



## IMPACT OF DEMONETIZATION ON CONSUMER SPENDING THROUGH E-PAYMENT MEDIUMS IN UDAIPUR CITY

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### **Introduction**

#### **Demonetization Meaning**

Demonetization is the act of stripping a currency unit of its status as legal tender. The current form or forms of money is pulled from circulation and retired, often to be replaced with new notes or coins.

#### **Demonetization In India, 2016**

On Nov 8, 2016, the Indian government decided to demonetize the 500- and 1000- rupee notes, the two biggest denominations in its currency system. These notes together accounted for 86.4% of the country's circulating cash. Indian economy, being cash dependent, was found in utter chaos as long lines were formed outside ATMs and banks. The new denominations, having different sizes and shapes, required recalibration which resulted in banks and ATMs being shut down for a day. Individuals and entities with huge sums of black money earned from parallel cash systems were forced to take their large-denomination notes to a bank, which was by law required to acquire tax information on them.

### **Introduction to E-payment**

#### **E-payment Meaning**

E-payment system is a way of making transactions or paying for goods and services through an electronic medium without the use of cheque or cash. It's also called an electronic payment system or online payment system.

#### **Modes of E-payment**

E-payment methods could be classified into two areas, which are:

1. Debit payment System such as electronic funds transfer, direct debit, E-cheque, E-billing, E-cash and stored value cards.
2. Credit payment systems such as credit card, E wallet and smart cards.

### **Review of Literature**

#### **Review of Work Already Done On the Subject**

Ansari (1982) examined the impact of real per capita GDP, the size of overseas trade and density of population on the tax revenue by making an inter country comparison. The study concluded that real gross domestic product and foreign trade were positively correlated with tax revenue, whereas density of population was negatively correlated with tax revenue. Kumar (2017) presented an analytic view about the impact of demonetization on the Indian Economy. His analysis showed that demonetization had adverse effects on the Indian economy. The cashless transaction has been promoted but it takes lot of efforts to convince rural people to adopt those skills. Rani (2016) studied the effects of demonetization on retail outlets. The study revealed that initially the demonetization effects on market were painful but this also instigate the shopkeepers and consumers to adopt cashless means such as paytm, debit card use, internet banking to buy goods. Demonetization effect will be positive in coming time for Indian Economy. Indian consumers will strive to learn new ways of cashless transactions. Muthulakshmi and Kalaimani (2016) assessed how the demonetization can be used to eradicate parallel economy. They



believed that Central government's recent decision to demonetize the high value currency is one of the major step towards the eradication of black money in India. The demonetization drive will affect some extent to the public, but for larger interest of the country such decisions are inevitable. Also, it may not curb black money fully, but it has major impact in curbing black money to large extent. Bansal (2017) evaluated the reason behind demonetization and its impact on the various sectors of the Indian economy. They found that GDP of Country has decreased slightly as compare with the previous year but the same cannot be said about the future. This intervention is a one-time draining of this current stock of black money but unless the root causes of corruption are removed, corruption will continue. Arvind Kumar (2017) concluded that demonetization is every Indian's memorable experience and is going to be one of the economic events of current time. Its impact is felt by every Indian citizen. Demonetization affects the economy through the liquidity side. Demonetizing is progressive shift to a cashless economy with a greater focus on electronic transactions. Rising use of credit/debit cards, net banking and other online payment mechanisms will be another positive effect of demonetization, as these would not only lower transaction costs but have many other benefits as well. Singh and Mittal (2017) analysed that demonetization has done its work. Let's see when our economy will become a Digital Nation. PM Modi has been able to sell the dream well but reality will be known in coming years only. Koala (2017) analysed that the demonetization 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.

## **Research Methodology**

### **Scope of the Research**

The paper studies the impact of demonetization on consumer spending through electronic means in Udaipur city. The research is restricted to the Udaipur city and focuses on the impact on consumer spending through electronic payment mediums.

### **Research Design**

The research is exploratory and descriptive in nature. It explores the impact of demonetization among Udaipur citizens and describes the changes in their spending pattern.

### **Research Objectives**

1. To study the impact of demonetization on the consumer spending through e-payment in Udaipur district.
2. To analyse the impact of demonetization on consumer's mode of E-payment method while buying products.
3. To study the impact of demonetization on nature of expenses preferred to be paid using E-payment medium.

### **Data collection**

Collection of data is done through Questionnaire. The questionnaires were sent using email accounts of various respondents. Some respondents who were not having access to email were also the printed copy of the questionnaire to enable them to mark their responses.

### **Sample Design**

**Sample unit:** Udaipur.

**Sample size:** 300 respondents have sent their responses using e-mail or paper during the period March 1, 2017 to May 31, 2017. Of these, 158 were females and 142 were males.

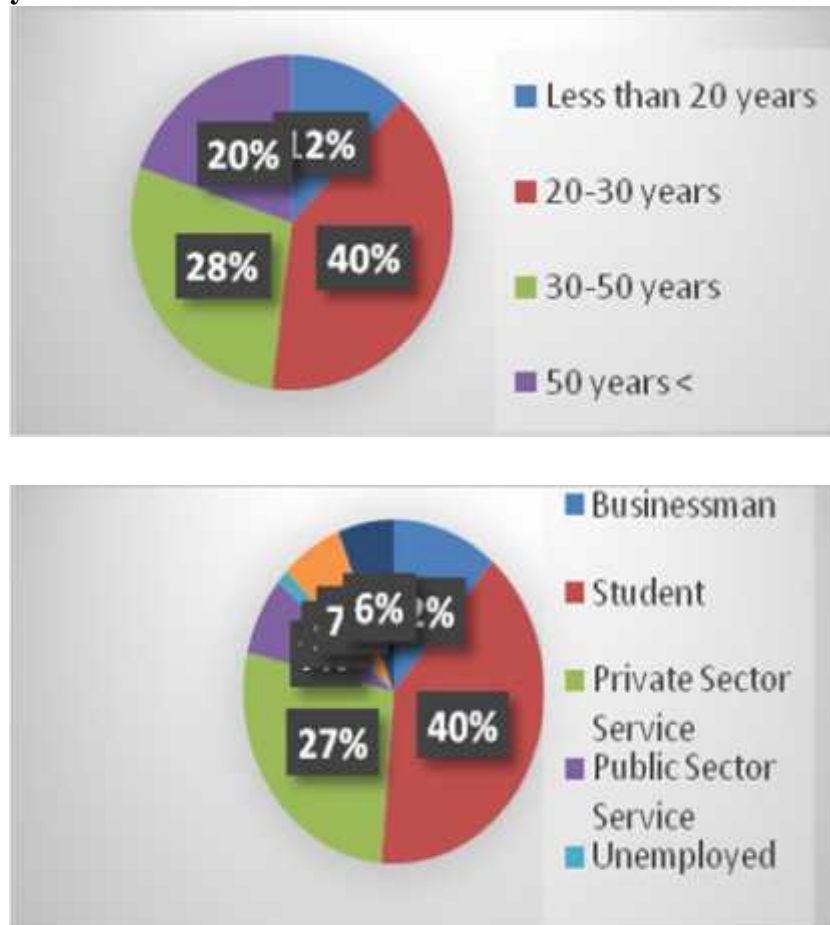
**Sampling Procedure:** Convenience sampling method is applied for data collection.



### Limitations

1. The limitations of the study are those characteristics of methodology that influence the interpretation of the findings of the research.
2. Research covers urban area of Udaipur district.
3. Sample may not be a complete representative of the universe.
4. The research is entirely based on the responses provided by the respondents.

### Demographic Analysis



**Figure 1 - Age Group of the Respondents**

It has been observed from the above data that 40% of the respondents are Students, 11.3% of the respondents are Businessmen, 27.3% of the respondents are in Private Sector Service, 7.3% of respondents are in Public Sector Service, 6.7% of respondents are Housewives, 1.7% of respondents are Unemployed and 6% of respondents opted for others.

### Hypothesis

The following hypothesis can be developed from the scope of the study and its objectives.

H<sub>0</sub> = There is not a significant impact of Demonetization on Consumer spending through E-Payment mediums.

H<sub>a</sub> = There is a significant impact of Demonetization on Consumer spending through E-Payment mediums.



### Data Interpretation and Analysis Awareness about E-Payment Mediums

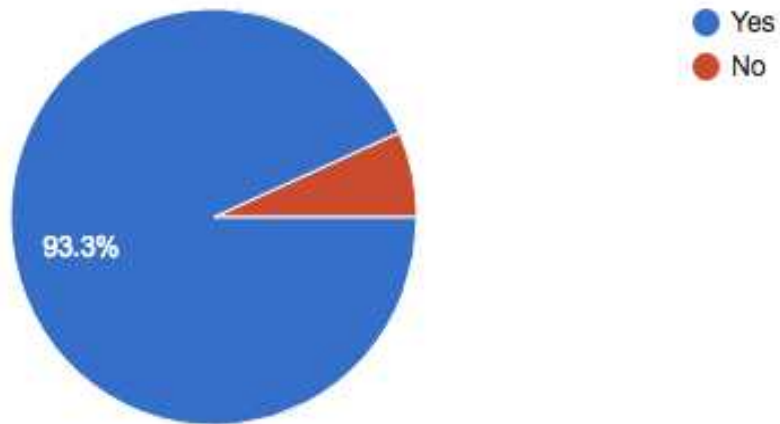


Figure 2 - Awareness among Respondents about E-Payment Mediums

### Use of E-Payment Medium to Pay for Expenses

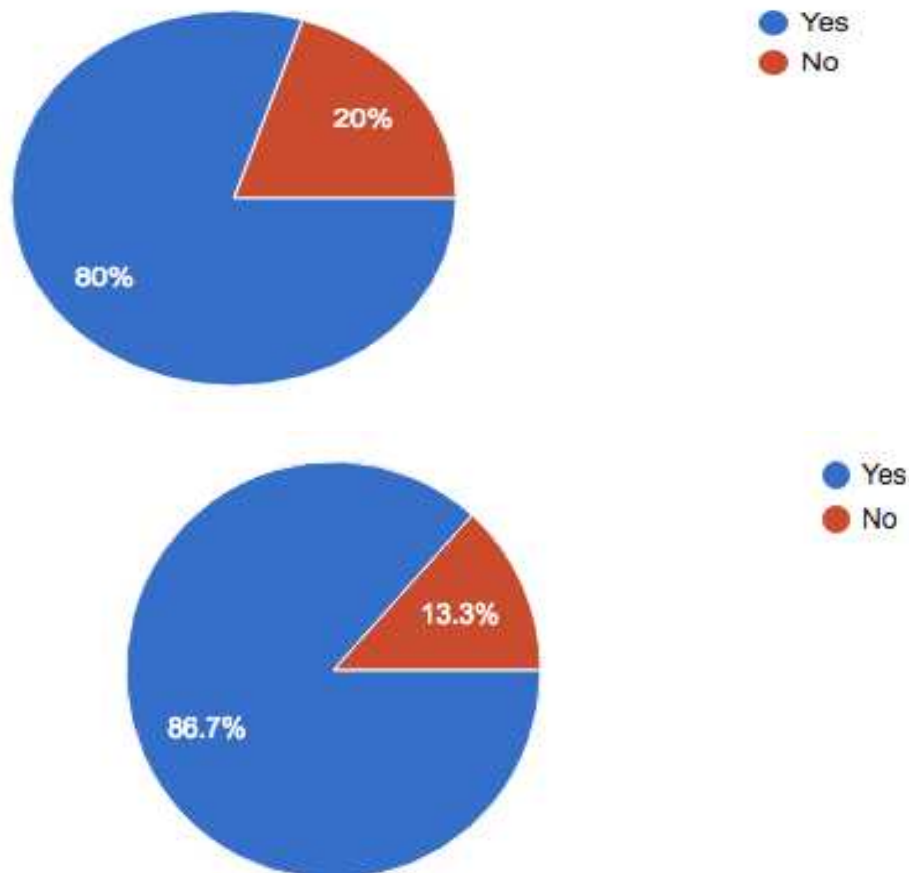
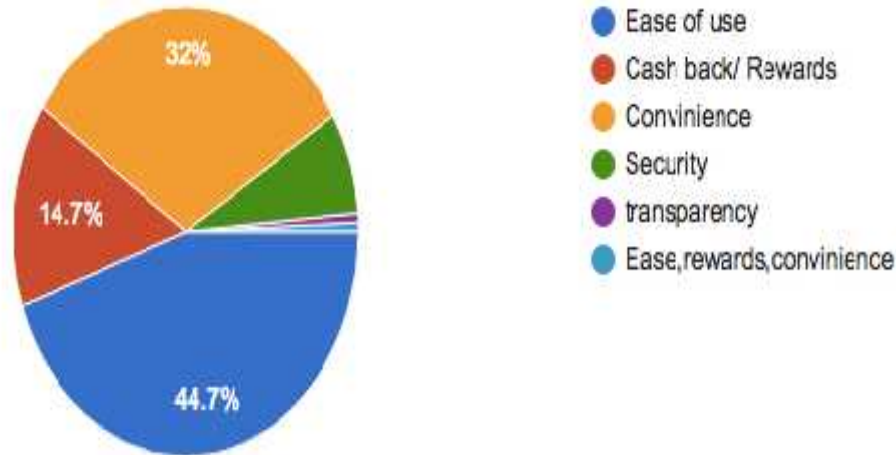


Figure 3 - Use of E-Payment Medium among Respondents before and After Demonetization



From the above two graphs, it has been observed that before demonetization, 80% of respondents were using e-payment medium to pay for their expenses which increased to 86.7% since demonetization. The high percentage of use is testament to the fact most of the sample is from city area of the Udaipur district which is more likely to use E-payment mediums.

Benefit of E-payment medium that attract respondents



**Figure 4 - Benefits of E-Payment That Attract Respondents**

It has been observed that 44.7% of respondents are attracted towards e-payment mediums due to ease of use, 14.7% respondents are attracted to get rewards points or cash back based on their purchases, 32% of the respondents are attracted towards e-payment due to convenience in use, 7.5% of the respondents are attracted towards e-payment due to security factor and 0.7% of the respondents are attracted due to other benefits such as transparency.

#### Frequency of Use of Electronic Payment Medium in a Month

**Table Error! No text of specified style in document.-1 - Impact of Demonetization on Frequency of Using E-Payment Medium**

Frequency	I don't use E-payment	Once a Month	Once in 15 Days	Once a Week	Thrice a Week	Daily
B.D.	32	92	58	60	46	12
A.D.	20	50	64	68	68	30
Change	-12	-42	6	8	22	18
% Change	-38%	-46%	10%	13%	48%	150%

From the above graph, it is observed that after demonetization, the number of respondents not using E-payment mediums decreased by 38% and those using once in a month is decreased by 46%, whereas the frequency of use of E-payment mediums once in 15 days is increased by 10%, the frequency of use of electronic payment medium once a week is increased by 13%, the frequency of use of electronic payment medium thrice a week has increased to 48% and those who use daily has increased by 150%.

Nature of Expenses preferred by respondents to be paid through electronic payment medium

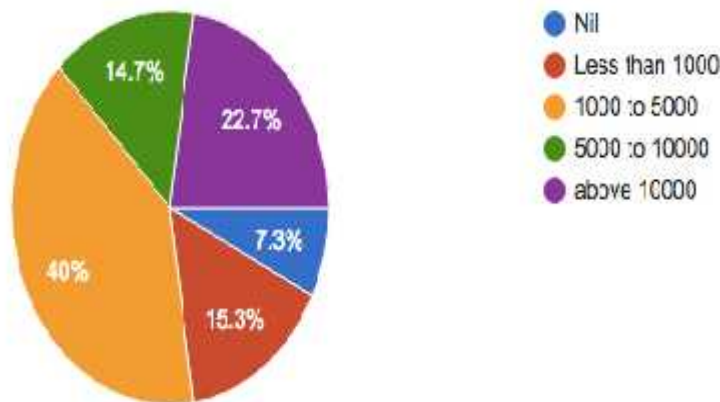


**Table Error! No text of specified style in document.-2 - Impact of Demonetization on the Nature of Expenses Paid Using E-Payment Medium**

Nature of Expenses	Bills	Travel	Clothing	Groceries	Online Shopping	Electronics	Food/ Beverages	Others	I don't use E-payment options
B.D.	226	210	152	68	216	96	106	58	20
A.D.	188	180	130	52	182	80	66	28	32
Change	38	30	22	16	34	16	40	30	-12
%age change	20%	17%	17%	31%	19%	20%	61%	107%	-38%

From the above chart, it has been observed that after demonetization, Number of respondent who never used E-payment medium to pay for any expenses have decreased by 38%. However, number of respondents who prefer to pay for bills/recharges through electronic payment medium increased by 20% whereas the respondents who prefer to pay for Travel/Accommodation/Ticket Booking through E-payment medium increased by 17%, number of respondents who prefer to pay for Clothing through electronic payment medium increased by 17%. number of respondents who prefer to pay for Groceries through electronic payment medium increased by 31%, number of respondents who prefer to pay for Online Shopping through electronic payment medium increased by 19%, number of respondents who prefer to pay for Electronics through electronic payment medium increased by 20%, number of respondents who prefer to pay for Food/Beverages through electronic payment medium increased by 61%, number of respondents who prefer to pay for others through electronic payment medium increased by 106%.

**Average Monthly Spending Through Electronic Payments After Demonetization**



**Figure 5– Average Monthly Spending Through E-Payment Options**

It has been observed that After demonetization, respondents who do not have any spending through E-payment option comprise only 7.3% of the sample whereas the average monthly spending of



15.3% respondents through e-payment medium is less than Rs. 1000, 40% respondents spend Rs. 1000-5000 monthly, 14.7% respondents spend 5000-10000 Rs monthly and 22.7% respondents spends above Rs. 10000 monthly through e-payment medium.

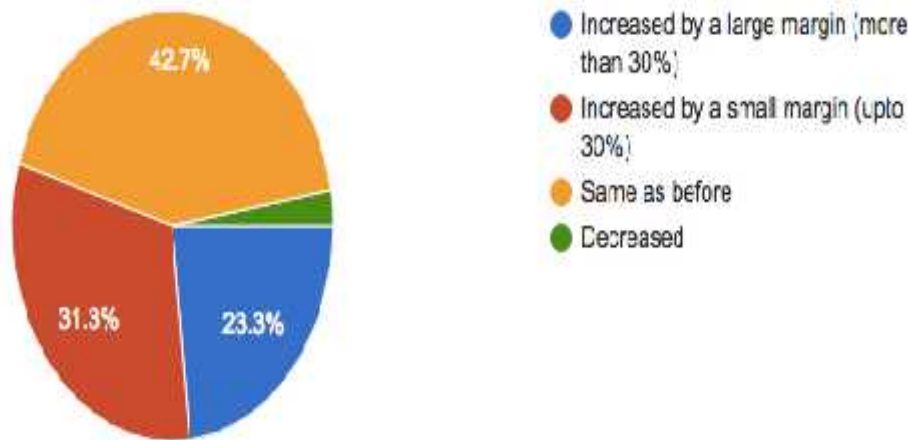
**Preferred Mode of Payment through Electronic Payment Medium**

**Table Error! No text of specified style in document.-3- Impact of Demonetization on the Preferred Mode of E- Payment Mediums**

Preferred mode of payment	Credit/Debit cards	Online wallets	Internet Banking	EMI/Gift cards	Others	I don't use E-payment Medium
A.D.	256	146	102	8	2	20
B.D.	244	82	98	4	4	32
Change	12	64	4	4	-2	-12
%age change	5%	78%	4%	100%	-50%	-38%

From the above chart, it is observed that after demonetization, the respondents not using E-payment medium have decreased by 38% while those using them have been increasing. The preference of credit/debit cards for making payments increased by 5% whereas the preference of Online Wallets such as Paytm, Mobikwik etc. for making payments increased by 78%, the preference of Internet Banking for making payments increased by 4%, the preference of EMI/Gift cards for making payments increased by 100%, the preference of other E-payment option for making payments decreased by 50%.

Effect of Demonetization on consumer spending through electronic payment medium



**Figure 6 - Effect of Demonetization on Consumer Spending Through E-Payment Medium**

During the survey, it was observed that 23.3% of the respondents believed that demonetization has increased their spending through electronic mediums by a large margin (more than 30%), 31.3% of the respondents believe that their spending through electronics payment mediums has increased by a small margin (upto 30%), 42.7% respondents believe that there is no change in their spending through electronic payment mediums after demonetization but 2.7% respondents believed that their spending through electronic payment medium has decreased after demonetization.



**Descriptive Analysis**  
**Analysis of Preferences**

**Table Error! No text of specified style in document.-4 - Analysis of Preferences of Respondents for Their Choice of Expenses and Choice of Electronic Payment Options**

Statistics				
	Nature of Expenses B.D.	Nature of Expenses A.D.	Preferred Mode of E-payment B.D.	Preferred Mode of E-payment A.D.
N	300	300	300	300
Mean	3.0200	3.7400	1.4400	1.7133
Mode	1.00	5.00	1.00	2.00
Std. Deviation	2.12162	2.12464	.86151	.89096
Skewness	.447	-.060	.408	.196
Kurtosis	-.663	-1.042	-.239	-.311
Sum	906.00	1122.00	432.00	514.00

The above table presents various statistics of the respondents provided using SPSS (Statistical Package for Social Sciences). We can observe that most of the respondents preferred to pay for one type of expenses using E-payment medium whereas post demonetization the said value was 5. The mode value of 1 under preferred mode of payment increased to 2 post demonetization which highlights that respondents have added new mediums of E-payment to pay for their expenses.

Analysis of preference of expenses paid through e-payment medium

**Table Error! No text of specified style in document.-5 - Impact of Demonetization on the Number of Expenses Paid Using E-Payment Medium**

	B.D.	A.D.	Change	% points change
0	32	20	-12	-4
1	58	38	-20	-6.6
2	48	32	-16	-5.3
3	42	50	8	2.7
4	46	38	-8	-2.6
5	34	56	22	7.4
6	14	24	10	3.3
7	20	32	12	4
8	6	10	4	1.3
<b>Total</b>	300	300		

The above table presents a comparative analysis of the number of types of expenses opted for by respondents to be paid through E-payment mediums. As we can see the number of respondents who never used E-payment medium for any type of expenses have decreased by 4% points and those using for 1 or 2 types of expenses have decreased by 6.6% points. On the other hand, those using E-payment





mediums for three, five or more types of expenses have increased. This highlights the fact that demonetization have increased the number of expenses which the respondents now prefer to pay using E-payment mediums.

### Analysis of Preferred Mode of E-Payment Options

#### Before Demonetization

**Table Error! No text of specified style in document.-6 - Impact of Demonetization on The Number of E-Payment Medium Used**

	B.D.	A.D.	Change	% points change
0	32	20	-12	-4
1	144	108	-36	-12
2	86	116	30	10
3	36	50	14	4.7
4	2	6	4	1.3
Total	300	300		

The above table presents a comparative analysis of number of E-payment mediums opted for by the respondents as their preferred mode of E-payment. The last column of the table presents the percentage points change pre and post demonetization. As you can see the number of respondents not using E-payment medium has decreased by 4% points where as those using two, three and four different mediums have increased.

### Testing of Hypothesis

#### Reliability Test

Since the Cronbach Alpha based on standardized items is almost equal to Cronbach Alpha as calculated from the given data, it can be said that the questionnaire is reliable in its ability to measure the impact of demonetization on consumer spending through E-payment mediums. Also, the value of 0.84 signifies high co-variance between the variables and thus affirming the reliability of the data.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.840	.844	7

### Significance of the Impact of Demonetization on Consumer Spending

Due to the non-normality of the responses, the Wilcoxon Signed Ranks Test was applied and the results of the test are shown in the following table. As the Z statistics (in absolute terms) for all the 3 observation for which pre and post data was recorded are higher than the statistical value of 1.645 at 95% level of significance, it can be said that the Impact of Demonetization on consumer spending through E-payment medium was significant. The null hypothesis (H0) is therefore, rejected.

1. The Z statistics for nature of expenses preferred to be paid electronically was 9.269 which suggests that Demonetization has significantly affected the nature of expenses preferred to be paid electronically.



- The Z statistics for mode of electronic payment preferred was 7.506 which suggest that Demonetization has significantly affected the choice of electronic payment medium preferred by the respondents.
- The Z statistics for differences in Frequency of electronic payments is 9.341 which suggests that demonetization has increased the frequency of the respondents using electronic payment and the difference is significant.

**Table Error! No text of specified style in document.-7 Results of Wilcoxon Signed Rank Test**

Test Statistics			
	Nature of Expenses B.D. - Nature of Expenses A.D.	Preferred Mode of E- payment B.D. - Preferred Mode of E-payment A.D.	BFreq - AFreq
Z	-9.269b	-7.506b	-9.341b
Asymp. Sig. (2- tailed)	.000	.000	.000
a. Wilcoxon Signed Ranks Test			
b. Based on positive ranks.			

## Findings, Suggestions and Conclusion

### Findings

The above research has revealed the following findings

- The demonetization has increased consumer spending through E-payment medium as 54.6% of the sample have responded the same.
- The most attractive feature of the benefits of use of electronic mediums to pay for expenses is identified as ease of use.
- Demonetization has led to increased frequency of use of e-payment mediums among the respondents. Before demonetization most the respondents preferred to use e-payment mediums once a month (30.66%) whereas the after demonetization is thrice a week or once a week (22.67% each).
- 44.67% of the respondents agree that they have increased their frequency of spending through e-payment medium. 28.7% have increased it a little whereas the remaining 16% have increased it drastically post demonetization.
- 45.33% of the respondents have changed the nature of expense that they use electronic payment mediums to pay for. Of the respondents, 24% of the respondents added one type of expenses to their E-payment list whereas the remaining 21.33% added more than 1 type of expenses.
- Demonetization has also affected the type of electronic medium opted for payments by the respondents as 26% of the respondents added new ways of making E-payment for their expenses. The biggest gainer was the use of mobile wallets which was added by 23% of the respondents.
- The number of expenses paid for by customers using e-payment options have also increased as the before demonetization maximum respondents opted for 1 type of expense whereas after demonetization the maximum number of respondents paid 5 expenses through e-payment medium.
- The number of options opted for by the respondents in the mode of payment preferred also increased as before demonetization, respondents preferred only one type of mode of payment whereas after that they have preferred 2 modes of payment.



## Suggestions

Demonetization have affected the way consumer wishes to spend their money as evident from the research. However, the awareness about available options and new options is limited to the urban areas. The spread of knowledge across rural areas could come as a significant move in moving India to a digital economy.

## Conclusion

Thus, from the above study, it can be concluded that demonetization has impacted the consumer spending through E-payment mediums. The magnitude of the Z value of the Wilcoxon Signed Rank test affirms the same. The null hypothesis is rejected as the impact is significant. Due to demonetization consumers are buying more products through electronic payment mediums instead of cash due to cash crunch and ease of use. The consumers have adopted new methods of making payment like online wallets, gift cards and EMI options. They have added new expenditures like restaurant bills, electronics for which they have started using e-payment options as well where prior to demonetization such expense were mostly through cash. Also, the frequency of using such options has increased which augurs well for the economy as it has started the shift from cash to digital payments slowly but positively. It can also be said that demonetization have opened huge opportunities for businessman who positively react to these changes in consumer spending. Overall, it can be said that demonetization have affected the consumer spending through electronic medium and this research serves as a very good evidence of such change.

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