IMPACT OF DEMONETIZATION ON DIGITAL TRANSACTIONS IN INDIA

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ABSTRACT

India has been witnessing financial transactions through digital mode since the availability of internet facility in urban cities. One could observe gradual increase in the same ever since smart phones reached in the hands of general public because of its cost and need. But, the major thrust towards digitization has been witness subsequent to demonetization of Rs 500 and Rs 1000 currency notes in India. It was all due to technology and digital mode of transferring money which did not allowed the entire business system coming to halt. The present study focuses on the impact of demonetization in enhancing the digital mode of transactions and shift of our society towards cashless regime. The findings of the study have been supported by various statistical test such as Kolmogorov Smirnov test , Levenes test, t-test, etc.

KEYWORDS: *Demonetization, NEFT, Mobile transactions, Kolmogorov Smirnov test, Levenes test.*

Introduction

Among the various steps taken by the present Government for bringing reform in economy, one of the main step has been demonetizations of Rs 500 and Rs 1000 currency notes from the midnight of November 8,2016. As most of the businesses, particularly the organized ones, were already making use of digital or online system of payment, the move did left any choice for the business in unorganized sectors and being conducted on smaller scale except to adopt online or digital mode of financial transactions.

Objective and Hypothesis of the Study

The present study aims to examine the impact of demonetization in bringing significant change in the number of digital mode of transactions. Transactions through various kind of digital mode of settling transactions such as National Electronic Funds Transfer (NEFT) and Mobile transactions released by Reserve bank of India have been used to examine the same. These mode of transactions have been focused as they are generally used by individuals in paying off their routine bills and settling their dues. Accordingly, the following null hypotheses have been tested using t-test :

Null Hypothesis (H$_o$)

There is no significant difference between volume of transactions through mobile transactions during pre and post demonetization period.

Null Hypothesis (H$_o$)

There is no significant difference between volume of transactions through NEFT during pre and post demonetization period.

Research Methodology

In order to test the above hypotheses, the data in respect of Mobile transactions and NEFT for the period January, 2016 to October, 2017 has been taken from RBI reports. The entire period of 22

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months have been divided in two equal halves i.e. from January, 2016 to November, 2016 and December, 2016 to October, 2017. Bifurcation of the above set of data led to generation of two samples with size being less than 30. Therefore, t-test has been employed individually on two different type of mode of digital transaction with the help of SPSS. However, before subjecting the data for t-test, the compliance of necessary conditions which included testing the normality of data and homogeneity of variances have also been ensured.

Data Analysis

The data relevant for the study was collected from reports of Reserve Bank of India and it is summarized below in table 1. It contains monthly details of transactions executed through NEFT and Mobile phones.

**Table 1: Month wise Digital Transactions During the Pre and Post Demonetizations Period
January, 2016 to October, 2017**

	Year 2016		Year 2017	
	NEFT (Number of transaction in million)	**Mobile Transactions** (Number of transaction in million)	**NEFT** (Number of transaction in million)	**Mobile Transactions** (Number of transaction in million)
January	118.97	42.8	**164.19**	**106.13**
February	110.17	44.65	**148.21**	**95.41**
March	129.24	49.47	**186.7**	**113.65**
April	111.84	48.67	**143.17**	**106.27**
May	117.5	61.73	**155.82**	**114.26**
June	118.29	63.17	**152.34**	**115.73**
July	113.48	67.47	**148.14**	**103.25**
August	118.56	71.76	**151.61**	**97.89**
September	120.15	72.63	**157.67**	**113.43**
October	133.21	78.12	**158.78**	**147.82**
November	123.05	87.47		
December	166.31	110.64		

As mentioned earlier, the period January 2016 to Nov 2016 has been treated as pre demonetization period whereas the period December 2016 to October, 2017 has been treated as post demonetization period. The normality of the samples were checked using Kolmogorov Smirnov test , as shown below in table 2.

One-Sample Kolmogorov-Smirnov Test (For NEFT transactions)

Table 2: Testing Normality Using KS Test

		Value
N		22
Normal Parameters[a,b]	Mean	138.5182
	Std. Deviation	21.67373
Most Extreme Differences	Absolute	.171
	Positive	.171
	Negative	-.126
Kolmogorov-Smirnov Z		.804
Asymp. Sig. (2-tailed)		.538
a. Test distribution is Normal.		
b. Calculated from data.		
One-Sample Kolmogorov-Smirnov Test (For Mobile transactions)		
		Value
N		22
Normal Parameters[a,b]	Mean	86.9282
	Std. Deviation	28.58264
Most Extreme Differences	Absolute	.125
	Positive	.111
	Negative	-.125
Kolmogorov-Smirnov Z		.587
Asymp. Sig. (2-tailed)		.881
a. Test distribution is Normal.		
b. Calculated from data.		

It can be observed from the above tables, in all cases p value happens to be higher than 0.05, which indicates that the sample data chosen for the study complies with the condition of normality. As in case of SPSS, the levenes statistics is generated along with the output for t-test, therefore the data for each of the mechanism of digital transactions under study were directly subjected to t-test and the output from the SPSS are shown below in table 3, 4 and 5.

Independent Samples Test

Table 3: SPSS Output of t-test for NEFT

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Value	Equal variances assumes	1.416	.248	-9.143	20	.000	-38.04364	4.16098	-46.72329	-29.36398
	Equal variances not assumes			-9.143	16.112	.000	-38.04364	4.16098	-46.85956	-29.22771

Independent Samples Test

Table 4: SPSS Output of t-test for Mobile Transactions

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Value	Equal variances assumed	.635	.435	-8.018	20	.000	-48.77636	6.08357	-61.46647	-36.08626
	Equal variances not assumed			-8.018	19.938	.000	-48.77636	6.08357	-61.46901	-36.08372

Levenes statistic, as can be observed from the output shown in table 3 and table 4, happens to be more than 0.05 which indicates that our sample data in all the cases under study complies with condition of homogeneity of variance. After having ensured, compliance of both i.e. the conditions of normality and homogeneity of variance , t – test was employed at 5% level of significance. It was found that in all the cases , p value was less than 0.05, which implies that our hypothesis has been rejected and there is significant difference between the two sets of data in each sample.

Conclusion

On the basis of above, we can conclude that volume of financial transactions which occurred in the period subsequent to the announcement of demonetization of currency notes are significantly different than those which occurred in the period prior to it. Another important finding which emerges from the above conclusion is that initially people were shy of using digital mode of transaction and prefers to settle most of the transaction through use of cash only but when they were left with no alternative, they quickly switched over to the new mechanism of settling their financial transactions through digital modes. The initial groundwork done by the Government with regard to promoting and activating financial inclusion and bringing large segment of society within banking network proved effective to large extent in preventing hue and cry in the system due to demonetization.

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