


Figure IV: Gross Value Added (GVA) at basic prices (Rs. Billion)



This suggests that after demonetization people have switched over to e-payment mechanism to meet consumption expenditure needs. The extent to which e-payment system is used by the people to finance their consumption expenditure can be estimated in terms of Fisher’s Equation of Exchange which is another important objective of this paper. This can be assessed by the fact that prior to demonetization the velocity of circulating money was stable at around an average stable value of 1.95 (refer table I) in the first and second quarter of the financial year 2016-17.

Table I: Currency in Circulation, Gross Value Added and Velocity of Circulating Money in India During the Four Quarters of the Year 2016-17

Quarters	Currency In Circulation (M) (Rs. BILLION)	Gross Value Added at Current Prices (Y) (Rs. Billion)	Velocity of Circulating Money (V=Y/M)
Q <sub>1</sub>	17331.1	33410.95	1.93
Q <sub>2</sub>	17279	33987.49	1.95
Q <sub>3</sub>	9384	34903.38	3.71
Q <sub>4</sub>	13352.7	35283.47	2.64

However after demonetization the value of velocity of circulating money jumped to 3.71, but had their being no demonetization the value of velocity of circulating money would have remained stable at around the average value of 1.95. Taking this into account along with the value of currency in circulation in the third quarter the gross value added (GVA) at current prices should have been Rs.18299 billion. However the actual output at current prices at the end of third quarter has exceeded estimated value by about 47%. This reflects that this additional quantum of output has been financed by the e-payment device. This is indeed a substantial change in the habits of the people but is exhibited only in times of crisis but as the normalcy is restored they again move back to their original habits of cash transactions. This can be substantiated by the available data of the terminal quarter of 2016-17. The terminal quarter of the financial year 2016-17 comprises of the months January, February, March 2017 and during this period currency in circulation has started moving upward (refer figure II). The gross value added (GVA) also showed upward movement as a result velocity of circulating money declined (refer table 1) indicating that cash transactions has begin to improve with the augmentation of currency in circulation since it will take time to fully replenish the amount of currency in circulation that has been curtailed due to demonetization of higher denominations of currency notes. Therefore velocity of circulating money has not moved back to the original level of 1.95 but has certainly come down significantly from 3.71 attained at the end of third quarter to 2.64 by the end of fourth quarter of the year 2016-17. The net impact of this on the e-payment system is that the improvement made by it to the extent of 47% of gross value added at current prices has been reduced to 24% of gross value added at current prices i.e. e-payment habits of the people from third quarter to fourth quarter has almost been reduced to half. This reflect the tendency of the Indian people to have strong desire for cash preferences and regards it as a most convenient form of making transactions rather than the use of credit card, debit card, paytm, e-wallets etc and there is hardly anything to wonder that complete

normalcy of currency is restored if Velocity of circulating money moves back to the original level of 1.95. Demonetization, therefore is a very short run phenomenon to force people to use e-payment mechanism for transactions but overtime its use is mitigated on account of strong desire among people to make cash payment in the economy since it hides many of the corrupt practices of generating black money which otherwise is not possible in case of e-payment system.

### CONCLUSION:

The theoretical rationale based on Fisher's Equation of Exchange suggest that reduction in the quantity of money in circulation in a substantial way must curtail output and average price level. However curtailment of money in circulation on account of abrupt demonetization in the Indian economy on November 8, 2016 has only a marginal impact in reducing the average price level but gross value of output instead of falling has increased. Thus, it is prolonged reduction in the quantity of money in circulation may have a significant positive impact on average price level and output growth but not atleast in the short run.

However demonetization is an extremely useful short run measure in promoting e-payment system in the economy. The fact that demonetization has promoted the use of e-payment devices to the extent of about 47% of the gross value output at current prices shows that if immediate remonetization is not done then probably the effect of demonetization could have a lasting impact in augmenting the e-payment habits of the people in the economy. But as our analysis has revealed that remonetization began from the initial month of the terminal quarter of the year 2016-17 and has caused e-payment to decline substantially from 47% to about 24% of gross value of output at current prices by the end of the fourth quarter of the year 2016-17. This is a sufficient indication that immediate remonetization is not conducive, rather deters the augmentation of e-payment in the economy and is indeed a reflection of strong desire among people to make cash payment in the economy since it hides many of the corrupt practices of generating black money which otherwise is not possible in case of e-payment system.

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