A Comparative Analysis of Economic Activities Before and After Demonetization: A Case Study of Palwal City

Ms. Amandeep Kaur
Assistant Professor in Economics
B. P. S. Women University
Khanpur Kalan (Sonipat)

Bhawna Mudgal
MA Economics (Integrated) Semester VI
B. P. S. Women University
Khanpur Kalan (Sonipat)

Abstract- Recent demonetization has affected people of India in the variety of ways. We are well-known to the fact that demonetization has great influence over economy on a wider scale, with either its positive side or with the negative side. The government has tried to overcome many hurdles with just one revolutionary step and is also trying to establish India as a cashless economy i.e. DIGITAL INDIA. The bold step helped out in getting fake currency out of circulation, controlling inflation, stopping fraudsters, reducing illegal activities and also a move to the digital currency but is not free from the disadvantages like little cash in circulation, slowdown of economic growth, disruption of trade, short-term financial crisis for poor people, and many more. The purpose of this paper is to explore the impact of demonetization on the basic economic activities of the people of Palwal city i.e. consumption, savings and investment and to perform a comparative analysis of the economic activities of people of different occupations. A survey was conducted of the 115 households of the Palwal city which was further classified as per the requirement. The methodology used consists of correlation, regression and Paired t-test on the basis of occupational structure to find out the significant difference in mean values of the various economic activities before and after demonetization. The change in the consumer behavior, saving and investment pattern is too explored to know the difference due to the phase of demonetization.

1.1 Introduction

Demonetization refers to an economic policy where a certain unit ceases to be recognized or use as a form of legal tender. In other words, a currency loses its legal tender status as a new one comes into circulation. The currency unit that has been demonetized is withdrawn from the circulation. During the implementation of this policy, the currency unit that has lost its status as a legal tender is deposited with the banks or other authorized financial institutions and replaced with units that still have legal tender status. Demonetization can also be referred as the process of moving people from a cash-based system to a cashless system i.e. digital system. Keeping hard cash is a practice that is not encouraged by the government as well as financial institutions. It is easy for people to evade taxes in an economy where people mostly deals with cash. Keeping cash out of the bank also erodes the deposit base of these financial institutions and drives the cost of credits through the roof. Therefore, moving people to a cashless system is a favorable economic policy.

In a single masterstroke, the government has attempted to tackle all three malaises plaguing the economy. Namely,

- A parallel economy
- Counterfeit Currency
- Terror Financing

1.2 India's History with Demonetization: From 1946 to 2016

A look into the past will make you realize that India is no new to the concept of demonetization. It has been implemented twice- 1946 and 1978 in the past.

- **The First Currency Ban:**
  In 1946, the currency note of Rs. 1000 and Rs. 10000 were removed from the circulation. The ban really did not have much impact, as the currency of such higher denomination was not accessible to the common people. However, both the notes were reintroduced in 1954 with an additional introduction of Rs. 5000 currency.

- **The Second Currency Ban:**
  In 1977, the Janata Party coalition government came into power. A year into the government's term, party leader Morarji Desai was more bullish about cracking down on counterfeits and black money. The introduction to Demonetization, instated by the ruling party on Jan. 16,1978, deemed the Rs. 1000, Rs. 5000 and Rs. 10,000 notes illegal for the second time. The sole aim of the ban was to curb black money generation in the country.

- **The Third Currency Ban (Recent process):**

  On Nov. 8, 2016, announcement was made about demonetization i.e. Rs. 1000 and Rs. 500 would not be served as the legal tender anymore. It was an attempt to overcome the problem of terror financing and counterfeit money as well as to curb the black money.

1.3 Necessity of Demonetization

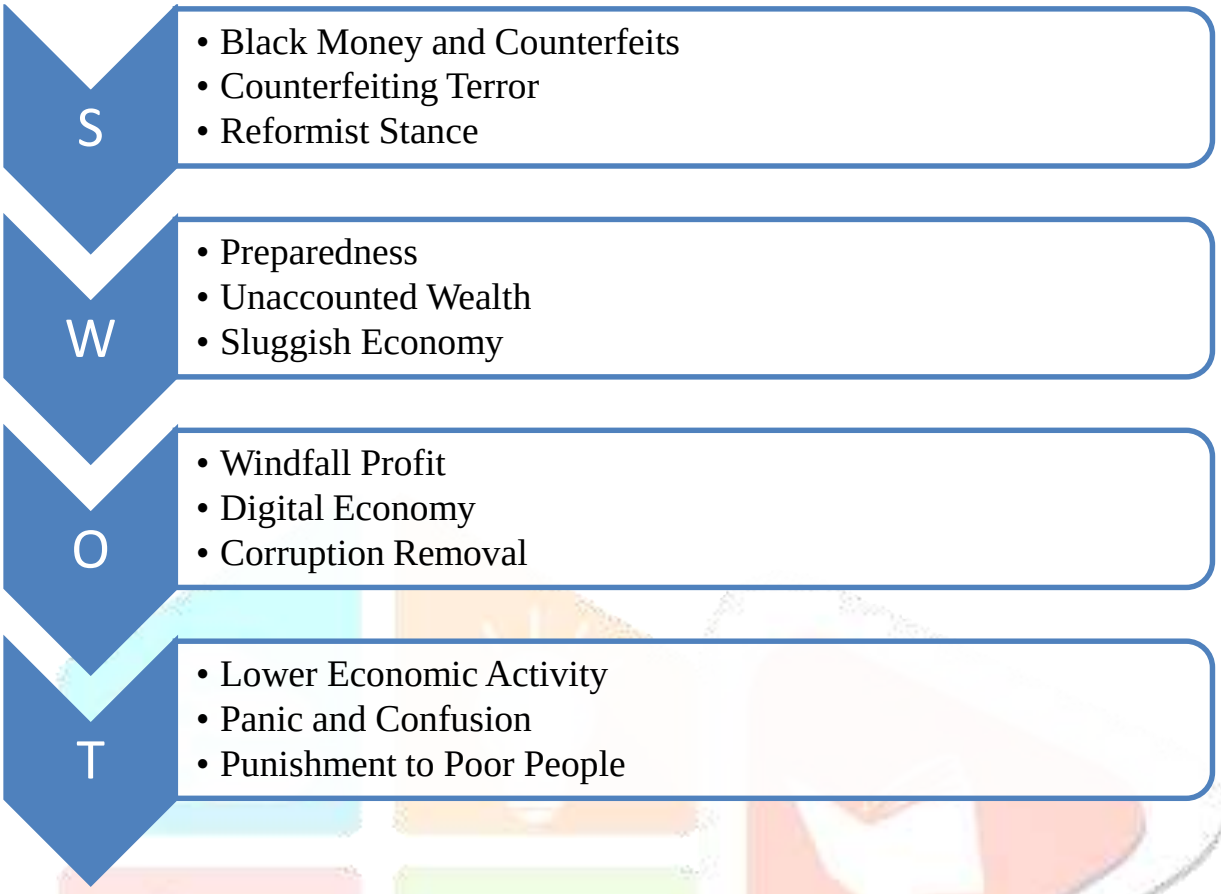
The concept of demonetization was required to be introduced as it helps in the fulfillment of the following objectives as under:

- It can act as an attempt to put end to financial corruption as it shatters down the economic, social as well as the political stability of the country.
- It is an effective way to fight the peril of the fake currency notes.
- Demonetization can expose those entities that have non-complied with the prevailing tax rules.
- The government can improve the figure of the collected revenues.
- It is a move towards the cashless economic framework.
- Destroying hoardings of public money by few influential people.
- Destabilizing election campaigns being done through black money.

1.4 SWOT Analysis

Demonetization is not a foolproof step taken and like other measures, this also carries some strengths and opportunities as opposed to the weaknesses and threats to deal with. If the objectives with which demonetization was put forward are achieved through sound implementation, it is going to have a strong impact on India's anti-corruption drive. But at the same time it was reported to have weak planning behind such a huge drive. SWOT analysis has been carried out to view demonetization from all the four aspects.

Figure1: SWOT Analysis of Demonetization

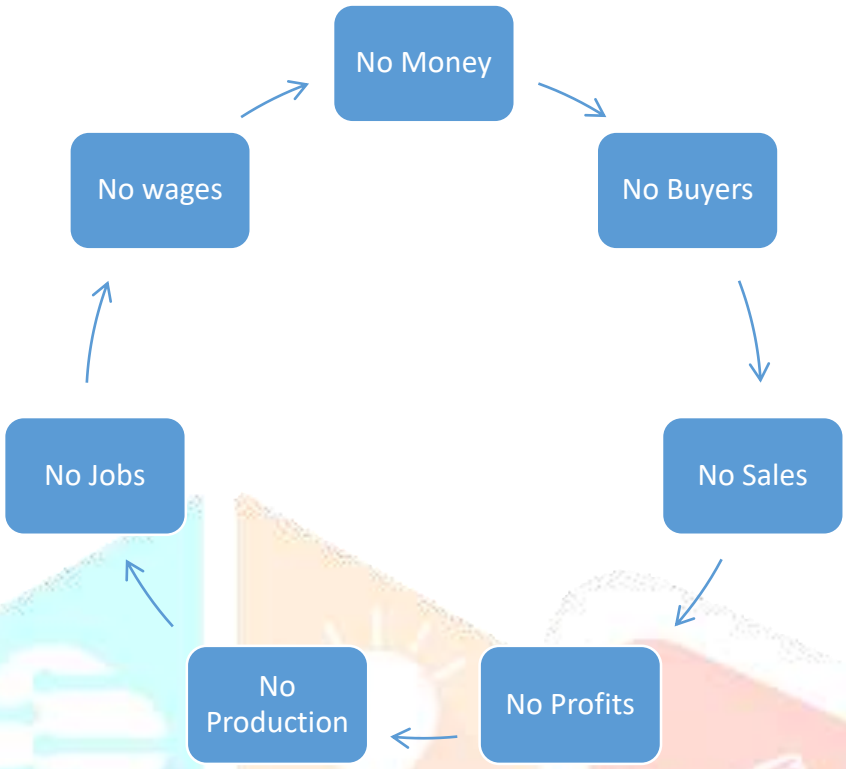


Source: Arora et al; 2017

1.5 Vicious Circle due to Demonetization

The phase of demonetization that leads to the less availability of cash or its circulation in the economy has a great power to affect the economy in a negative sense as it leads to the downfall of the economic activies and hence, the whole economic structure. The only solution to break this vicious cyle created in the economy is to avail the proper amount of cash in the economy. As it is a process or we could say a trap in which the whole economy gets trapped in.

Figure 2: Vicious circle due to demonetization



Source: Singh et al; 2017

The following process, stated to be the vicious circle depicts us that how our economy will be facing the declining path due to shortage or less availability of cash in hands of the individuals. As cash is the basic requirement for commencement of any activity.

1.6 Impact of Demonetization over various variables in the economy

The sectors affected are illustrated with the help of the tabular statement for better understanding as follows:

Table1: Impact of Demonetization

S. No.	Variable	Impact (either positive or negative)
1.	**Consumption**	Negative
2.	**Income**	Negative
3.	**Investment**	Negative
4.	**Parallel Economy**	Positive
5.	**Demand**	Negative
6.	**Real estate and Property**	Negative
7.	**Service Sector**	Negative
8.	**Household Sector**	Negative
9.	**GDP**	Negative
10.	**Banking System**	Positive
11.	**Employment**	Negative
12.	**Informal economy**	Negative

Source: Bhatnagar; 2017

1.7 Review of Literature

Singh et al (2017) and Rani and Kumar (2017) investigated the impact of demonetization over the economic variables namely consumption, production, investment, GDP, economic growth and on different sectors. They stated that money supply will be reduced, as a result it will have impact on consumption, production and investment. Demonetization would leads to decrement in income level of the economy and is affecting GDP, hence, slow economic growth. Due to lack of investment, there are adverse effects on employment and production. The sectors like real estate, construction material, gold, unorganized trade and services will see significant pain in the near future.

Bansal (2017) and Jain (2017) in their studies examines the impact of demonetization on Indian economy's different sectors. It has been visualized that only agriculture sector shows some positive improvement while both manufacturing and service sector are crushed down and that will affect the whole Indian market in future too. The study undertaken by Jain revealed that public sector banks witnessed an immediate positive effect on the returns whereas the private banks recorded a lagged negative impact.

Bumra and Kumar (2017), Panwar and Singh (2017), Bhatnagar (2017) evaluated the concept of demonetization over the different sectors, industries and informal sectors of India. The short-term implications are seen in agriculture and consumer market as they are cash incentive sectors. Automobiles too have negative impact while there was negligible impact over the pharmaceutical sector. Informal economy consisting self-employed, casually employed, people engaged in micro and small enterprises as wage labourers faced contraction of economic activities as the effects are regressive in nature due to liquidity crunch that adversely affected livelihood of such workers. From the equity market perspective, this move would be positive for sectors like banking and infrastructure in the medium to long-term and could be negative for sectors like consumer durables, luxury items, gems and jewellery, real estate and allied sectors.

1.8 Objectives of the Study

- To analyze the impact of demonetization on income, savings, investment and consumption pattern.
- A comparative study of the economic activities before and after demonetization on the basis of occupation structure.
- To analyze the consumption, savings and investment behavior of the household before and after demonetization.

1.9 Research methodology

The methodology used here is exploratory in nature as the survey is done to know the impact of the demonetization step undertaken by the government. Hence, the data source is based on the primary data of the sample size of 115 households, selected randomly of the Palwal city of the Palwal District. Here, the economic variables taken are income, consumption, savings and investment.

The analytical tools used are:

- Graphical representation by bar graphs and pie charts
- Correlation
- Regression
- Paired-t test
- Tabulation, frequency and percentage

1.10 Model Specification

1.10.1 Model 1

Hypothesis-1

- **H_0:** There is NO statistically impact of income on economic variables i.e. consumption, savings and investment.
- **H_1:** There is a statistically impact of income on economic variables i.e. consumption, saving, investment.
  1. **C=f(Y)** $C = b_0+b_1Y+ui$
  2. **S=f(Y)** $S = a_0+a_1Y+ui$
  3. **I=f(Y)** $I = c_0+c_1Y+ui$

1.10.2 Model 2

Hypothesis-2

- **H_0:** There is NO SIGNIFICANT difference between the mean value of the data in relation to before and after demonetization.
- **H_1:** There is SIGNIFICANT difference between the mean value of the data in relation to before and after demonetization.

1.11 General Profile of Palwal City: According to Household Survey

Table 2: General Profile of the Households

Characteristics	Frequency (N=115)	Percentage (%)
Age (Years)		
0-30	16	13.91
30-60	79	68.70
Above 60	20	17.39
Sex		
Male	101	87.83
Female	14	12.17
Marital Status		
Married	89	77.39
Unmarried	15	13.05
Divorced	11	09.56
Economic Category		
APL	95	82.61
BPL	20	17.39
Social Category		
General	59	51.31
OBC	36	31.31
SC/ST	19	16.52
SBC	1	0.86
Family Size		
0-5	73	63.48
5-10	39	33.91
Above 10	03	2.61

Source: Field Survey

Table-1 describes the basic characteristics of the Palwal city. The table states that 13.91% population of the city are specified in the age group 0-30, 68.70% in the age group 30-60, and the leftover 17.39% are above the 60 years of age considered to be in the category of senior citizens. So, the higher proportion of the city's population lies in the second category i.e. 30-60 age group. The survey conducted asked about the head of the family and came to the conclusion that 87.83% of the total are males and remaining 12.17% females are the head of the family. APL households comprises the 82.61% and remaining 17.39% are the families under BPL categorization. The table visualizes the social structure of the city and states 51.31% of the population are specified into general category, 31.31% into the OBC category, 16.52% into the SC/ST category, 0.86% into SBC category, being the largest area assured to the population of general category. It can be clear from the data available that most of the population in the city prefer to have the small family.

1.12 Educational and Occupational Structure of the households

Table 3: Education and Occupational structure of the Households

Variables	Frequency (N=115)	Percentage (%)
Either Educated or not		
Yes	102	88.69
No	13	11.31
Education Level		
Illiterate	13	11.30
10^{th}/10+2th	26	22.61
Graduation	45	39.13
Post-Graduation	31	26.96
Occupational Structure		
Agriculturist	10	08.69
Government Employee	28	24.35
Business Holders	17	14.78
Entrepreneurs	29	25.22
Student	01	0.87
Private Services	30	26.09
Range of Family Income		
Below 1 lakh	10	08.69
Between 1lakh to 3 lakhs	18	15.66
Between 3 lakhs to 5lakhs	17	14.78
More than 5 lakhs	70	60.87

Source: Field Survey

Table-2 provides an overview of the educational level of the city, range of the families' income and the deployment of the population in different occupations. It depicts that 88.69% of the population is educated i.e. are able to read and write. The 11.31% of the population is considered to be illiterate. The level of education are further categorized and states that 22.61% of the population have completed their secondary education, 39.13% have completed their graduation and the remaining 29.96% are post-graduated. The data even describes the diverse occupational structure of the city and shows that 8.69% of the population are agriculturist, 24.35% are the government employees, 14.78% are business-holders, while 25.22% of the population are self-employed, 0.87% being the students and 26.09% of the population is engaged in other activities i.e. providing their services in the private sector. It also represents that most of the households are classified in the income group of

more than 5 lacs being 8.69% in the range of below 1 lakh income group, 15.66% lies in the 1 lakh to 3 lakhs income group, 14.78% in 3lakhs to 5 lakhs income group and 60.87% in the range of more than 5 lakhs.

1.13 Income Distribution as per the Tax Slabs

Table 4: Income Analysis

Table 3 comprising of two sub-tables that are indicating the income level of the population in the city as per the Income slabs set by the government of India. One is for the citizens under the age of 60 and another is as per the criterion of the senior citizens.

4.1 Income Slabs for Individual Tax Payer (Less than 60years of age – both men and women)

Income Slabs (Rs.)	Range of Income (Frequency)		Percentage (%)	
	Before Demonetization	After Demonetization	Before Demonetization	After Demonetization
Upto 2,50,000	22	23	23.16	24.21
2,50,000-5,00,000	13	12	13.68	12.63
5,00,000-10,00,000	20	20	21.05	21.05
More than10,00,000	40	40	42.11	42.11
Total	95	95	100	100

Source: Author Calculation

Table 3.1 talks about the individual tax payers who are less than 60 years of age including both men and women. It depicts that 23.16% of the population comes in the income slab of upto Rs.2,50,000 , 13.68% in the slab of 2,50,000 to 5 lakhs, 21.05% in the slab of 5lakhs-10 lakhs and 42.11% lies within the income slab of more than 10 lakhs before demonetization. As the concept of demonetization introduced by the government, the population lying within the slab of 5-10 lakhs and more than 10 lakhs remains the same but there is decrement of 1.05% in the income level of Rs.2,50,000 to 5 lakhs that states that tax revenue of the government have been declined.

4.2 Income Tax Slabs for Senior Citizens (60 years old or more but less than 80 years old- both men and women)

Income Slabs (Rs.)	Range of Income (Frequency)		Percentage(%)	
	Before Demonetization	After Demonetization	Before Demonetization	After Demonetization
Upto 3,00,000	02	02	10	10
3,00,000-5,00,000	05	06	25	30
5,00,000-10,00,000	07	06	35	30
More than10,00,000	06	06	30	30
Total	20	20	100	100

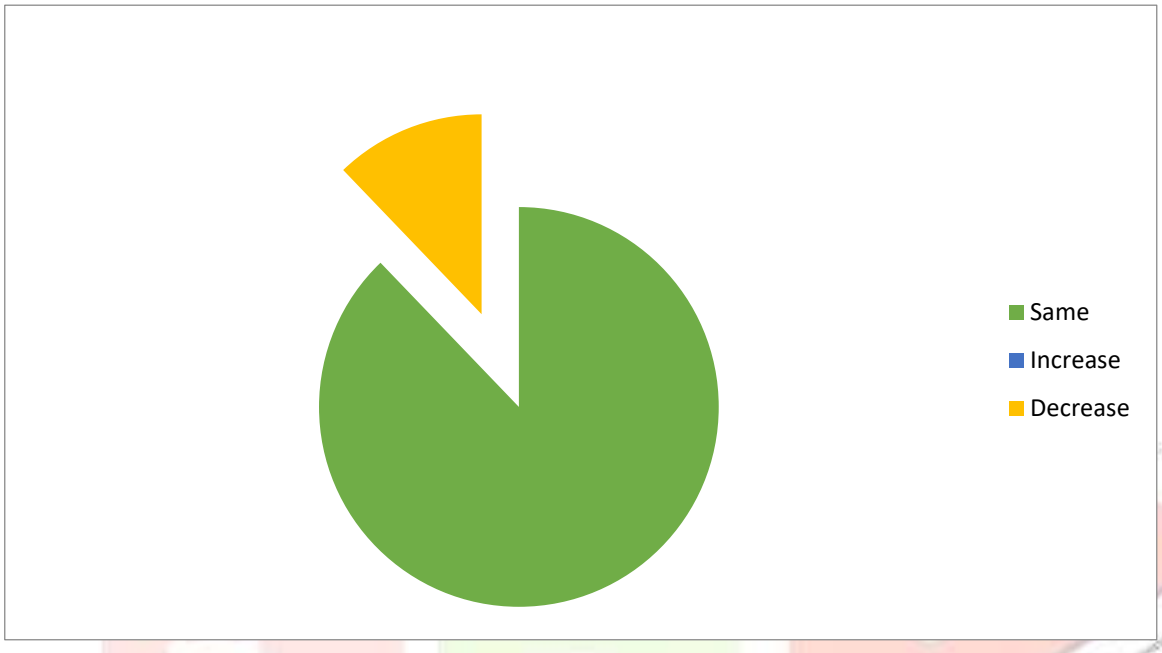
Source: Author calculation

Table 3.2 talks about the Income tax slabs for senior citizens, above 60 years of age or more but less than 80 years of age including both men and women. It depicts that 10% of the population lie in the income slab of upto 3 lakhs, 25% in slab of 3 lakhs to 5lakhs, 35% in slab of 5lakhs to 10 lakhs, and the remaining 30% in the slab of more than 10 lakhs of income before demonetization. But, after demonetization, the percentage level of individuals under the slab of upto 3 lakhs and more than 10 lakhs remains the same but there is decline in the slab of 5 to 10 lakhs with the same level of increment in the slab of 3 to 5 lakhs, showing shift of 5% people in

the lower income slab than before as a consequence of demonetization and hence, decrement in the tax revenue of the government.

1.14 Change in Income Level after the due of demonetization

Figure 3: Change in income level

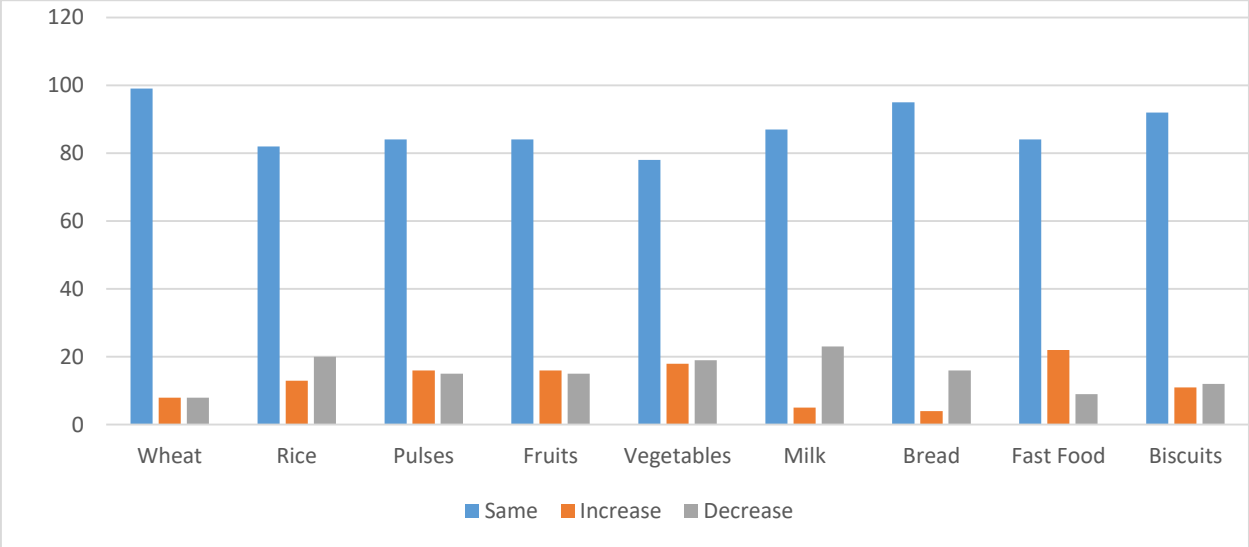


Interpretation:

The following pie-chart is representing the change in income level of the population due to the implementation of demonetization. It can be concluded that 88% of the individual's income remains the same, nobody has any increment in their income level while the 12% of the population faced decrement in their income level due to the demonetization.

1.15 Change in Consumption Level

Figure 4: Change in buying behavior of households due to demonetization (Food Items)



Interpretation:

The above diagram represents the change in behavior of population regarding the consumption of food items. The data states that:

- In case of wheat, 86.08% of the population have same behavior as before. 6.96% population has shown increment in their behavior while 6.96% faced decrement.
- In case of rice, 71.3% of the population have same behavior as before. 11.31% population has shown increment in their behavior while 17.39% faced decrement.
- In case of pulses, 73.05% of the population have same behavior as before. 13.91% population has shown increment while 13.04% faced decrement.
- In relation to fruits, 73.05%, 13.91%, 13.04% faced no change, increment and decrement in their behavior respectively.
- In relation to vegetables, 67.83%, 15.65%, 16.52% faced no change, increment and decrement in their behavior respectively.
- In case of milk, 75.65% of the population have same behavior as before. 4.35% population has shown increment while 20% faced decrement.
- In case of bread, 82.61%, 3.48%, 13.91% faced no change, increment and decrement respectively.
- In case of fast food 73.04%, 19.13%, 7.83% faced no change, increment and decrement respectively.
- In case of biscuits,80%, 9.57%, 10.43% faced no change, increment and decrement respectively.
- Higher level of decrement is seen in case of rice while there is highest percentage increment in consumption of fast food.

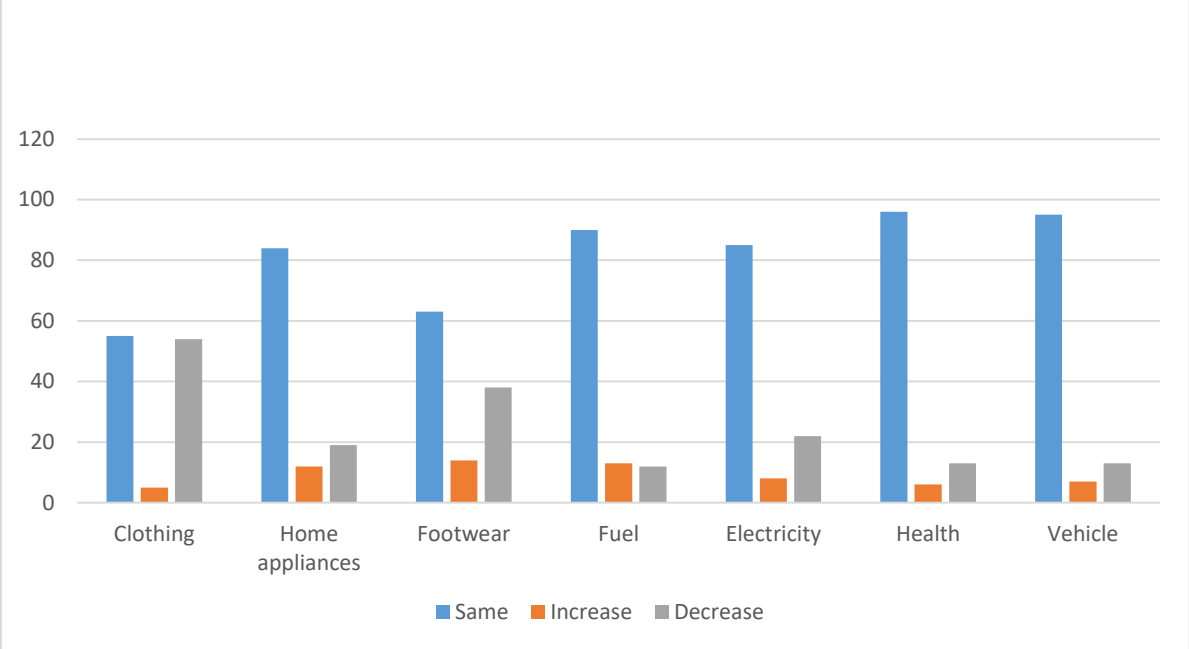


Figure 5: Change in buying behavior due to demonetization (Non-food Items)

Interpretation:

The above diagram represents the change in behavior of the population regarding the consumption of non-food items. The data states that:

- 47.82%, 5.21%, 46.97% faced no change, increment and decrement respectively in case of clothing.
- 73.04%, 10.43%, 16.53% faced no change, increment and decrement respectively in case of home appliances.
- 54.79%, 12.17%, 33.04% faced no change, increment and decrement respectively in case of footwear.
- 78.26%, 11.31%, 10.43% faced no change, increment and decrement respectively in case of fuel.
- 73.91%, 6.96%, 19.13% faced no change, increment and decrement respectively in case of electricity.
- 83.47%, 5.22%, 11.31% faced no change, increment and decrement respectively in case of health.
- 82.61%, 6.08%, 11.31% faced no change, increment and decrement respectively in case of vehicle.
- Highest level of decrement is visualized in case of clothing while highest increment is in the case of footwear.

1.16 Change in Level of Investment

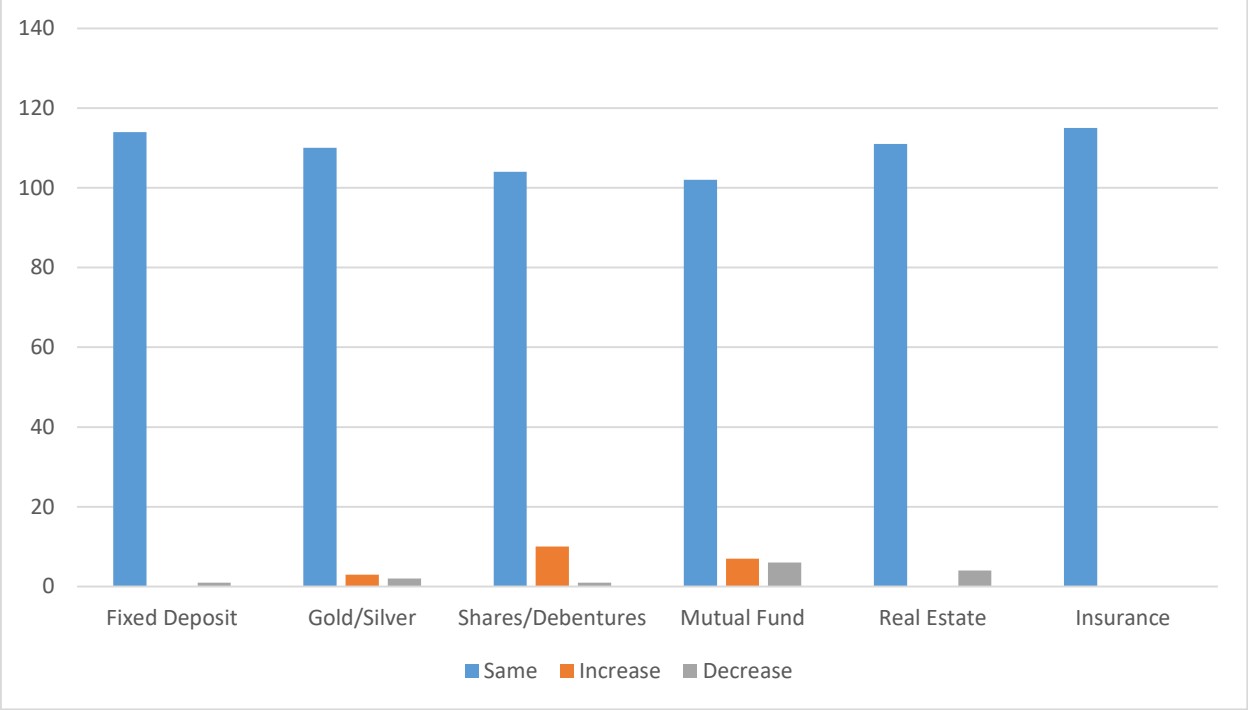


Figure 6: Change in investment behavior due to demonetization

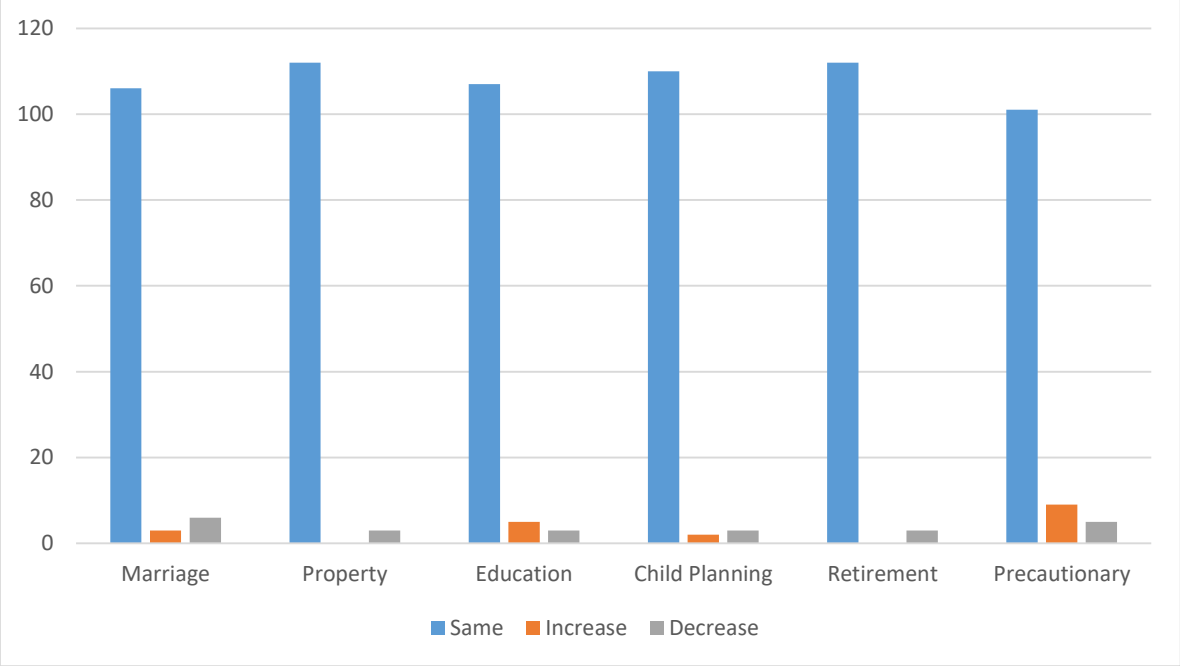
Interpretation:

The above diagram represents the change in behaviour of population regarding the pattern of investment. The data traces out that:

- There is 99.13% of the population that didn't showed any change while investing for fixed deposits, also the increment is at zero level. 0.87% faced the decrement in its nature.
- There is 2.61% population that has shown increment in case of investing in gold/silver while 1.74% faced decrement. There is no change in behaviour of 95.65% of the population.
- There is 8.70% population that has shown increment in case of investing in shares/debentures while 0.87% faced decrement. There is no change in behaviour of 90.43% of the population.
- 88.69%, 6.09%, 5.22% faced no change, increment and decrement in case of mutual funds.
- There is 96.52% of the population that didn't showed any change while investing in real estate, also the increment is at zero level. 3.48% faced the decrement in its nature.
- There is no change in the behaviour related to investment in insurance.
- Highest level of decrement seems to be in mutual funds while the increment level is high in case of shares/debentures.

1.17 Change in level of Savings

Figure 7: Change in saving behavior due to demonetization



Interpretation:

The above diagram represents the change in behavior of population regarding the pattern of savings after the commencement of demonetization. The data traces out that:

- There is 92.17% of the population that didn't showed any change while saving for the purpose of marriage, also the increment is by 2.61%. 5.22% faced the decrement in its nature.
- There is 2.61% of the population that has shown decrement in case of saving their income for property while 97.39% shows no change in their behavior. The increment level tends to be at zero.
- There is 93.04% of the population that didn't showed any change while saving for education purpose, also the increment is of 4.35% of population. 2.61% faced the decrement in its nature.
- 95.65%, 1.74%, 2.61% faced no change, increment and decrement respectively in case of child planning.
- 87.83%, 7.82%, 4.35% faced no change, increment and decrement respectively in case of precautionary needs.
- There is 2.61% of the population that has shown decrement in case of saving for retirement purpose while 97.39% remains the same regarding its proportion of saving. There is zero level of the increment faced.
- Highest level of decrement is visualized in case of marriage while the savings for precautionary needs increased meanwhile.

1.18 An Analysis of Impact of demonetization on consumption, saving and investment pattern of the households

Table 5: Impact of Income on Consumption- Before and After Demonetization

Consumption	Time-period	Bo (Intercept)	B1 (Y) MPC	R square	Correlation
Aggregate consumption	**Before**	137240.9	0.080455* (7.03E-	0.52	0.72

(Food+ Non-food items)			20)		
	After	138856.3	0.078372* (2.44E-19)	0.51	0.72
Aggregate consumption (Food-items)	**Before**	58957.15	0.012125* (6.59E-09)	0.26	0.51
	After	60194.89	0.012293* (7.69E-09)	0.26	0.51
Aggregate Consumption (Non-food items)	**Before**	78283.7	0.068331* (6.23E-21)	0.54	0.74
	After	78661.37	0.066079* (1.44E-20)	0.54	0.73

Source: Author Calculation

Note: - *shows the statistically significance level value at 5% level of significance

- p-calculated values are in the brackets

Interpretation of result:

- If p calculated value > α= 0.05 (H_0 accepted and H_1 rejected)
- If p calculated value < α= 0.05 (H_0 rejected and H_1 accepted)

It can be concluded from the table that-

- The consumption of analysis at **aggregate level** is classified as the total expenditure of both food and non-food items. Table explains that the correlation between variables is 0.72 (moderate correlated) , the goodness for fit tends to be 0.52while the p calculated value is less than 0.05 hence, null hypothesis is accepted i.e. the consumption is impacted by the income level. The value of MPC for selected household is 0.08 i.e. for unit change in income there is 8% change in consumption level that changed to 7% due to demonetization. After demonetization too, there tends to be the significant impact of income level over the aggregate consumption and the correlation is same while the goodness for fit is decreased.
- The expenditure on **food items** consists of wheat, rice, pulses, fruits, vegetables, milk, bread, fast food and biscuits. Table defines that the correlation between the variables is 0.51, the goodness for fit tends to be 0.26. The value of MPC is 0.012i.e. for unit change in income there is 1.2% of change in consumption of food items that remains same somehow while the p calculated value is less than 0.05 hence, null hypothesis is accepted that there tends to be the significant impact of income on the consumption of food items before demonetization. After demonetization too, there tends to be the significant impact of income level over the consumption of food items while the correlation and the goodness for fit remains same.
- The expenditure on **non-food items** includes clothing, home appliances, footwear, fuel, electricity, health and vehicle. Table implies that correlation between the variables was 0.74 that leads to the 0.73 (moderate correlated) due to demonetization. The goodness for fit remains the same at the level of 0.54. In both the time-period, p calculated value was less than the 0.05 hence, there tends to be the significant impact of income on consumption level. The value of MPC was 0.068 that means for unit change in income there is 6.8% of change in consumption level of non-food items that changed to 6.6% after demonetization.

Table 6: Impact of Income on Aggregate Investment- Before and After Demonetization

Investment	Time-period	Bo (Intercept)	B1 (Y)	R square	Correlation
Aggregate Investment	**Before**	-96566.9	0.234137* (3.82E-27)	0.64	0.80
	After	-78025.9	0.231376* (1.29E-24)	0.61	0.78

Source: Author Calculation
Note: - *shows the statistically significance level value at 5% level of significance

- p-calculated values are in the brackets

Interpretation of result:

- If p calculated value > α= 0.05 (H_0 accepted and H_1 rejected)
- If p calculated value < α= 0.05 (H_0 rejected and H_1 accepted)

Investment here is depicting the aggregate level of investment consisting fixed deposits, gold/silver, shares/debentures, mutual funds, real estate and insurance. Table 4 explains that the correlation between the income and investment was 0.80 hence, highly correlated and goodness for fit was 0.64 before demonetization that changed to 0.78 (highly correlated) and 0.61 after demonetization that means the relation between the variables declined. The value of MPC was 0.23 that means for unit change in income there is 23.4% change in level of investment that changed to 23.1% after demonetization, approximately the same. The p-calculated value is less in both cases that shows there is a significant impact of income on investment.

Table 7: Impact of Income on Aggregate Savings- Before and After Demonetization

Savings	Time-period	Bo (Intercept)	B1 (Y) MPS	R square	Correlation
Aggregate saving	**Before**	22651.23	0.153498* (3.51E-08)	0.24	0.49
	After	29675.92	0.144777* (2.39E09)	0.27	0.52

Source: Author Calculation
Note: - *shows the statistically significance level value at 5% level of significance

- p-calculated values are in the brackets

Interpretation of result:

- If p calculated value > α= 0.05 (H_0 accepted and H_1 rejected)
- If p calculated value < α= 0.05 (H_0 rejected and H_1 accepted)

Savings here is depicting the aggregate level of savings comprising savings for marriage, property, education, child planning, retirement and Precautionary needs. Table 5 explains that the correlation between the income and savings was 0.49 hence, moderately correlated and goodness for fit was 0.24 before demonetization that changed to 0.52 (moderate correlation) and 0.27 respectively after demonetization the relation between variables increased. The value of MPC was 0.15 that means for unit change in income there is 15% change in level of savings but after demonetization it is only 14%. The p-value is less in both cases that shows there is a significant impact of income on savings.

1.19 Multiplier Effect

Table 8: Multiplier Effect of Income due to Government Spending

Variable	Time-Period	Multiplier (K)	Formula
Aggregate Consumption	Before	1.087	K=1/1-MPC
	After	1.084	

Source: Author Calculation

There tends to be the direct relationship between MPC and the value of multiplier. The above table explains that by how many times, the increased government investment or spending will lead to the multiplication of the aggregate income. Overall, it is derived that the proportion of the government spending is just declined by a small level after the commencement of demonetization. It was multiplied by 1.087 times before demonetization that transformed to 1.084 times after demonetization.

1.20 Paired t-test (Occupational Distribution)

Table 9: Application of Paired t-test on the basis of Occupation Structure

S.No.	Variable / Occupation	Income	Consumption			Savings	Investment
			Food-items	Non-food items	Aggregate consumption		
1.	**Agriculturist**	1.46385 (0.177)	0.98213 (0.352)	0.913096 (0.385)	1.07545 (0.311)	0.9813816 (0.352)	0.942134 (0.371)
2.	**Government employee**	FIXED INCOME	-1.0647 (0.296)	0.372403 (0.703)	-0.23295 (0.817)	1.351314 (0.188)	-0.63912 (0.528)
3.	**Business Holders**	2.815958* (0.012)	1.899571 (0.076)	2.817549* (0.012)	2.942923* (0.009)	0.756179 (0.461)	0.948891 (0.357)
4.	**Entrepreneur**	1.610172 (0.118)	-1.22888 (0.229)	1.822995 (0.079)	0.735143 (0.468)	0.812244 (0.423)	1.077933 (0.291)
5.	**Private Services**	1 (0.325)	-1.62329 (0.115)	2.120832* (0.042)	0.329418 (0.744)	-0.79915 (0.431)	-1.02442 (0.314)

Source: Author Calculation

Note: - *shows the statistically significance level value at 5% level of significance

- p-calculated values are in the brackets

Interpretation of result:

- If p calculated value > α= 0.05 (H_0 accepted and H_1 rejected)
- If p calculated value < α= 0.05 (H_0 rejected and H_1 accepted)

The above table summarizes that:

- In case of **Agriculturists**, there is no statistically significant difference between the mean values of the respective economic activities consisting of food-items and non-food items consumption, aggregate consumption, savings and investment and also on income level as the p calculated value is more than the significance level of 0.05 so, the null hypothesis is accepted and found that there is no significant difference in activities of agriculturists after commencement of demonetization.
- In case of **government employees** too, there is no statistically significant difference in the mean values of the respective economic activities consisting of food-items and non-food items consumption,

aggregate consumption, savings and investment. The income level of them is fixed as paid by the government, hence, no change in it. As the p calculated value is more than the significance level of 0.05 so, the alternative hypothesis is accepted and found that there is no significant difference in activities of government employees too after commencement of demonetization.

- **Business Holders** faced no significant difference in their mean values hence, no such level of distinction in the activities of consuming food-items, savings and investment. While the p calculated value in case of income, non-food items consumption, aggregate consumption is less than the 0.05 so the alternative hypothesis is accepted and found that there is significant difference in these economic activities after demonetization.
- The case of **entrepreneurs** shows that there is no statistically significant difference in the mean values of the respective economic activities consisting of food-items and non-food items consumption, aggregate consumption, savings and investment and also the income level. As the p calculated value is more than the significance level of 0.05 so, the null hypothesis is accepted and found that there is no significant difference in activities of government employees too after commencement of demonetization.
- **Private services holders** faced no significant difference in income level, food-items consumption, aggregate consumption, savings and investment as the p calculated value is more than the significance level of 0.05. While the p-calculated value in case of non-food items is less than 0.05 that shows there termed out to be the statistically significant difference between there mean values after the demonetization.

1.21 Conclusion

Even if the call of demonetization has created some sorts of troubles in the course of daily life, you cannot overrule the point that it is just about a pain to incur gain. This call for demonetization is the most important reformative step that has been taken since independence. It is expected that in due course of time it will bring manifold holistic and sustainable benefits to the nation. Moreover, it has been called a more of political step than the economic one. In this way, demonetization can be a chance for a fresh new start, or it can be something that causes unnecessary confusion for a country. So, it can be evaluated that this is the prominent step of the government is not working upto that level which is required in the short-run but will show its magical colors in the long-run.

Following are the findings of the study:-

- ❖ The study represents the represents the general profile of the Palwal city, which shows that the 13.91% population of the village are specified in the 0-30 age group, 68.70% in the 30-60 age group and 17.39% are specified in the above 60 age group. It also represents that most of the people of the city are included in 30-60 age groups. There tends to be 101 males and 14 females to be the head of the family. In the city, maximum population lies under general category i.e. 51.31%. Mostly, the families consist of 0-5 members depicting smaller families.
- ❖ The occupation structure of the city shows that the 8.69% population are agriculturists, 25.22% population's are Entrepreneurs, 24.35% population are the government employees, 26.09% population provides their services in private sector. Business holders comprises of 14.78% of the population while 0.87%population comprises of students who directs their families acting as the head of the family.
- ❖ 88.69% of the total population tends to be educated and the remaining 1.31% are uneducated. The educated population could be categorized as per their level of education gained. 22.61% of the population have completed their education till the level of 10/10+2th, 39.13% till graduation and 26.96% of the population are post-graduated. Remaining 11.31% are illiterate.

- Mostly, the families lie in the range of income above 5 lakhs, that shows that there is not a higher level of population that resides in the lower level of income.
- When categorization was done of the population as per the slabs of the income tax, it was visualized that:
  - (i) In the first table that shows the income tax slabs for the people below the age of 60 years of age comprising the 82.61% of the total population that one person's slab changed from Rs.2,50,000 to 5,00,000 to upto Rs. 2,50,000. Mostly, the population lie under the slab of above Rs. 10 lakhs.
  - (ii) In the second table that shows the income slabs for the people above 60 but less than 80 years of age i.e. senior citizens comprising the 17.39% of the total population that one person's slab changed from Rs. 5-10 lakhs to Rs. 3-5 lakhs.
- Overall, none faced increment in their income level due to the emergence of demonetization. Only 12% of the population faced decline in their income while remaining 88% population's income remained same.
- Highest savings were done for the purpose of education and meeting precautionary needs while the retirement gained less importance in the eyes of savers.
- Highest investments were done in the form of fixed deposits while the lowest investment were visualized in case of real estate. There was presence of such percentage of the population too that doesn't either save or invested at all.
- The level of online transactions is increased after demonetization but not upto that level that was expected. Now also, more than half of the population prefers cash as the mode of the transactions. While there is presence of some population too, that uses both cash and online methods for transactions.
- Buying behavior in case of food items mostly remained same. Highest level of increase is noticed in fast food consumption and lowest in bread. Highest decline is in the case of milk and lowest in wheat.
- Buying behavior in case of non-food items mostly remained same. Highest and lowest level of increase is noticed in footwear, fuel and clothing respectively. Highest and lowest decline is visualized in case of clothing and fuel respectively.
- In case of investments too, mostly the behavior after demonetization remained same. No increase is visualized in fixed deposits, real estate and insurance. Highest level of increase is seen in the behavior related to shares/debentures. Highest and lowest declined is in the case of mutual funds and fixed deposits, shares/debentures respectively. No decline is there in relation to insurance.
- Mostly the savings remained same. Highest and lowest level of increment is in precautionary needs and property respectively. Highest and lowest level of decline is for marriage purpose and education respectively.
- There is the emergence of statistically significant impact of income that changed after demonetization on all the variables undertaken namely, food-items, non-food items, aggregate consumption. While the impact over the particular factor is dependent upon the occupation in which it is tested.
- MPC that defines the change in the level of consumption due to one unit change in income was defined to be higher in case of non-food items and lower in case of food items, in both the phases- before and after demonetization.
- The fall in MPS is also of a large extent.
- The correlation between the income and the variables savings and investments tends to be moderate relationship only even after the commencement of demonetization.
- Correlation between income and the variables of consumption comprising of food-items consumption, non-food items consumption, aggregate consumption also tends out to be moderate relationship in both the phases- before and after demonetization.
- Income level of the government employee's is fixed that has nothing to do with the commencement od the step of demonetization.

- ❖ No overall significant difference in mean values of the economic activities and income level of Agriculturists, Government employees and the Entrepreneurs is obtained. As the value of calculated p-value is higher than the significance level of α=0.05.
- ❖ There is a statistically significant impact on the income level of business holders as the calculated p-value i.e. 0.012 is less than the 0.05.
- ❖ There is no statistically significant difference between the mean values of food items after demonetization. The impact is termed out to be negligent in relation to the population that is comprised under any of the occupation namely, agriculturist, government employees, business holders, entrepreneur, and private service holders.
- ❖ Non-food items consumption is significantly differentiated of business holders and private services provider after the phase of demonetization as the calculated p-value of the following are less than the significance level of α=0.05.
- ❖ There is significant difference over the aggregate consumption in case of business holders after demonetization as the calculated p-value termed out to be 0.009 is leess than 0.05.
- ❖ There tends to be no significant difference in the mean values of savings and investment due to demonetization under any category of the occupation undertaken.
- ❖ Overall, the impact of the demonetization was not also upto that point which it was considered to be in the case of the Palwal city.

1.22 Suggestions

Demonetization has affected each and every citizen to some or large extent. Huge queues outside banks and post offices shows the merciful position of the people. Basically, the major impacts emerges out over the areas where cash is the primary source for dealing due to the shortage of currency in circulation. Some concrete suggestions that will surely will be helpful to cope up with the demonetization crisis are:

- Educate everyone about the use of e-wallet and Debit and Credit cards.
- Give every businessman, who has current account with banks, swipe machines at the earliest possible.
- Supporting farmers, tenants and small business holders to operate their bank accounts as they are habituated to do most of the dealings in cash.
- Measures must be undertaken to strengthen banking structure.
- Extend the income disclosure scheme.
- Reform the silly curbs on legitimate election donations to candidates.
- Setup of digital literacy booths outside banks.
- More printing and circulation of smaller currency notes.
- Subsidy schemes for smart phones.
- Cash management in banks and ATM's upto a certain point.
- Increasing penetration of banks.

If these steps are taken wisely, then surely the sufferings suffered by the people at this current junction will be reduced to a large extent.

References

1. Alka Rani and Punit Kumar, "Impact of demonetization in different sector in Indian economy", International Journal of Advanced Educational Research, Vol-2, Issue-6, November 2017, ISSN: 2455-6157 Page No. 221-223
2. Anuradha Bhatnagar, "Demonetization and Its Impact in India", International Journal of Informative and Futuristic Research, Vol-4, Issue-6, February 2017, ISSN: 2347-1697, Page no:6503-6510.

3. Bansal, Jai (2017), Impact of Demonetization on Indian Economy, International Journal of Science Technology and Management, vol.- 6, issue -1, pp. 598-605 available at www.ijstm.com
4. Dr. D. B Singh and Dr. Shefali Panwar, " Study of Effects of Demonetization on the Informal Economy of India", International Journal of Engineering Technology, Management and Applied Sciences (IJETMAS), May 2017, Vol-5, Issue-5, ISSN: 2349-4476.
5. Dr. Sudesh Kumar and Sunandan Bumra, " Demonetization in India: Pre and Post effect on Indian Industry", International Journal of Scientific and Engineering Research, Vol-8, Issue-7, ISSN: 2229-5518.
6. Singh, et .al (2017), 3rd Interenational Conference on Recent innovations in Science, Technology, Management and Environment (ICRISTME-16), ISBN: 978-93-86171-13-9, Vol-5, Issue-12, pp 625-635.
7. Ritika Jain," Is Demonetization a Windfall for the Banking Sector", Indian Economy, New Age International Publisher, New Delhi, 36th ed., 2010.
8. Dr. Nidhi Arora and Poonam Arora, "Measuring the Impact and Acceptance of Demonetization: A Data Extensive Analytical Study", Online Journal of Multidisciplinary Subjects, Vol-11, Issue-2, September 2017, ISSN: 2349-266X.