

AN ANALYTICAL STUDY ON THE IMPACT OF DEMONETISATION ON THE USAGE OF PLASTIC CURRENCY IN INDIA

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Abstract

This paper aims to analyze the impact of demonetization on the use of plastic money in the Indian economy. On November 8, 2016, the government introduced the demonetization to monitor invisible parallel economies, facilitate digital transactions and reinforce the Indian financial system. This research explores whether the use of plastic money in India post demonetization has changed significantly. Research data was collected from 2015-16 to 2017-18 from the website of Reserve Bank of India, and paired sample t-tests were used for analysis. The study found that demonetization had no noticeable effect on plastic money use. This study would be useful to both the public and government in increasing the use of plastic currency.

Keywords : Black Money, Demonetization, Gross Domestic Product, Plastic money.

INTRODUCTION

Demonetization is the act of eliminating the legal status of a currency unit. The Indian government recalled the currency notes of Rs 500 and Rs 1000 from its status as legal tender on 8 November 2016. Rs 500 and Rs 1000 bank notes are approximately 86.40 percent of the total money circulation with the value of Rs 15.44 lakh crores, according to the Reserve Bank of India survey, on 31 March 2016. 97% of old notes were deposited in the bank before 31st December 2016, roughly about Rs. 14.98 lake crore. Lokesh Uke (2017) argued that there is an increase in inflation, corruption, black money and a boost to cashless transactions in the country for reasons of demonetization.

The Indian economy is one of the fastest growing economies in the World, achieving a growth rate of approximately 7%. In comparison, the 18% gross domestic product ratio is possibly one of the lowest in the World, as India has become listed in the 2017-18 Union budget as a tax-free compliant country. Economy development is hampered by tax evasion, corruption, black money and fake notes. Neelavathi K investigated the government's need for better and more reliable payment ports using programmed high security tools that do not result in data theft or hacking of user's financial information.

LITERATURE REVIEW

Kumari D (2016) stated that inadequate infrastructure is a significant barrier to digital transactions. Illiteracy, as defined by UNESCO, is one of the key issues in electronic transaction road. Hacking is one of the concerns for the cashless transaction, as per Economic Times.

Pathania, (2016) examined some of the benefits of cashless transactions to nations like increased GDP by using cards and reduced social cost, increase in financial inclusion due to acceptance of electronic payments, reduces the unparalleled economies, reduced in cash payment enables e-commerce growth and facilitated credible transactions online. He says that

at 1.7% of GDP, India incurs a much higher cost of cash than most developed economies. Every changing digital World had a massive impact on Human resources. It had created an impact on their jobs and their workplaces.

Garg and Panchal (2017) published a report on people's views regarding India's digital economy. Responses from respondents indicate that cashless economy can help to restrict black money, counterfeit fake currency, counter terrorism, reduce cash-related theft, and help increase our country's economic growth. Cyber fraud, high illiteracy rates, people's attitudes, and lack of accountability and productivity in the digital payment system are major challenges that can impede the policy's implementation. The study shows that India 's implementation of a cashless economy can be viewed as a step in the right direction. It contributes to economic growth and development in India.

Gupta (2017) the main aim of the paper was to find out schemes, achievements and challenges of the Haryana government for the cashless transaction. She says that in order to promote cashless transactions in India Central Government has also launched Lucky Grahak Yojana and Digi Dhan Vyapar Yojana in which monetary benefits will be provided to citizens using cashless transactions. The Haryana government has agreed to observe a 'cashless week' to facilitate digital payment in the state from January 20 to January 27. The government has also agreed to involve students and staff at the college to support the cause.

Kumari and Khanna (2017) explore the impact of implementing a cashless system on developed countries' economic growth and development. The research revealed that the implementation of the cashless economy initiative would increase the country's growth in fiscal stability. It seems like a lot has already been done to make people aware of the cashless system and that a large number of people are still waiting for the cashless economy to be implemented. The cashless economy project will significantly support the developing economy; hence, the cashless program will be beneficial in the fight against corruption and money laundering. One significant contribution of the cashless economy is that the risk associated with carrying cash is supposed to be reduced.

Sharma (2017) surveyed to understand India's cashless economy potential through a comprehensive Jodhpur City household survey. The degree to which households made non-cash outlays was calculated. The bottlenecks that prevented households from making non-cash payments such as protection, internet access, card failure, hacker activity, lack of technology are customer's worries about moving to a cashless economy have also been established.

OBJECTIVE OF THE STUDY

To understand the detailed overview of demonetization concerning the Indian economy and to investigate the impact of demonetization on the use of plastic money concerning credit cards, debit cards and prepaid payment devices.

METHODOLOGY OF THE STUDY

The research was conducted from data taken from the RBI website from 2015-16 to 2017-18 on the effect of demonetization on the use of plastic money in relation to the Indian economy. For the analysis, paired sample t-test was conducted to analyze the effect of demonetization on the use of plastic money on credit cards , debit cards and prepaid payment devices.

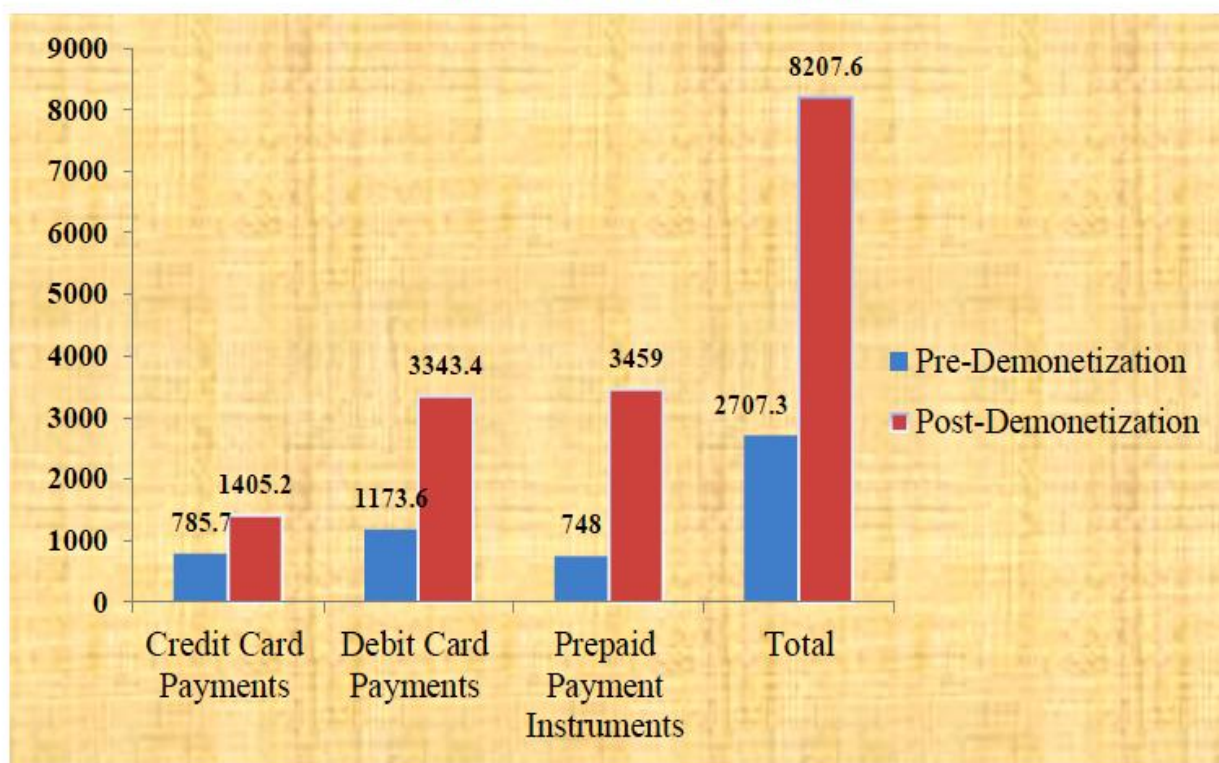
RESULTS AND DISCUSSION

Table 1: Effect of demonetization on the use of payments with plastic money (Volume in a million)

| | Pre-Demonetization | | Post-Demonetization | |
|-----------------------------|--------------------|------------|---------------------|------------|
| | Volume | Percentage | Volume | Percentage |
| Credit Card Payments | 785.7 | 29.02 | 1405.2 | 17.12 |
| Debit Card Payments | 1173.6 | 43.35 | 3343.4 | 40.74 |
| Prepaid Payment Instruments | 748.0 | 27.63 | 3459.0 | 42.14 |
| Total | 2707.3 | 100 | 8207.6 | 100 |

Source: RBI Annual Report 2017-18

Figure 1: Histogram Showing Plastic Money Payments volume in Million Pre and Post-Demonetization



The above table and histogram show the impact of demonetization on the usage of plastic money payments volume in a million, analyzed with respect to Credit, Debit, and Prepaid Payment Instruments. The total volume of plastic money pre demonetization i.e. 2015-16 is 2707.3 million and the total payments volume post demonetization is 8207.66 million. It reveals that demonetization should give a positive effect on usage of plastic money.

Hypotheses

H0: There is no significant impact of demonetization on the volume of plastic money payments.

H1: There is no significant impact of demonetization on the volume of plastic money payments.

Usage of plastic money volume in million

t-test: Paired two Sample for Means

| | <i>Variable 1</i> | <i>Variable 2</i> |
|------------------------------|-------------------|-------------------|
| Mean | 902.4333 | 2735.866667 |
| Variance | 55503.84 | 1331346.173 |
| Observations | 3 | 3 |
| Pearson Correlation | 0.383319 | |
| Hypothesized Mean Difference | 0 | |
| Degree of Freedom | 2 | |
| t Stat | -2.9253 | |
| P(T<=t) one-tail | 0.049845 | |
| t Critical one-tail | 2.919986 | |
| P(T<=t) two-tail | 0.09969 | |
| t Critical two-tail | 4.302653 | |

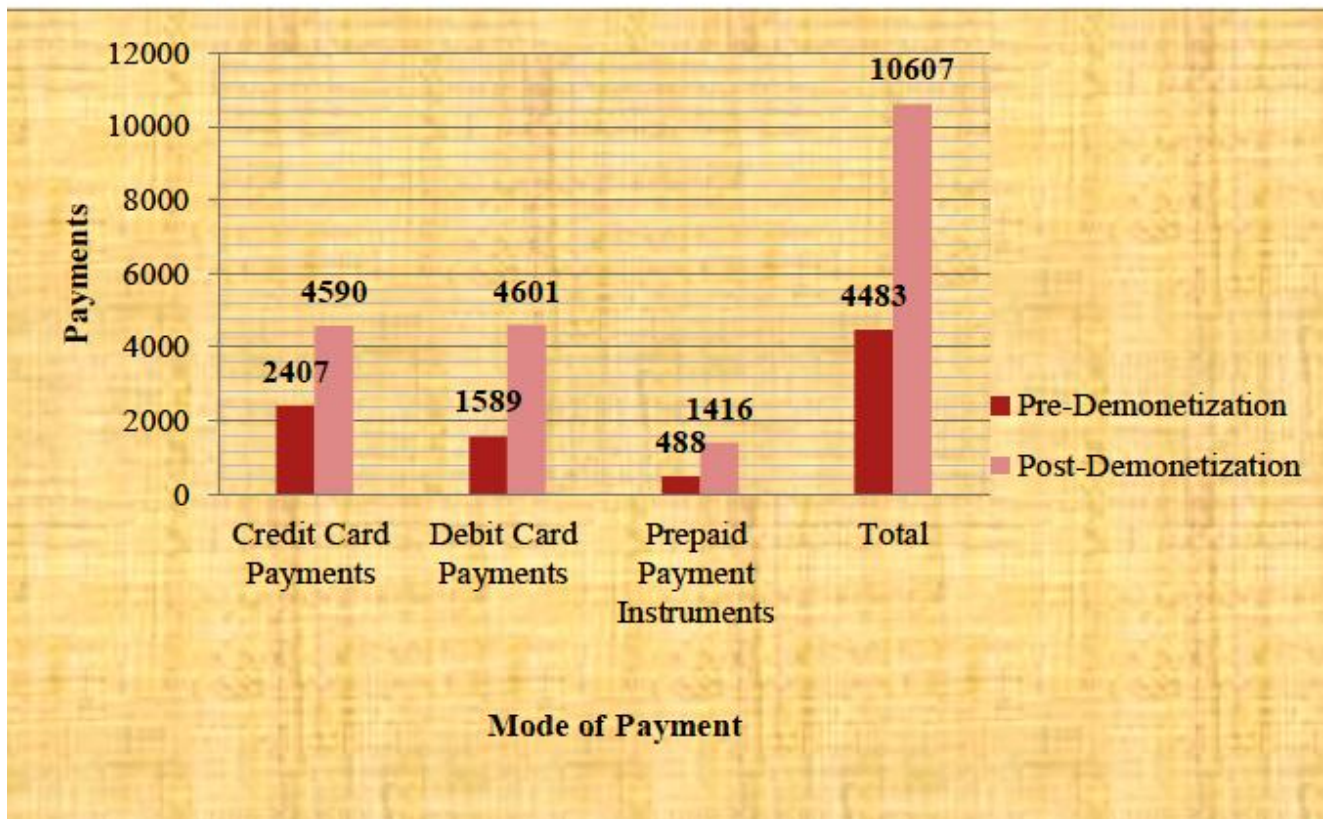
From the study, it is clear that P(T<=t) two-tail (0.099) gives the likelihood that the absolute value of t-Statistics (2.92) is observed, which is lower in absolute value than the critical t value (4.30). Since the p-value is greater than the alpha, 0.05, we accept the null hypothesis that there is no significant impact of demonetization on the use of plastic money in volume.

Table 2: Impact of Demonetization on usage of Plastic money (Value Rs. in billion)

| | Pre-Demonetization | | Post-Demonetization | |
|-----------------------------|--------------------|------------|---------------------|------------|
| | Value | Percentage | Value | Percentage |
| Credit Card Payments | 2407 | 53.69 | 4590 | 43.27 |
| Debit Card Payments | 1589 | 35.44 | 4601 | 43.38 |
| Prepaid Payment Instruments | 488 | 10.87 | 1416 | 13.35 |
| Total | 4483 | 100 | 10607 | 100 |

Source: RBI Annual Report 2017-18

Figure 2: Histogram Showing Plastic Money Payments Pre and Post-Demonetization value Rs. in Billion



The above table and histogram show the impact of demonetization on plastic money payments value rupees in billion, which is analyzed with respect to Credit, Debit, and Prepaid Payment Instruments. The total value of plastic money payments pre demonetization i.e. 2015-16 is 4483 billion and the total payments value post demonetization is 10,607 billion. It reveals that demonetization should have a positive effect on the usage of plastic money.

Hypotheses

H0: There is no significant impact of demonetization on the usage of plastic money payments Value.

H1: There is a significant impact of demonetization on the usage of plastic money payments Value.

Usage of plastic money value Rs in billion

t-test: Paired two Sample for Means

| | <i>Variable 1</i> | <i>Variable 2</i> |
|------------------------------|-------------------|-------------------|
| Mean | 1494.666667 | 3535.666667 |
| Variance | 927314.3333 | 3369770.333 |
| Observations | 3 | 3 |
| Pearson Correlation | 0.904044892 | |
| Hypothesized Mean Difference | 0 | |
| Degree of Freedom | 2 | |
| t Stat | -3.369242423 | |
| P(T<=t) one-tail | 0.038966541 | |
| t Critical one-tail | 2.91998558 | |
| P(T<=t) two-tail | 0.077933082 | |
| t Critical two-tail | 4.30265273 | |

From the study, it is clear that P(T<=t) two-tail (0.77) gives the likelihood that the absolute value of t-Statistics (3.36) is observed, which is lower in absolute value than the critical t value (4.30). Since the p-value is greater than the alpha, 0.05, we embrace the null hypothesis that demonetization does not affect plastic money use in value.

CONCLUSION

This paper analyses whether there is any significant impact of demonetization on usage of plastic money. By applying the t-test, the usage of plastic money volume and value during pre demonetization and post demonetization has been tested. The results show that the usage of plastic money in both volume and value does not affect due to demonetization. The results revealed that the null hypothesis had been accepted and it explains demonetization has no significant impact on the usage of plastic money.

LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

This research has the following limitations: Analysis focused on secondary data sources. Certain groups and other countries can not generalize outcomes. This study discusses the effect of demonetization on plastic money use. Further research can be done on the impact of demonetization on MSME results. Research can also light on the areas like the effect of demonetization on the bank's operational efficiency and agriculture sector.

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