G.S. College of Commerce & Economics, Nagpur
(NAAC Accredited 'A' Grade Institution)

AN ANALYTICAL STUDY OF IMPACT OF DEMONETIZATION WITH REFERENCE TO NAGPUR CITY

Research study conducted by:
Bachelor of Business Administration Department

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An Analysis of Impact of Demonetisation with special reference to Nagpur City

1. Introduction

The demonetization of `500 and `1000 banknotes was a policy enacted by the Government of India on 8th November 2016, ceasing the usage of all `500 and `1,000 banknotes as legal tender in India after 9th November, 2016. The Government claimed that the demonetization as an effort to stop counterfeiting of the current banknotes allegedly used for funding terrorism, as well as a crack down on black money in the country. The move was also described as an effort to reduce corruption, the use of drugs, and smuggling.

However, in the days following the demonetization, banks and ATMs across the country faced severe cash shortages with severe detrimental effects on a number of small businesses, agriculture, and transportation. People seeking to exchange their notes had to stand in lengthy queues, and several deaths were linked to the inconveniences caused due to the rush to exchange cash. Also, following the announcement, the BSE SENSEX and NIFTY 50 stock indices crashed for the next two days.

The move received support from several bankers as well as from some international commentators. But it was heavily criticised by members of the opposition parties, leading to debates in both houses of parliament and triggering organised protests against the government in several places across India.

The Government had expected all the SBNs [specified bank notes] to come back to the Banking system to become effectively usable currency.

This, however, is not borne out by the actual sequence of events since 8 November 2016. In a signed article appearing on 14 November, the chief economic advisor of the State Bank of India (SBI) had argued that since 25% of the proscribed currency notes did not return to the banking system during the 1978 demonetisation episode, it is reasonable to assume that 25%–50% of the proscribed currencies will not be exchanged in the present instance. He wrote, "there would be around `2,482–4,800 billion money that will not be converted and remain outside the banking system. To that extent, cash in the system may decline" (Ghosh 2016).

Defending the demonetisation decision in the Supreme Court, the then attorney general argued on 15 November 2016 that the government estimated black money size to be `15 to `16 lakh crore and expected people to deposit `10–`11 lakh crore in banks. He said, "Rest `4–5 lakh crore were being used in northeast and J&K to fuel trouble in India. That will be neutralised" (Times of India 2016).

On 23 November 2016, the chief economic advisor of the SBI once again wrote that there was no doubt over the fact that between `2.4 and `4.8 lakh crore would not return to the system and hence the RBI's liabilities will "get extinguished" to that extent, and that differences were only on how the consequent capital gain by the RBI was to be handled. He argued: "We reiterate that the best possible move should be the first one and the government must spend the funds on activities like infrastructure development or as it deems fit. There is nothing wrong in it, as is being claimed in several circles" (Ghosh 2016a).

On the day when the Reserve Bank of India (RBI) finally reported that almost 99% of the proscribed currency notes of `500 and `1,000 denomination had returned to the banking system by 30 June 2017, the finance ministry also issued a formal statement seeking to explain how demonetisation has been "immensely beneficial to the Indian economy and people."

Present study is conducted to know the impact of demonetization on people of Nagpur city. The questionnaire contained 26 questions and the sample size was 792. The study is presented in the following format. Next section of the study discusses review of related literature. Section three deals with research methodology used. Section four is data analysis and interpretation and the last section is finding and conclusion.

2. Review of related literature:

Various studies/ surveys were conducted post demonetization to understand its impact. Results of some of the studies have been discussed here:

(Krishnan and Siegel, 2017) studied the immediate impact of and reaction to demonetisation are documented and examined through a survey of around 200 families living in 28 slum or lower-income neighbourhoods in Mumbai in early December 2016. A drop in family income is recorded with wide variation across different groups and occupation types. There is also a drop in consumption as well as changes in the families' savings in November. Finally, they found that the majority of respondents view the policy overall as positive, including the majority of those who experienced some loss of income in November.

(Zhu et. Al., 2017) This study analyses and estimates the impact of demonetisation on the welfare of poor households in the Sundarbans region of India. Using a unique high frequency (weekly) data set collected during the process of demonetisation, they estimate that household welfare is reduced by INR 1,414 (US $ 20.8), equivalent to about 15.6% of income over the two months post demonetisation. Short-term welfare reductions happen through increased unemployment, losses to income and savings, and the opportunity costs of exchange. Their analysis shows that immediately after demonetisation, households adopted a range of strategies to rid themselves of unwanted currency notes, including increased consumption-related purchases, a reduction in borrowing and increased instances of loans. They find evidence that consumption levels and borrowing fall continuously, but consumption expenditures remain stubbornly high two months after the shock. Local income and remittances are affected heterogeneously by the shock, with households experiencing unemployment and female-headed households losing out more. The results shed light on how low income households use the limited tools at their disposal to deal with shocks, as well as the need to carefully consider how national monetary policy, however well intentioned, may adversely affect the welfare of vulnerable households.

(Guérin et. Al., 2017) Drawing on survey data from rural Tamil Nadu, the effects of demonetisation are documented. Serious concerns arise with regard to the achievement of its stated goals. The rural economy was adversely affected in terms of employment, daily financial practices, and social network use for over three months. People came to rely more strongly on their networks to sustain their economic and social activities. Demonetisation has probably further marginalised those without support networks. In a context such as India, where state social protection is weak and governmental schemes are notoriously subject to patronage and clientelistic networks, dense networks of supportive relatives, friends and patrons remain key for safeguarding daily life. With cashless policies gaining currency in various parts of the world, they believe their findings have major implications, seriously questioning their merit, especially among the most marginalised segments of the population.

3. Research Methodology:

Need of the study

Understanding demonetisation as a policy instrument requires analyzing its effect on people and macro indicators. As mentioned above, demonetization impacted different segments of people differently depending on the demography. Nagpur being the second capital of Maharashtra and Central part of India, it is worth examining the impact of demonetization on the people of Nagpur.

Objectives of the study

Looking at the importance of the decision taken by the Government of India and its impact, a research study is being conducted to know how people have taken it. Objectives of the study are:

1. To study opinion of people on demonetization
2. To study the relationship between occupation and change in income due to demonetization
3. To study the relationship between occupation and opinion about demonetisation.
4. To study the relationship between income level and change in income.
5. To study the relationship between change in income and opinion about demonetisation.
6. To study the relationship between change in income and change in savings due to demonetization.
7. To study the mode of savings before and after demonetization.

Hypotheses of the study

H1: Change in income due to demonetization is dependent on occupation.

H2: Opinion of people about demonetization is dependent on occupation.

H3: Change in income due to demonetization is dependent of income level.

H4: Opinion of people about demonetization is dependent on change in income.

H5: Change in savings is dependent on change in income.

H6: There is significant change in mode of savings before and after demonetization.

Universe and Sample of the study

The Universe of the study is Nagpur district which is one of the well urbanized district having more than two-third of its population lives in urban areas as two-fifth of state population lives in

urban areas. The population of the study includes Nagpur (Urban) tahsil which is the most populous having 2,405,665 persons as per 2011 census.

For selecting sample for the study, 1000 close ended questionnaires with 26 questions each were distributed through simple random sampling. Out of this, 792 questionnaires were returned and considered for analysis. Descriptive statistics viz. frequency, percentages and graphs have been used while Chi-square and t-test is used for inferential analysis.

Limitations of the study

Following are the main limitations of the study;
1. Restricted sample size of 792 is considered for the study.
2. Most of the respondents are from Nagpur (Urban) area. Nagpur (Rural) is not considered for the study.
3. The responses may be biased.
4. Macroeconomic impact of demonetization has not been considered.

4. Data Analysis and Interpretation:

As mentioned above, descriptive and inferential statistics have been used for the purpose of analysis. First part of the analysis deals with descriptive analysis as discussed below:

A) Descriptive Statistics

Table 1: Occupation-wise distribution of respondents:

Particulars	Frequency	Percent	Cumulative Percent
Government Service	93	11.74	11.74
Private service	217	27.40	39.14
Business Owner	157	19.82	58.96
Student	102	12.88	71.84
Housewife	142	17.93	89.77
Retired pensioner	22	2.78	92.55
Daily wages	44	5.56	98.11
Any other	15	1.89	100.00
Total	**792**	**100.00**	

**Fig.1: Occupation-wise distribution of respondents:**
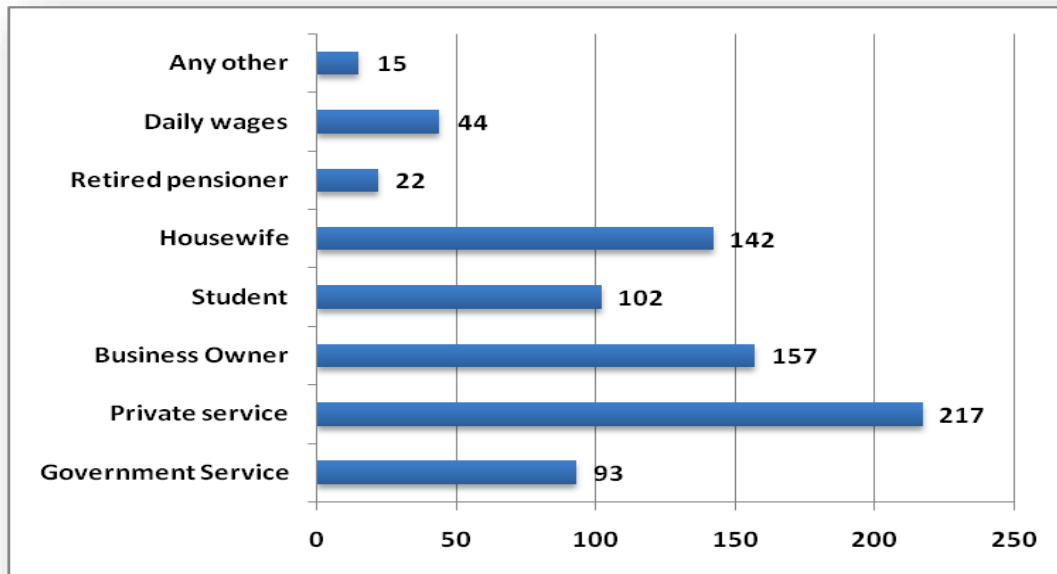
In Nagpur district, Nagpur (urban) tahsil is entirely urban tahsil and Nagpur (Urban) tahsil is the most populous having 2,405,665 persons out of which 11,20,561 are working class.[1] It is found from the survey that maximum respondents are from Private service (217, 27.4%) while the minimum are from 'any other' category (15, 1.89%).

Table no.2: Education/Schooling-wise distribution of respondents:

Particulars	Frequency	Percent	Cumulative Percent
Middle class or Below	68	8.59	8.59
High School	97	12.25	20.83
Senior secondary	178	22.47	43.31
Graduate	303	38.26	81.57
Post graduate	122	15.40	96.97
Any other	24	3.03	100.00
Total	792	100.00	

**Fig.2: Education/Schooling-wise distribution of respondents:**

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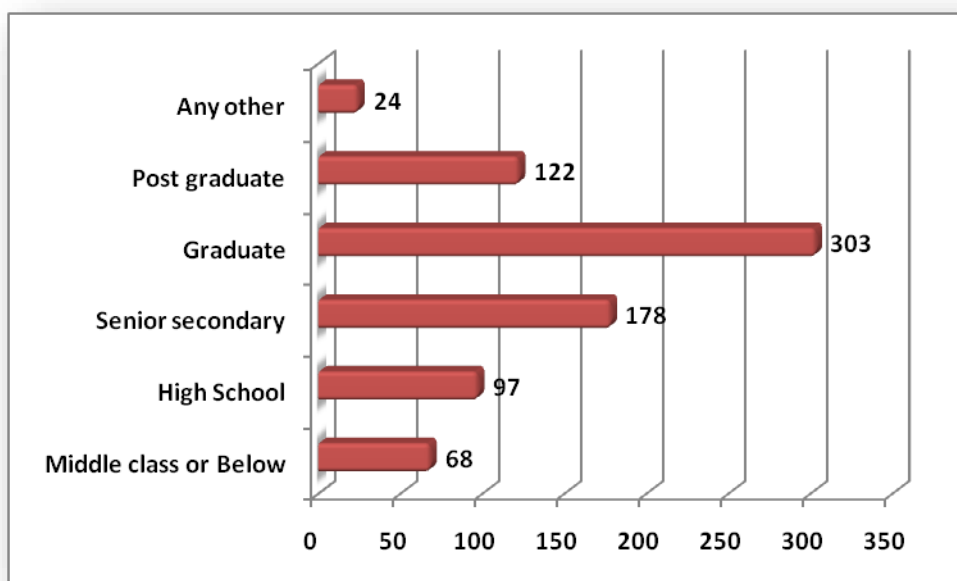
[1] Census 2011 report

Literacy rate of the district is 88.39% as against state rate of 82.34%[2]. As per figure 2 above, it is observed that maximum respondents are graduates (303, 38.26%) while the minimum are from 'any other' category (24, 3.03%).

Table no.3: Gender-wise distribution of respondents:

Particulars	Frequency	Percent	Cumulative Percent
Male	512	64.65	64.65
Female	278	35.10	99.75
Others	2	0.25	100.00
Total	792	100.00	

**Fig.3: Gender-wise distribution of respondents:**
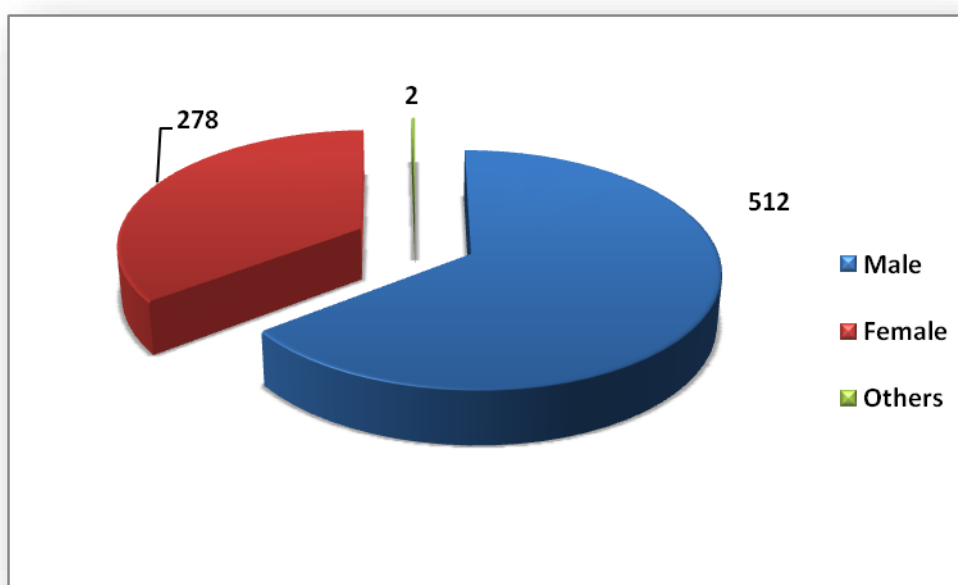
Sex ratio of the district is 951 as against state ratio of 929. It is found from table 3 and corresponding graph 3 that maximum respondents are males (512, 64.65%) while the minimum are from 'others' category - (2, 0.25%).

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[2] ibid

Table no.4: Monthly total income-wise distribution of respondents

Particulars	Frequency	Percent	Cumulative Percent
0-5000	174	21.97	21.97
5000-10000	170	21.46	43.43
10000-20000	230	29.04	72.47
20000-50000	145	18.31	90.78
50000-100000	54	6.82	97.60
>100000	19	2.40	100.00
Total	792	100.00	

**Fig.4: Monthly total income-wise distribution of respondents**
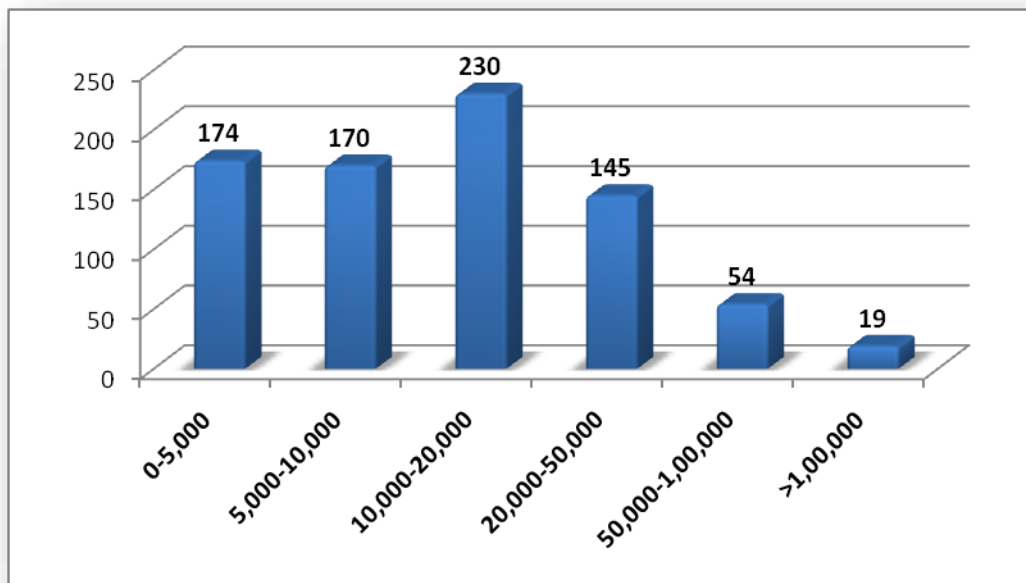
It is found from table no. and figure no. 4 that maximum respondents are from the income bracket of Rs.10,000-20,000/- (230, 29.04%) while the minimum are from the income bracket of over Rs.1,00,000- (19, 2.40%). The average income of respondents is found to be ` 21,035/-

Table no.5: After-effect of demonetization on the income of respondents

Particulars	Frequency	Percent	Cumulative Percent
Increased	71	8.96	8.96
Decreased	289	36.49	45.45
No change	432	54.55	100.00
Total	792	100.00	

**Fig.5: After-effect of demonetization on the income of respondents**
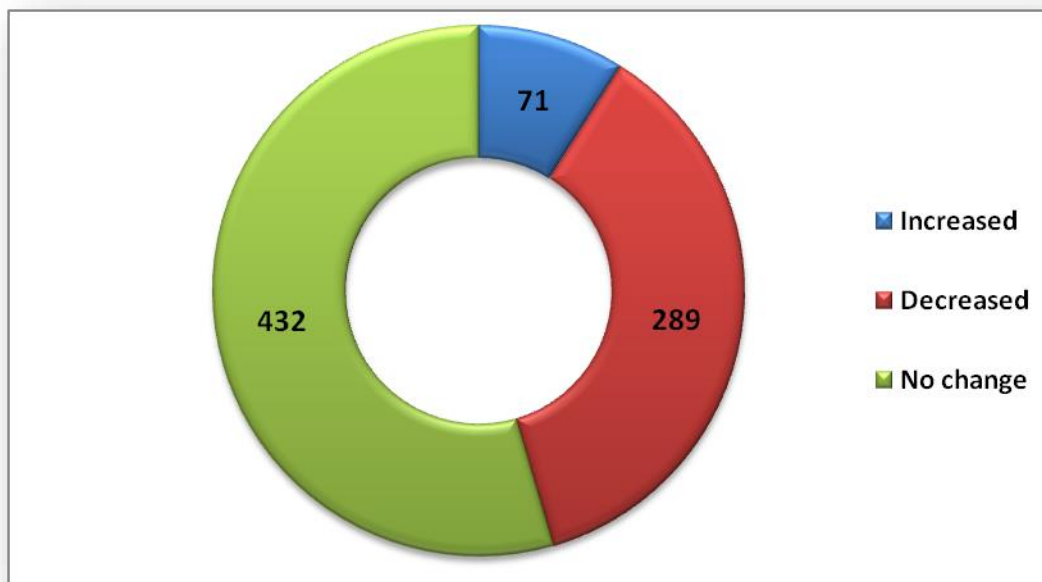
A survey conducted by Krishnan and Siegel, (2017) in selected slums of Mumbai reported that 31% of the household lost their income due to demonetization. The result of survey shows that 289 i.e. 36.89% respondents reported decrease in their income post demonetization. It is also seen that maximum respondents did not experience a change in their income post-demonetization (432, 54.55%) while the minimum experienced an increase in their income post-demonetization (71, 8.96%).

Table no.6: Respondents' opinion on Government's decision of Demonetization

Particulars	Frequency	Percent	Cumulative %
Very good	188	23.74	23.74
Good	274	34.60	58.33
Can't say	186	23.48	81.82
Bad	84	10.61	92.42
Very bad	60	7.58	100.00
Total	792	100.00	

**Fig.6: Respondents' opinion on Government's decision of Demonetization**
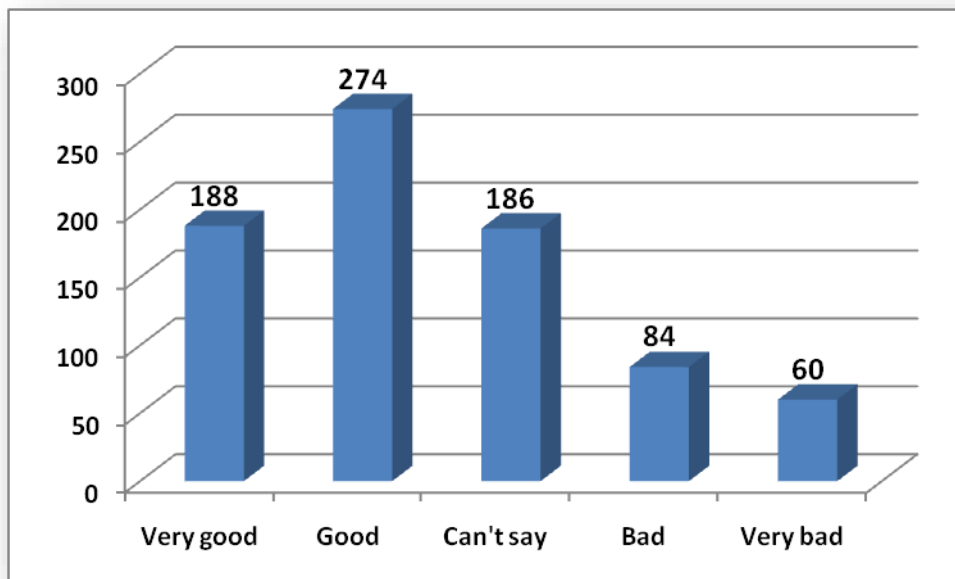
When it comes to opinion of respondents regarding policy decision of demonetization, different people have different opinions. A survey conducted in Mumbai reported 56% of respondents regarded this as a good policy. Here, it is observed that maximum respondents have a good opinion of demonetization (274, 34.60%) while the minimum have a very bad opinion of demonetization (60, 7.58%).

Table no.7: Respondents' opinion on Government's decision of Demonetization

Particulars	Frequency	Percent	Cumulative Percent
Crack down on black money	272	34.34	34.34
Stop terrorist funding	57	7.20	41.54
Halt the circulation of counterfeit currency	36	4.55	46.09
Reduce corruption	127	16.04	62.12
Stop drugs and smuggling	37	4.67	66.79
All of the above	176	22.22	89.02
Any of two/three	73	9.22	98.23
Other reason	14	1.77	100.00
Total	792	100.00	

**Fig.7: Respondents' opinion on Government's decision of Demonetization**
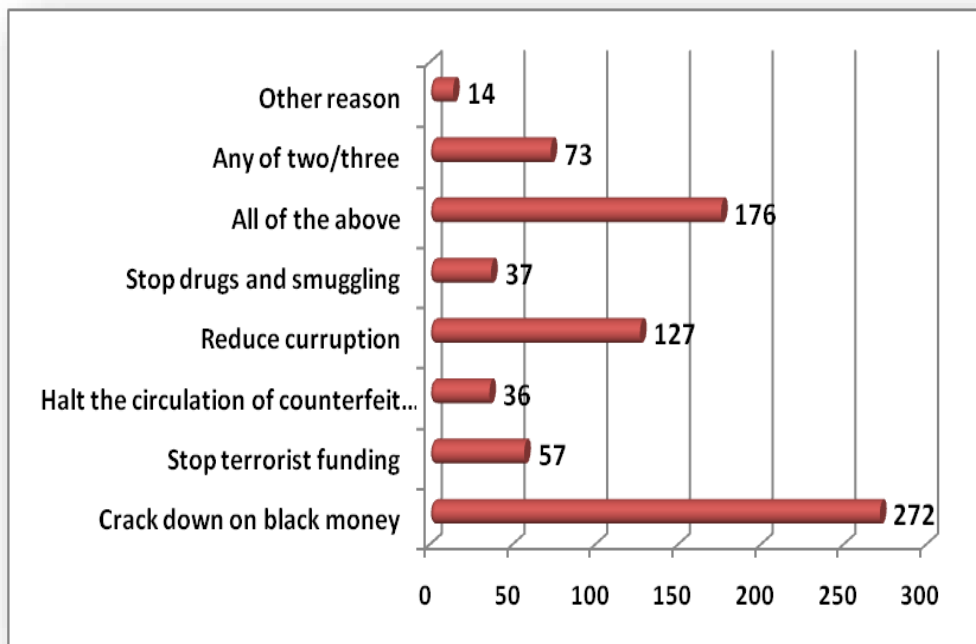
The Government claimed that the demonetization as an effort to stop counterfeiting of the current banknotes allegedly used for funding terrorism, as well as a crack down on black money in the country. The move was also described as an effort to reduce corruption, the use of drugs, and smuggling. The result of this survey shows that maximum respondents (272, 34.34%) feel that crack-down on black money was the main reason while minimum (14, 1.77%) feel that some 'other' reasons prompted the government to announce demonetization.

Table no.8: Respondents' opinion on whether demonetization has served its intended purpose

Particulars	Frequency	Percent	Cumulative Percent
Yes	210	26.52	26.52
Partly	264	33.33	59.85
Not sure	220	27.78	87.63
No	98	12.37	100.00
Total	792	100.00	

Fig.8: Respondents' opinion on whether demonetization has served its intended purpose
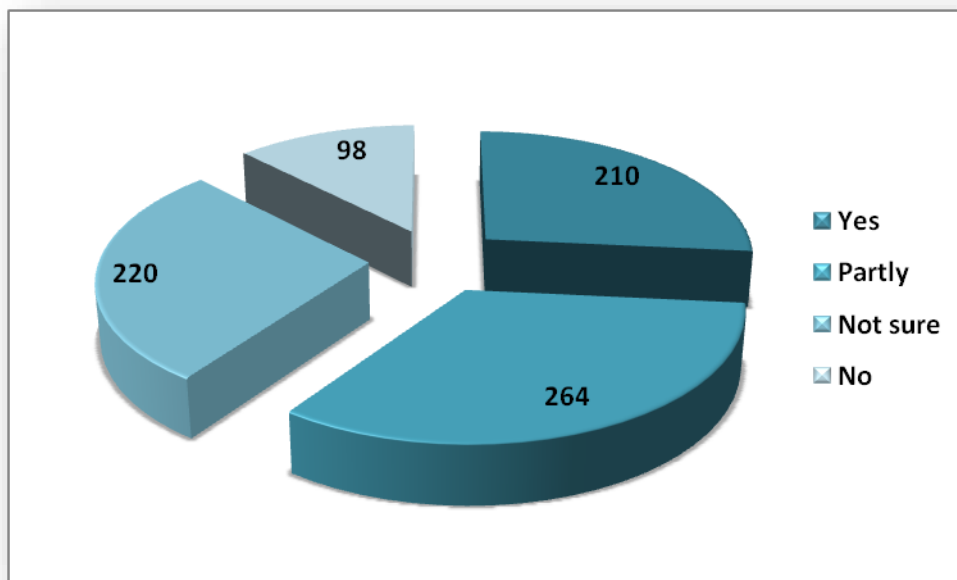

It is a matter of inquiry to see whether demonetization has served its intended purpose. The impact on the informal segment is something worth noting. As per Centre for Monitoring Indian Economy (CMIE), 1.5 million jobs in the unorganized sector were lost during Jan-April 2017. Sectoral Index of Industrial Production (IIP) comprising mining, manufacturing and electricity witnessed a lower growth in industrial production during the last few months of 2016-17 before recovering.

The survey result shows that maximum respondents (264, 33.33%) feel that demonetization has partly served its intended purpose while minimum (98, 12.37%) feel that demonetization has not served its intended purpose.

Table no.9: Did you face any problems immediately after demonetization?

Particulars	Frequency	Percent	Cumulative Percent
Yes	491	61.99	61.99
No	301	38.01	100.00
Total	792	100.00	

**Fig.9: Did you face any problems immediately after demonetization?**
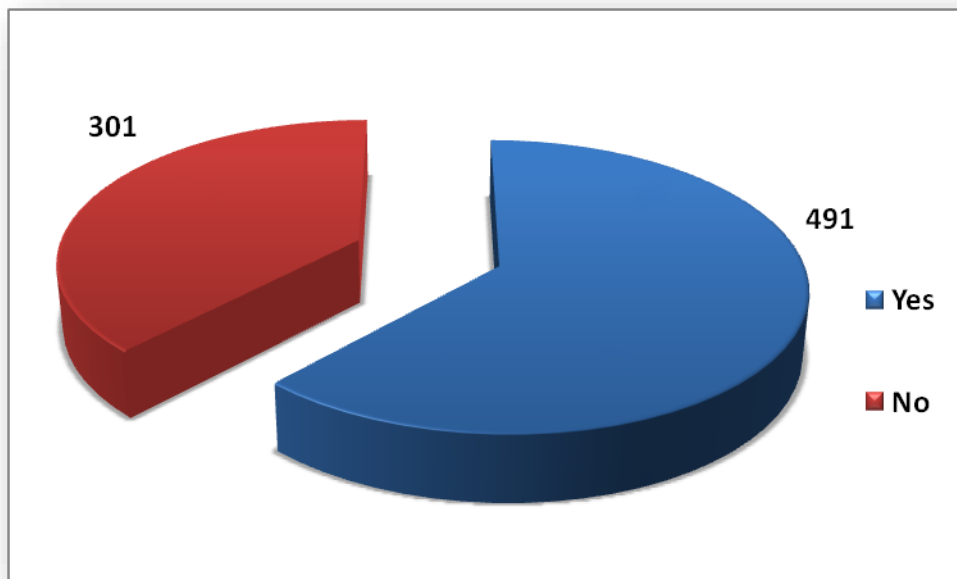
People faced many problems after demonetization particularly standing in queue to change old currency notes. A study done at Mumbai slums report that 63% of the respondents have to wait for 1 to 3 hours in queue to change old notes. Some cities have reported police beating people standing in queue. This survey also reported that a major portion of respondents (491, 61.99%) have faced some problems immediately after demonetization.

Table no.10: Nature of problems faced by respondents:

Particulars	Frequency	Percent	Cumulative Percent
Loss in income due to waiting in queue for a long time at Bank/ATM	302	38.13	38.13
Delay in receipts	119	15.03	53.16
Delay in payment	177	22.35	75.51
Postponing purchases	133	16.79	92.30
Any other	61	7.70	100.00
Total	792	100.00	

**Fig.10: Nature of problems faced by respondents:**
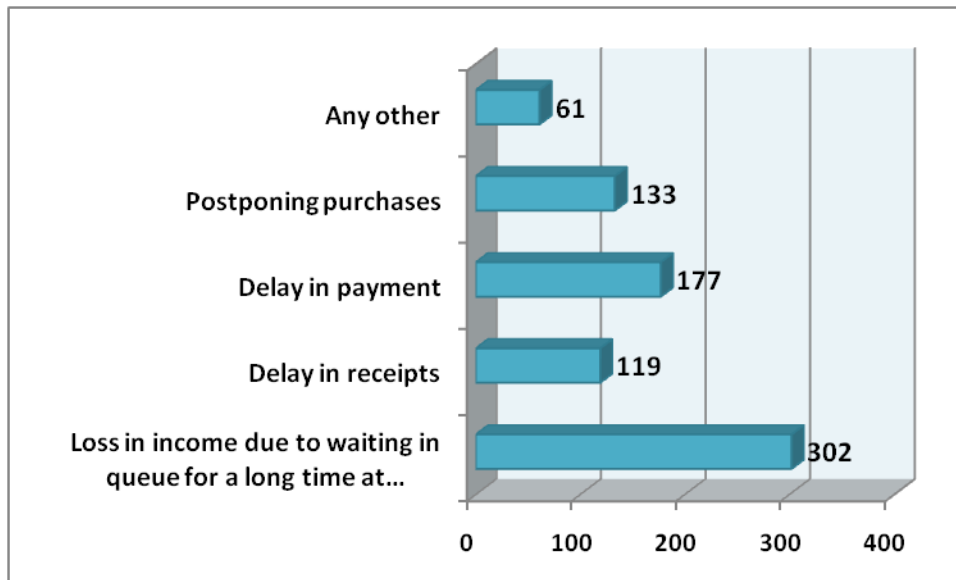
When asked about the problem faced by the respondents, it is found that maximum respondents (302, 38.13%) feel that demonetization has resulted in Loss in income due to waiting in queue for a long time at Bank/ATM while minimum (61, 7.7%) have experienced other unspecified problems.

Table no.11: Were the problems (effects) faced temporary or long-term in nature?

Particulars	Frequency	Percent	Cumulative Percent
Temporary in nature	583	73.61	73.61
Long term in nature	209	26.39	100.00
Total	792	100.00	

**Fig.11: Were the problems (effects) faced temporary or long-term in nature?**
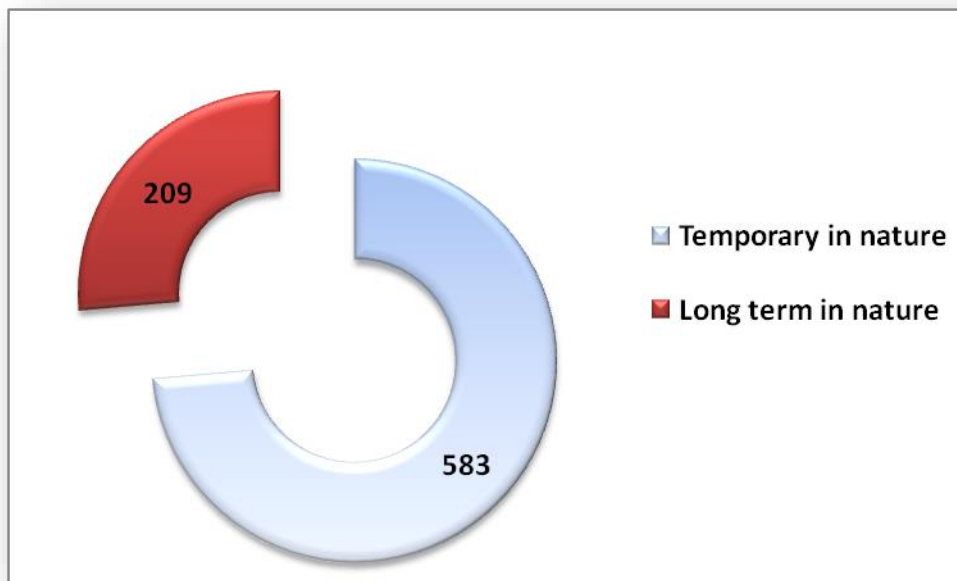
Even though respondents came across problems after demonetization viz. loss of income, delayed receipts, delayed payments etc., maximum respondents (583, 73.61%) feel that the problems faced by them (as mentioned in the previous chart) are of a temporary nature.

Table no.12: How was the demonetization exercise handled by the government?

Particulars	Frequency	Percent	Cumulative Percent
Properly	410	51.77	51.77
Not properly	382	48.23	100.00
Total	792	100.00	

Fig.12: How was the demonetization exercise handled by the government?
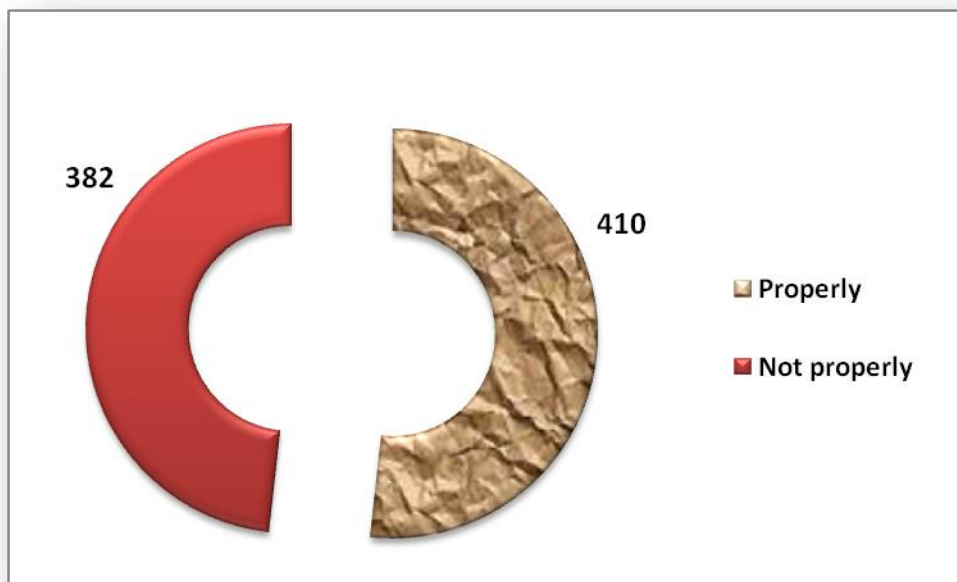

It was a topic of debate and discussion after demonetization whether government has handled this exercise properly or not. It is observed that the respondents are almost equally divided opinion exists in this case.

Table no.13: Change in the amount of respondents' savings after demonetization

Particulars	Frequency	Percent	Cumulative Percent
Decreased	296	37.37	37.37
Increased	121	15.28	52.65
No change	375	47.35	100.00
Total	792	100.00	

Fig.13: Change in the amount of respondents' savings after demonetization
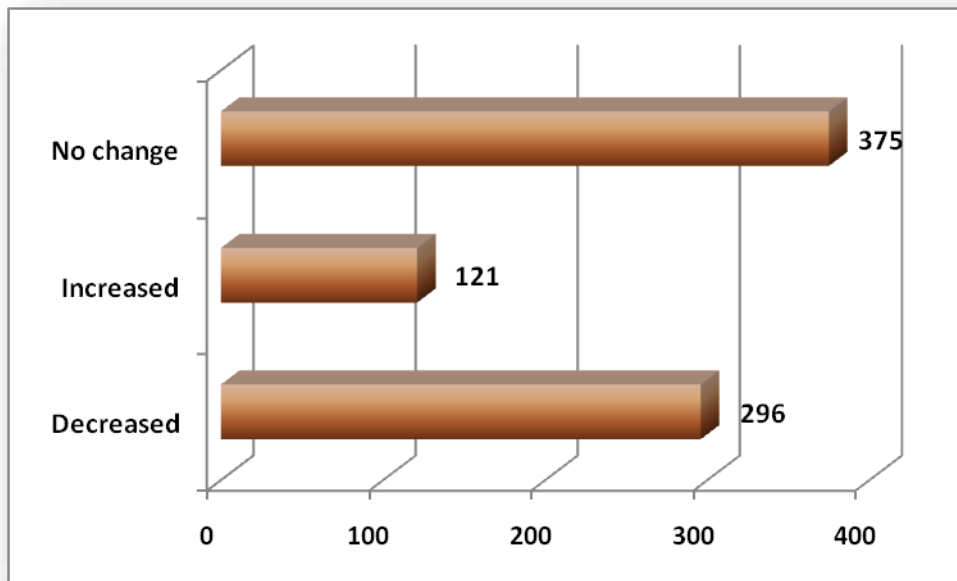

It is found as per table 13 and its corresponding graph 13 that maximum respondents (375, 47.35%) have experienced no change in their savings while minimum (121, 15.28%) have experienced an increase in their savings after demonetization.

Table no.14: Respondents' preferred options for savings before demonetization

Particulars	Frequency	Percent	Cumulative Percent
Holding cash	286	36.11	36.11
Bank deposits	375	47.35	83.46
Gold holdings	47	5.93	89.39
Lending	17	2.15	91.54
Real estate	9	1.14	92.68
Financial instrument	31	3.91	96.59
Any other	27	3.41	100.00
Total	792	100.00	

Fig.14: Respondents' preferred options for savings before demonetization
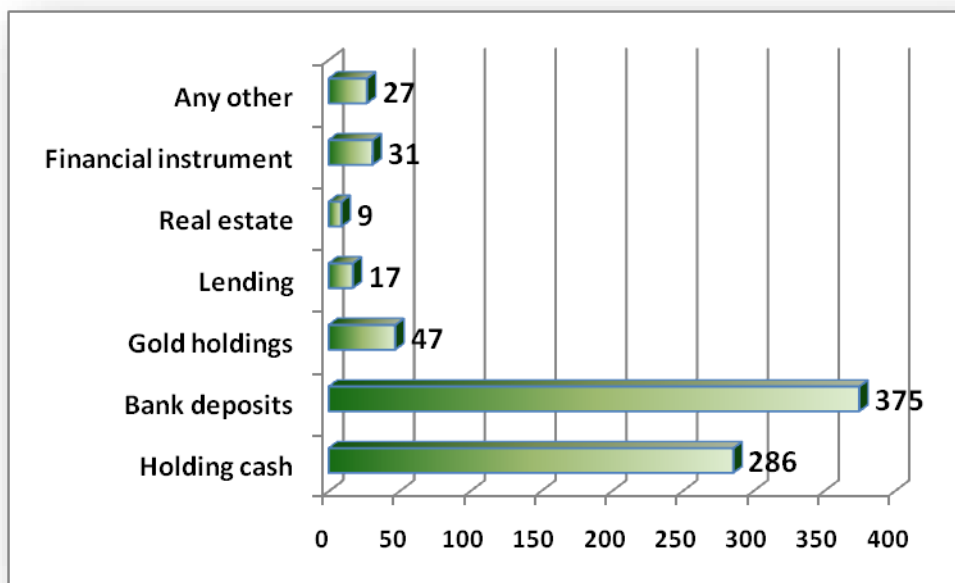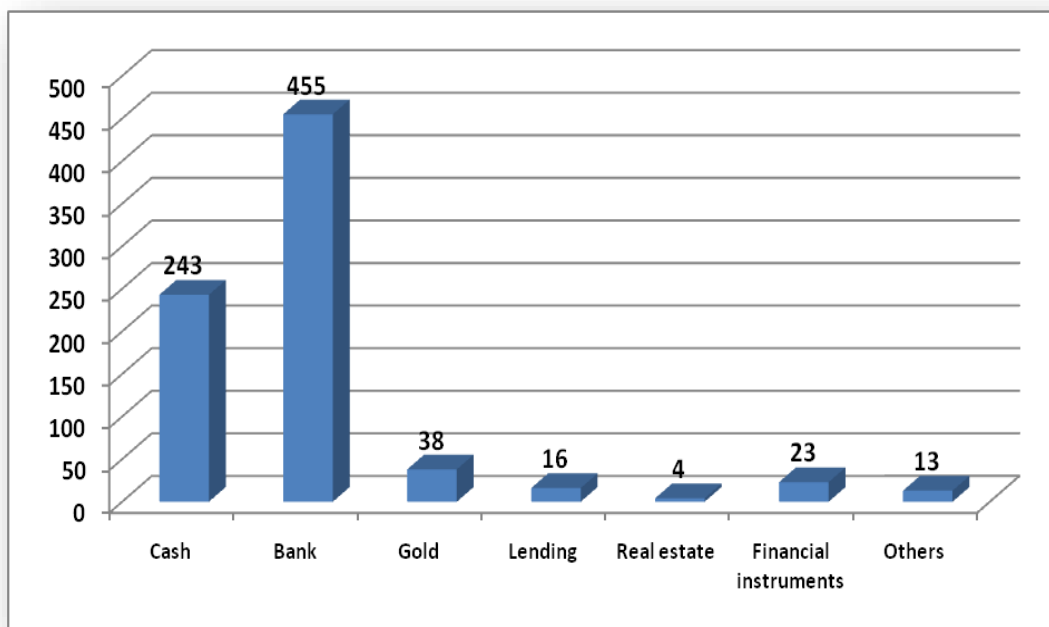

It is found before demonetization, maximum respondents (375, 47.35%) preferred to keep their savings in the form of Bank deposits while minimum (9, 1.14%) preferred to keep their savings in the form of real estate.

Table no.15: Respondents' preferred options for savings after demonetization

Particulars	Frequency	Percent	Cumulative Percent
Cash	243	30.68	30.68
Bank	455	57.45	88.13
Gold	38	4.80	92.93
Lending	16	2.02	94.95
Real estate	4	0.51	95.45
Financial instruments	23	2.90	98.36
Others	13	1.64	100.00
Total	792	100.00	

Fig.15: Respondents' preferred options for savings after demonetization
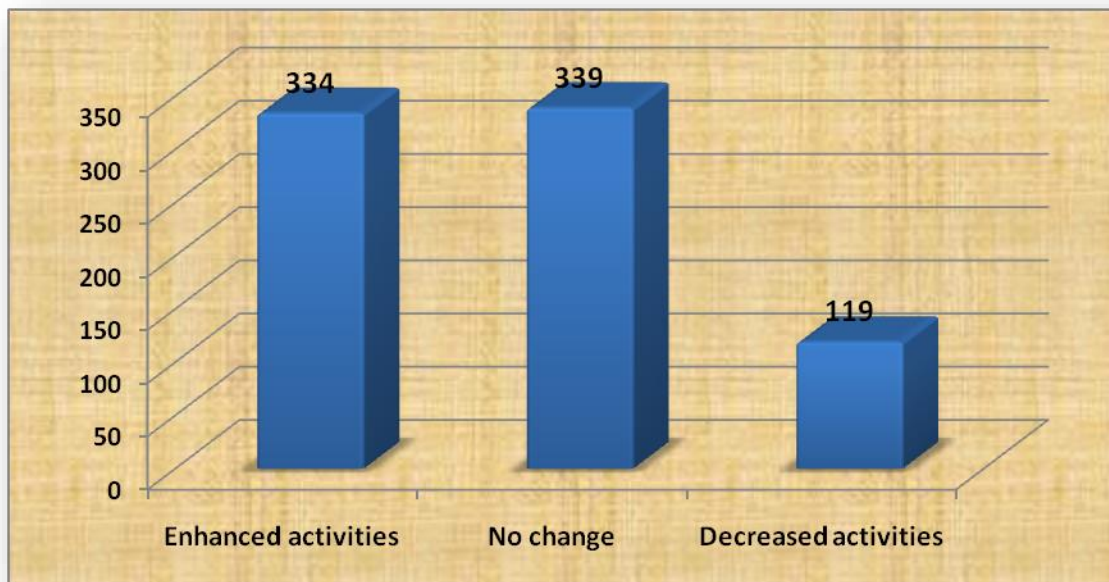

We can see above that after demonetization, maximum respondents (455, 57.45%) preferred to keep their savings in the Bank while minimum (4, 0.51%) preferred to keep their savings in the form of real estate. There is an increase of 10% in the number of people who use bank as an asset class for savings.

Table no.16: Change in the banking activities after demonetization (respondents' perception)?

Particulars	Frequency	Percent	Cumulative Percentage
Enhanced activities	334	42.17	42.17
No change	339	42.80	84.97
Decreased activities	119	15.03	100.00
Total	792	100.00	

Fig.16: Change in the banking activities after demonetization (respondents' perception)?


It is interesting to note that the banking activities of respondents have either increased or there is no change. It can be seen above that there is an almost equally divided perception among respondents that after demonetization banking activities have enhanced and that they have experienced no change.

Table no.17: Change of mode of payment effected by respondents after demonetization

Particulars	Frequency	Percent	Cumulative Percent
Yes	268	33.84	33.84
If yes, please elaborate	59	7.45	41.29
No	465	58.71	100.00
Total	792	100.00	

Fig.17: Change of mode of payment effected by respondents after demonetization
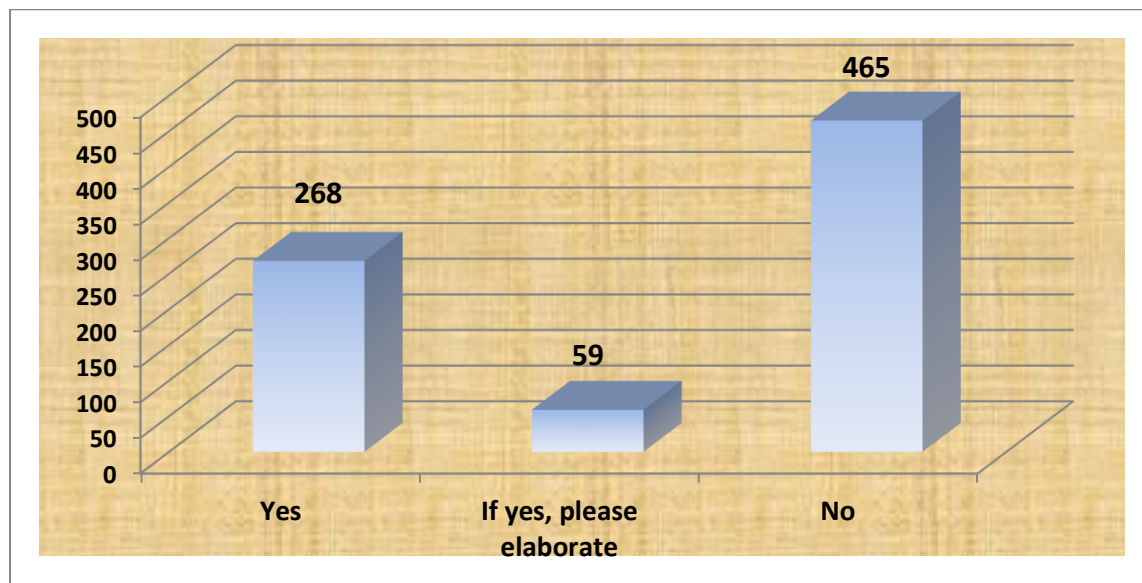
It is found from table no. 17 and its corresponding graph that 327 reported changes in mode of payment after demonetization out of which 56 have accepted that they have changed it to debit card, credit card, mobile wallet etc. and majority of the respondents (465, 58.71) have not changed their mode of payment post-demonetization.

Table no.18: Mode of cashless payment used frequently by respondents before demonetization.

Particulars	Frequency	Percent	Cumulative Percent
Debit card	347	43.81	43.81
Credit card	102	12.88	56.69
Mobile wallet	93	11.74	68.43
Cheque	98	12.37	80.81
Online banking	49	6.19	86.99
Any other	103	13.01	100.00
Total	792	100.00	

Fig.18: Mode of cashless payment used frequently by respondents before demonetization.
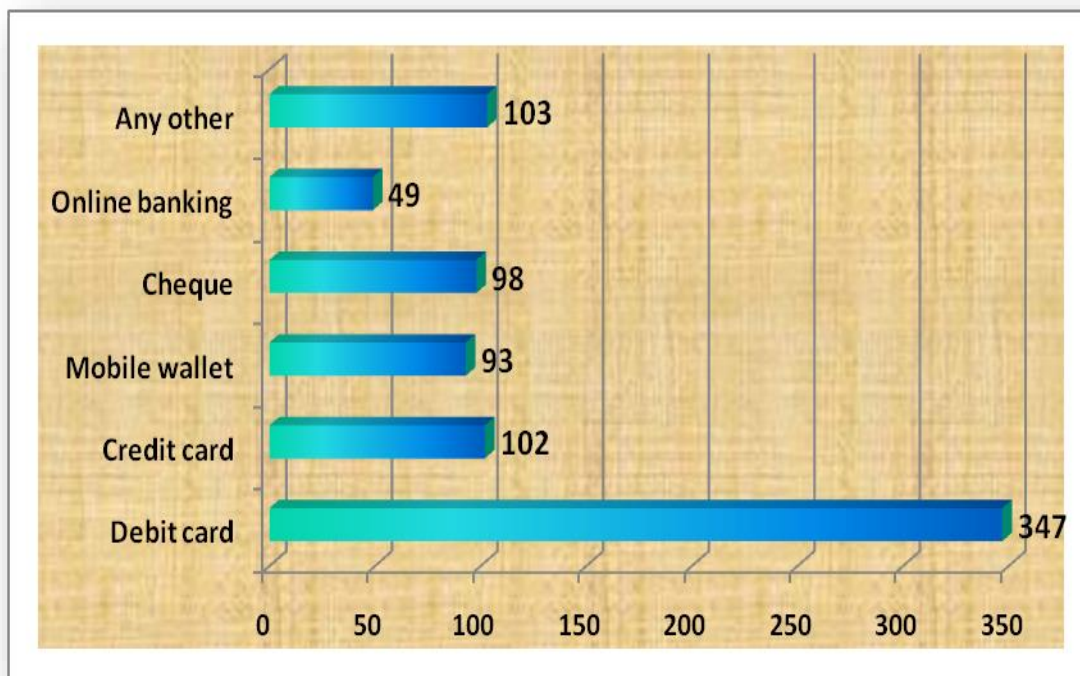
It is found that maximum respondents (347, 43.81%) were using debit cards while minimum (49, 6.19%) were using online payments before demonetization.

Table no.19: Mode of cashless payment used frequently by respondents after demonetization.

Particulars	Frequency	Percent	Cumulative Percent
Debit card	365	46.09	46.09
Credit card	94	11.87	57.95
Mobile wallet	135	17.05	75.00
Cheque	63	7.95	82.95
Online banking	74	9.34	92.30
Any other	61	7.70	100.00
Total	792	100.00	

Fig.19: Mode of cashless payment used frequently by respondents after demonetization.
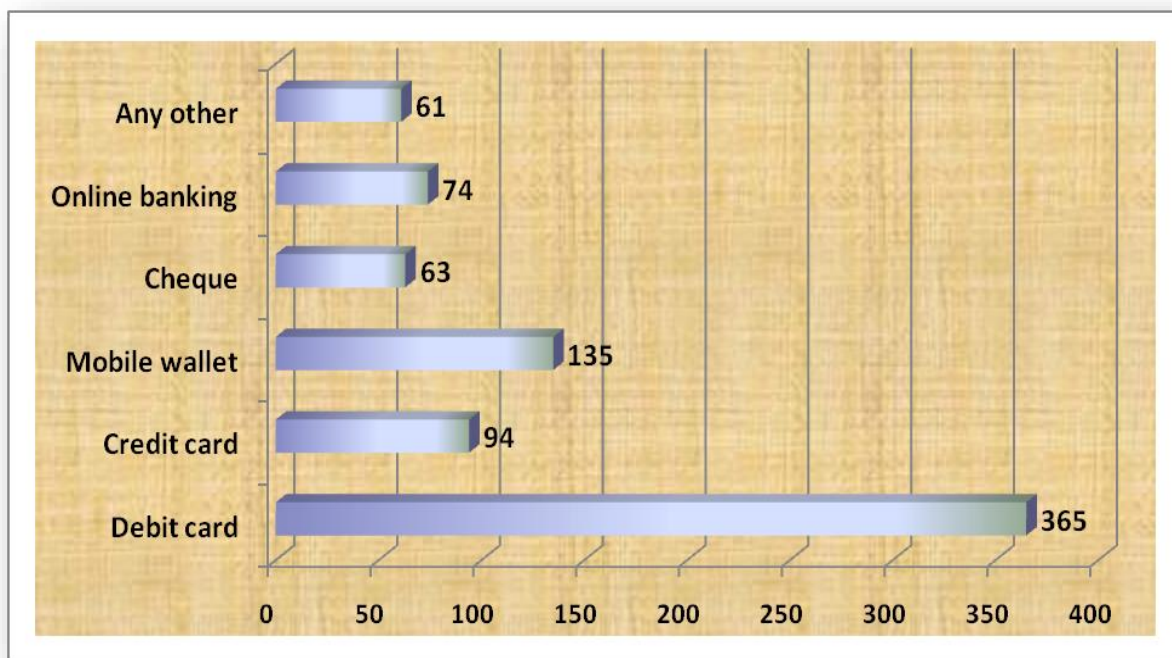
It is observed that maximum respondents (365, 46.09%) were using debit cards while minimum (61, 7.70%) were using other unspecified payment options after demonetization.

Table no.20: Items (where respondents spend their money on a daily-basis) that are most affected because of demonetization

Particulars	Frequency	Percent	Cumulative Percent
Milk and Grocery	101	12.75	12.75
Transportation	108	13.64	26.39
Food and entertainment	119	15.03	41.41
Vegetables and fruits	413	52.15	93.56
All the above	51	6.44	100.00
Total	792	100.00	

Fig.20: Items (where respondents spend their money on a daily-basis) that are most affected because of demonetization
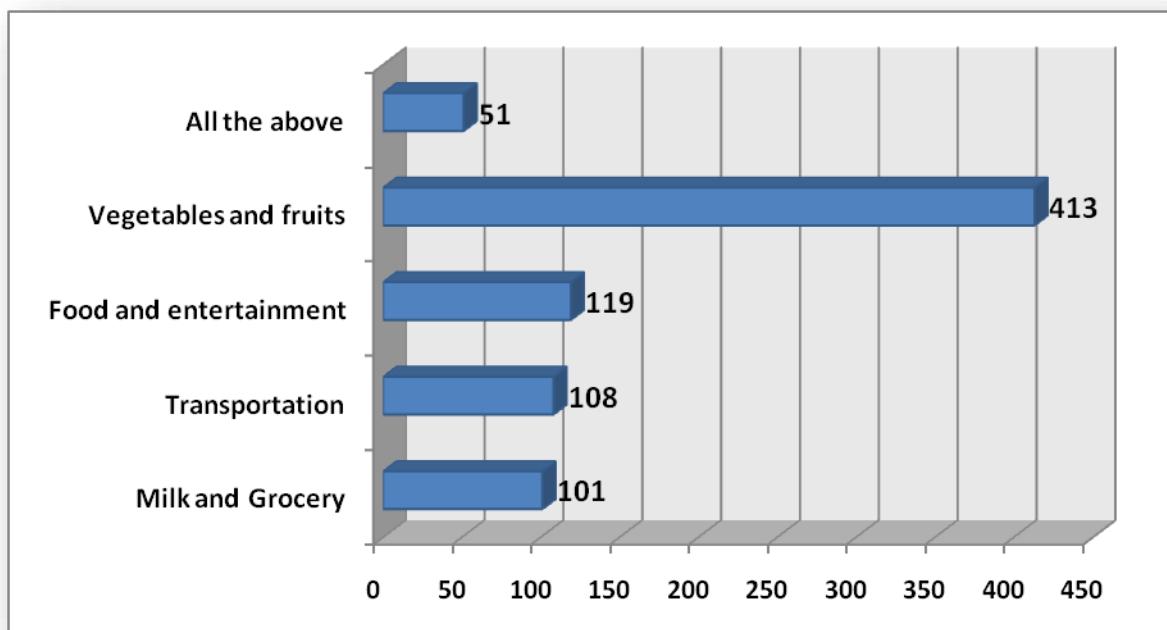
It is observed from the table and corresponding graph that maximum respondents (413, 52.15%) spend their money on vegetables and fruits while minimum (51, 6.44%) spend their money on all the items specified.

Table no.21: Opinion of respondents about the ability of demonetization to reduce corruption/ enhance transparency in various day to day transactions

Particulars	Frequency	Percent	Cumulative Percent
Yes	288	36.36	36.36
No	207	26.14	62.50
Not sure	297	37.50	100.00
Total	792	100.00	

Fig.21: Opinion of respondents about the ability of demonetization to reduce corruption/ enhance transparency in various day to day transactions
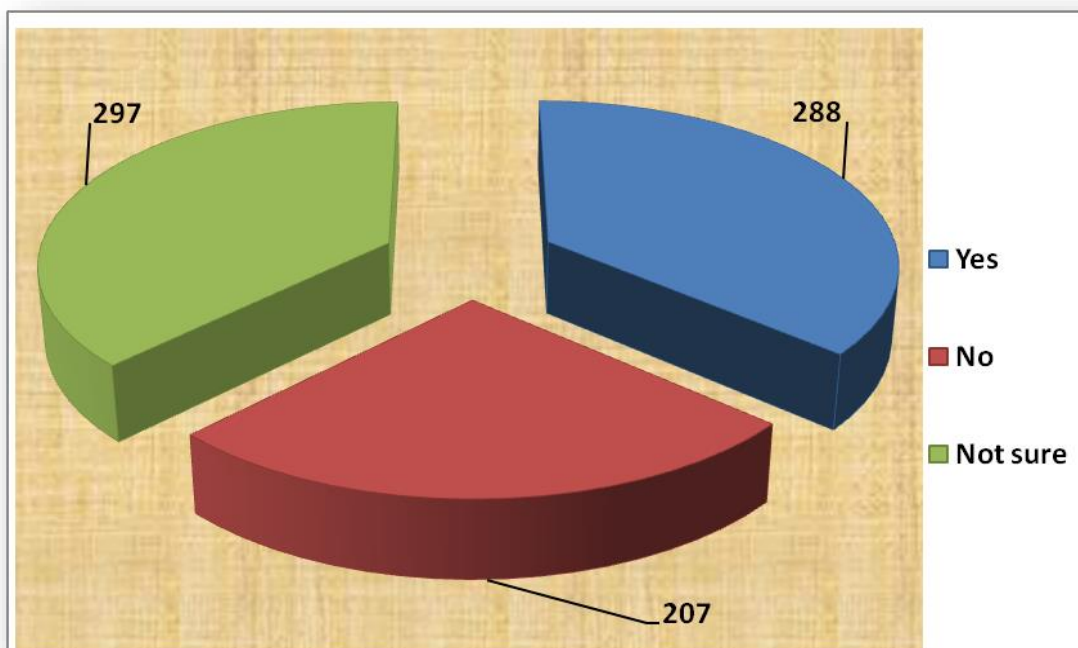
When asked whether demonetization would reduce corruption or increase transperancy, it is found that there is almost an equally divided opinion between 'yes' (288, 36.36%) and 'not sure' (297, 37.5%).

Table no.22: Opinion of respondents on whether India ever be a cash less society

Particulars	Frequency	Percent	Cumulative Percent
Yes	254	32.07	32.07
Not sure	298	37.63	69.70
No	240	30.30	100.00
Total	792	100.00	

Fig.22: Opinion of respondents on whether India ever be a cash less society
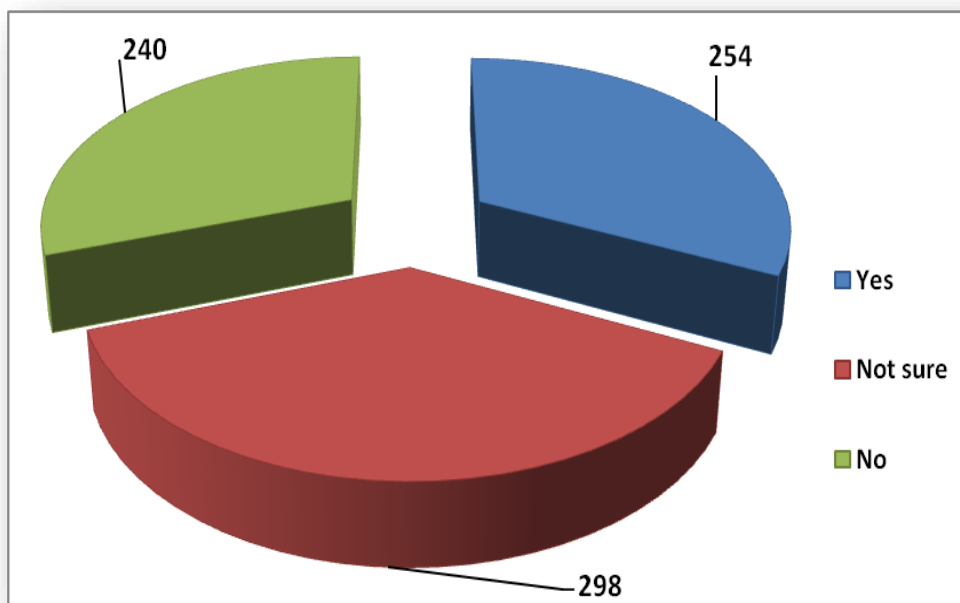
One of the major emphases after demonetization was to make India a cashless society. Here majority (298, 37.63%) of the respondents are not sure about it .

Table no.23: Do the respondents think that the promotion of cashless society was to cover up the shortage of new currency?

Particulars	Frequency	Percent	Cumulative Percent
Yes	306	38.64	38.64
No	241	30.43	69.07
Not sure	245	30.93	100.00
Total	792	100.00	

Fig.23: Do the respondents think that the promotion of cashless society was to cover up the shortage of new currency?
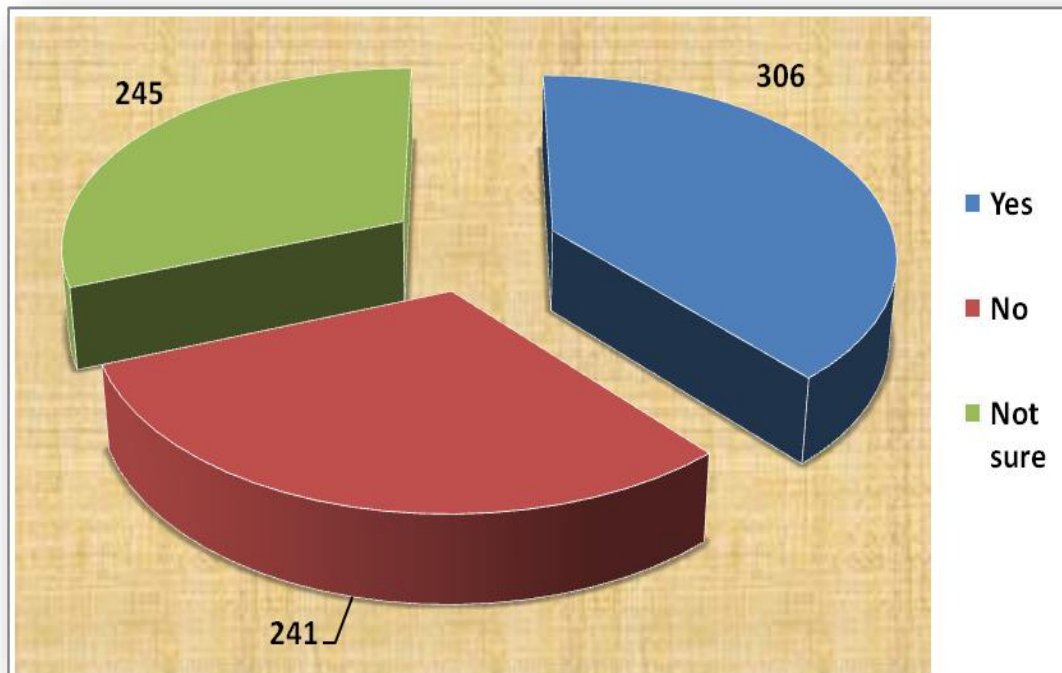
A substantial portion (306, 38.64%) of the respondents have the opinion that the promotion of cashless society was to cover up the shortage of new currency.

Table no.24: Do the respondents think that a new Rs 2000 note will further increase hoarding of money?

Particulars	Frequency	Percent	Cumulative Percent
Yes	377	47.60	47.60
No	202	25.51	73.11
Not sure	213	26.89	100.00
Total	792	100.00	

Fig.24: Do the respondents think that a new Rs 2000 note will further increase hoarding of money?
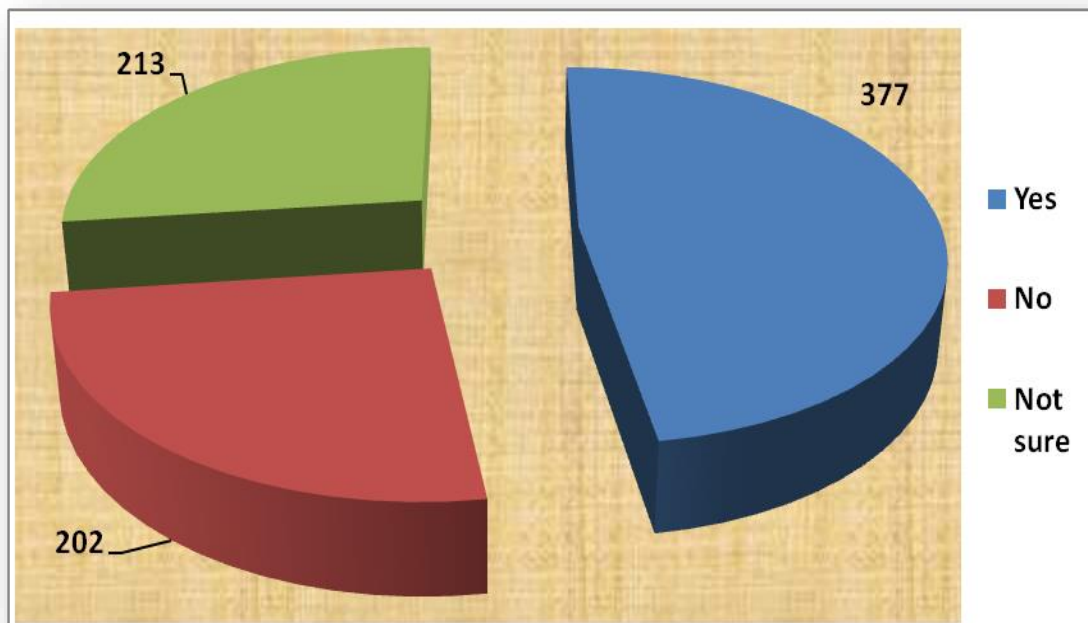
It is found that a substantial portion (377, 47.60%) of the respondents have this opinion that `2,000 note will further increase the hoarding of money.

Table no.25: Do the respondents think that the government should have focused more on bringing the black money stashed in foreign country than trying to unearth it in the country?

Particulars	Frequency	Percent	Cumulative Percent
Yes	426	53.79	53.79
No	169	21.34	75.13
Not sure	197	24.87	100.00
Total	792	100.00	

Fig.25: Do the respondents think that the government should have focused more on bringing the black money stashed in foreign country than trying to unearth it in the country?
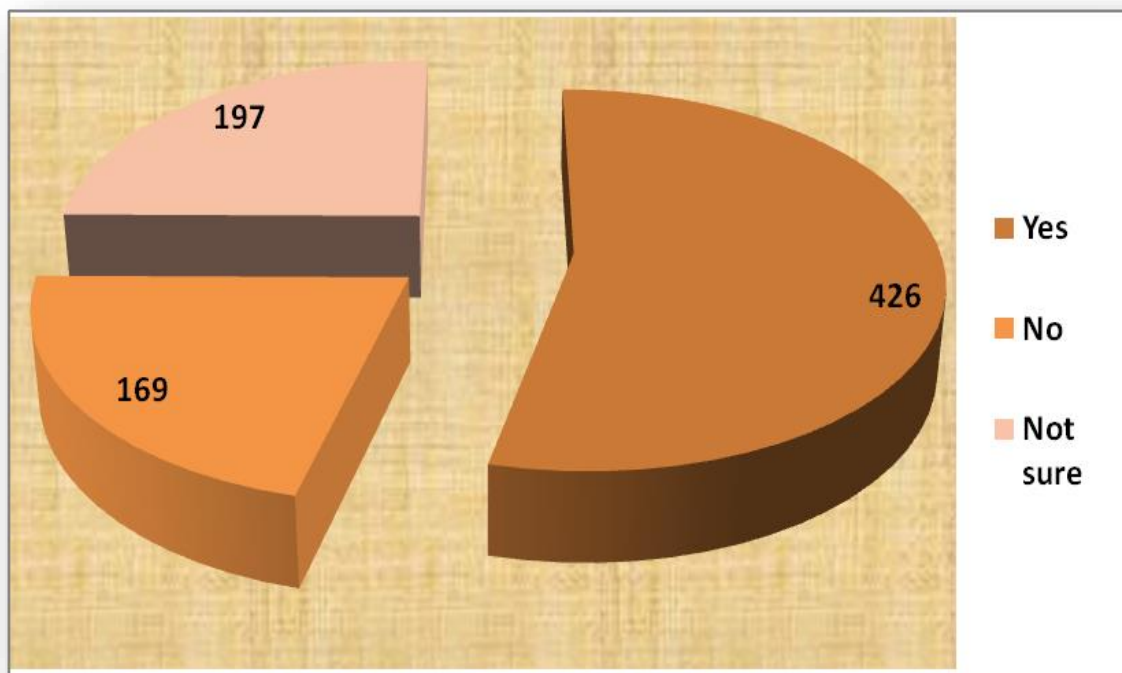
Economic research indicates a positive correlation existing between high volume of cash transactions and percentage of shadow economy to GDP. The sharp and disproportionate growth in circulation of high denomination banknotes results in infusion of Fake Indian Currency Notes

(FICN) and generation of black money.[3] According to the 'White Paper' on black money (2012) prepared by the central government, a considerable portion of P-notes were used by wealthy individuals who used it as a mechanism to channelize black money kept in foreign countries to India. These collapsed after demonetisation until January 2017 (Singh, 2018). The study justify this that majority (426, 53.79%) of the respondents have this opinion.

Table no.26: Do the respondents think that the Indian economy has slowed down between Nov 2016 and March 2017 due to the demonetization exercise?

Particulars	Frequency	Percent	Cumulative Percent
Yes	418	52.78	52.78
No	150	18.94	71.72
Not sure	224	28.28	100.00
Total	792	100.00	

Fig.26: Do the respondents think that the Indian economy has slowed down between Nov 2016 and March 2017 due to the demonetization exercise?

The majority (418, 52.78%) of the respondents have the opinion that the Indian economy has slowed down between Nov 2016 and March 2017 due to the demonetization exercise.

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3   Annual Report 2016-17, Department of Economic Affairs, GOI.

B) Inferential Statistics

			After effect of demonetization on income			Total
Table 27: Fraction of those that effect change in income						
			Increased	Decreased	No change	
Occupation	**Government Service**	Count	10	14	69	93
		Expected Count	8.3	33.9	50.7	93.0
		% of Total	1.3%	1.8%	8.7%	11.7%
	Private service	Count	27	63	127	217
		Expected Count	19.5	79.2	118.4	217.0
		% of Total	3.4%	8.0%	16.0%	27.4%
	Business Owner	Count	13	85	59	157
		Expected Count	14.1	57.3	85.6	157.0
		% of Total	1.6%	10.7%	7.4%	19.8%
	Student	Count	13	45	44	102
		Expected Count	9.1	37.2	55.6	102.0
		% of Total	1.6%	5.7%	5.6%	12.9%
	Housewife	Count	5	52	85	142
		Expected Count	12.7	51.8	77.5	142.0
		% of Total	0.6%	6.6%	10.7%	17.9%
	Retired pensioner	Count	0	7	15	22
		Expected Count	2.0	8.0	12.0	22.0
		% of Total	0.0%	0.9%	1.9%	2.8%
	Daily wages	Count	1	20	23	44
		Expected Count	3.9	16.1	24.0	44.0
		% of Total	0.1%	2.5%	2.9%	5.6%
	Any other	Count	2	3	10	15
		Expected Count	1.3	5.5	8.2	15.0
		% of Total	0.3%	0.4%	1.3%	1.9%
Total		Count	71	289	432	792
		Expected Count	71.0	289.0	432.0	792.0
		% of Total	9.0%	36.5%	54.5%	100.0%

(Pearson Chi-Square = 66.280, df = 14, p = 0.000)

Fig.27: Fraction of those that effect change in income
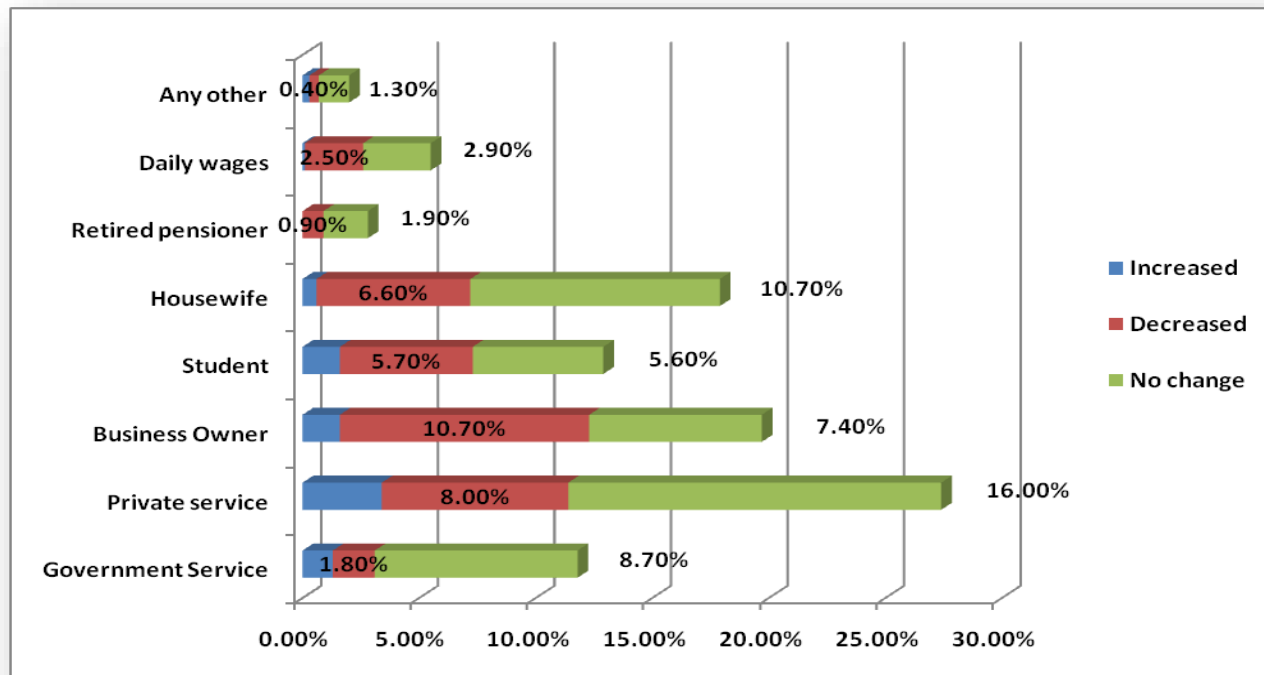
Table no. 27 shows the relationship between Occupation of respondents and Effect on their income due to demonetization. Out of 11.7% Government servant, maximum 8.7% respondents noticed no change in their income. Maximum business owners i.e. 10.70% have noticed decrease in income due to demonetization followed by private sector employees.

This relationship has been tested by using Pearson chi-square test. Calculated value of chi-square is found to be 66.280 which is greater than table value and is significant at 1% level of significance. Hence, it can be concluded that there is relationship between occupation of employees and effect of change in income.

			Government's decision on demonetisation					Total
Table 28: Fraction of those that say about Government's decision								
			Very good	Good	Can't say	Bad	Very bad	
Occupation	Government Service	Count	28	36	18	7	4	93
		Expected Count	22.1	32.2	21.8	9.9	7.0	93.0
		% of Total	3.5%	4.5%	2.3%	0.9%	0.5%	11.7%
	Private service	Count	59	73	49	22	14	217
		Expected Count	51.5	75.1	51.0	23.0	16.4	217.0
		% of Total	7.4%	9.2%	6.2%	2.8%	1.8%	27.4%
	Business Owner	Count	35	52	40	17	13	157
		Expected Count	37.3	54.3	36.9	16.7	11.9	157.0
		% of Total	4.4%	6.6%	5.1%	2.1%	1.6%	19.8%
	Student	Count	11	34	32	12	13	102
		Expected Count	24.2	35.3	24.0	10.8	7.7	102.0
		% of Total	1.4%	4.3%	4.0%	1.5%	1.6%	12.9%
	Housewife	Count	40	47	34	14	7	142
		Expected Count	33.7	49.1	33.3	15.1	10.8	142.0
		% of Total	5.1%	5.9%	4.3%	1.8%	0.9%	17.9%
	Retired pensioner	Count	5	8	5	2	2	22
		Expected Count	5.2	7.6	5.2	2.3	1.7	22.0
		% of Total	0.6%	1.0%	0.6%	0.3%	0.3%	2.8%
	Daily wages	Count	8	14	7	9	6	44
		Expected Count	10.4	15.2	10.3	4.7	3.3	44.0
		% of Total	1.0%	1.8%	0.9%	1.1%	0.8%	5.6%
	Any other	Count	2	10	1	1	1	15
		Expected Count	3.6	5.2	3.5	1.6	1.1	15.0
		% of Total	0.3%	1.3%	0.1%	0.1%	0.1%	1.9%
Total		Count	188	274	186	84	60	792
		Expected Count	188.0	274.0	186.0	84.0	60.0	792.0
		% of Total	23.7%	34.6%	23.5%	10.6%	7.6%	100.0%

(Pearson Chi-Square = 38.699, df = 28, p = 0.086)

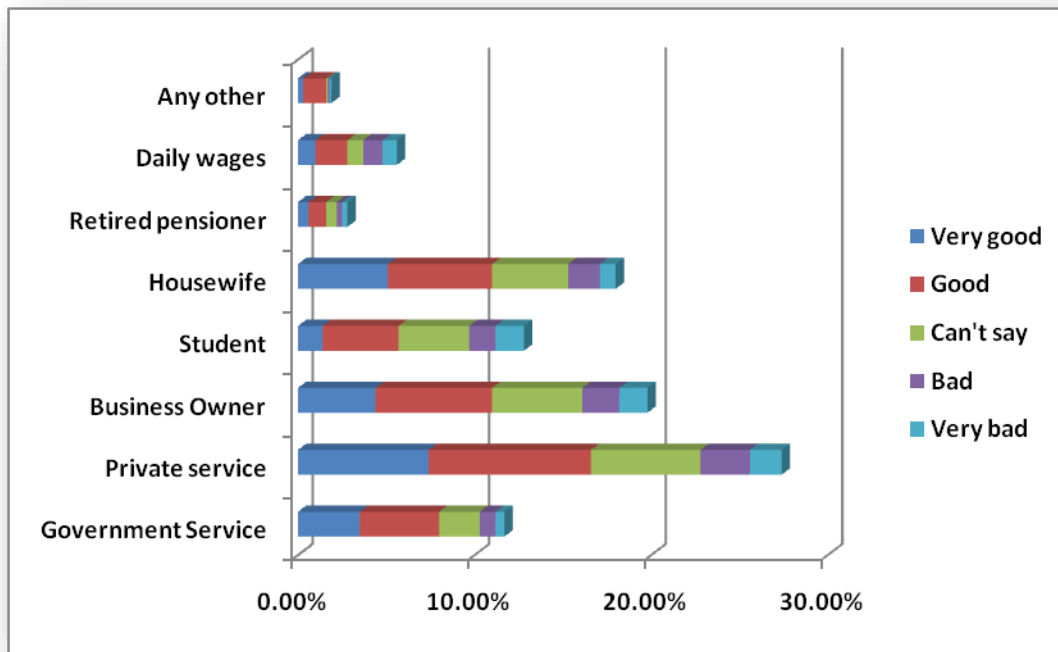**Fig.28: Fraction of those that say about Government's decision**

Table no. 28 shows the relationship between Occupation of respondents and their opinion on demonetization. It is found that out of maximum 27% private sector respondents, 9.2% opine the decision of demonetization to be good as against overall 'good' opinion of 34.6% and 23.7% 'very good' opinion. The result is in agreement with Krishnan & Siegel (2017) in which 56% of the respondents termed the policy to be 'good' policy.

Chi-square test has been used to test this relationship and it is found that the calculated chi-square value is 38.699 at 28 degrees of freedom at 0.086 level of significance. Hence, it can be concluded that there is no relationship between Occupation and their Opinion about demonetization at 5% level of significance.

Table 29: Fraction of those reporting change in income and Government's decision

			Government's decision on demonetisation					Total
			Very good	Good	Can't say	Bad	Very bad	
After effect of demonetization on income	Increased	Count	25	27	14	2	3	71
		Expected Count	16.9	24.6	16.7	7.5	5.4	71.0
		% of Total	3.2%	3.4%	1.8%	0.3%	0.4%	9.0%
	Decreased	Count	40	58	95	55	41	289
		Expected Count	68.6	100.0	67.9	30.7	21.9	289.0
		% of Total	5.1%	7.3%	12.0%	6.9%	5.2%	36.5%
	No change	Count	123	189	77	27	16	432
		Expected Count	102.5	149.5	101.5	45.8	32.7	432.0
		% of Total	15.5%	23.9%	9.7%	3.4%	2.0%	54.5%
Total		Count	188	274	186	84	60	792
		Expected Count	188.0	274.0	186.0	84.0	60.0	792.0
		% of Total	23.7%	34.6%	23.5%	10.6%	7.6%	100.0%

(Pearson Chi-Square = 122.849, df = 8, p = 0.000)

Fig.29: Fraction of those reporting change in income and Government's decision
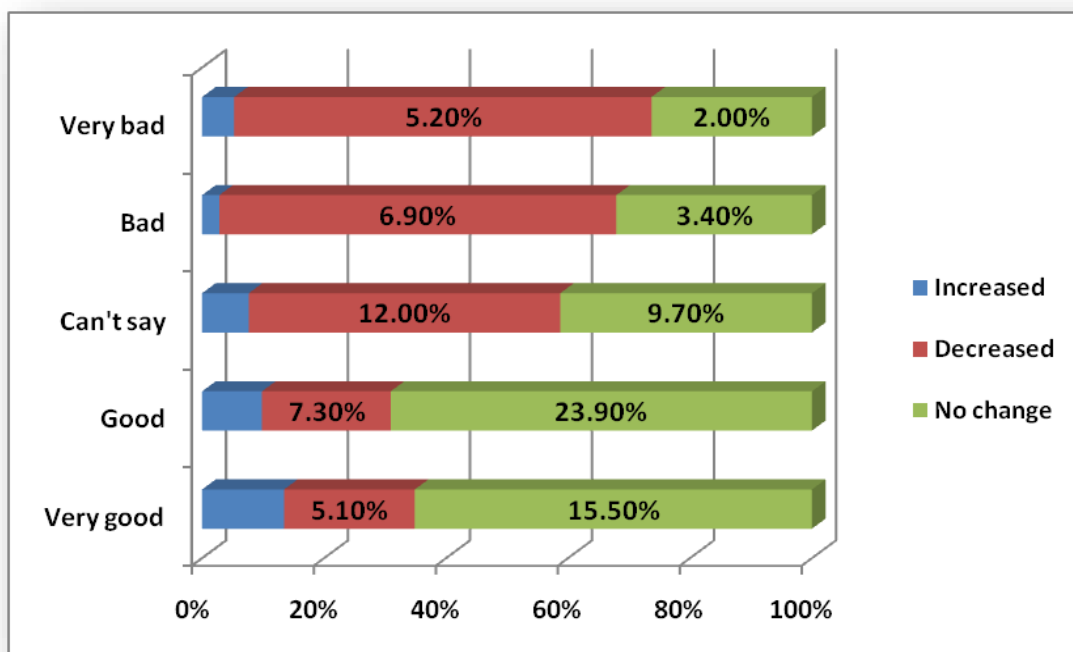

Table 29 shows the relation between 'effect on income due to demonetization' of respondents and their opinion on demonetization. 36.5% respondents reported decrease in their income due to

demonetization out of which 12% respondents are having neutral opinion about the decision. Maximum 54% respondents reported 'no change' in their income out of which 23.9% responded 'good' about demonetization.
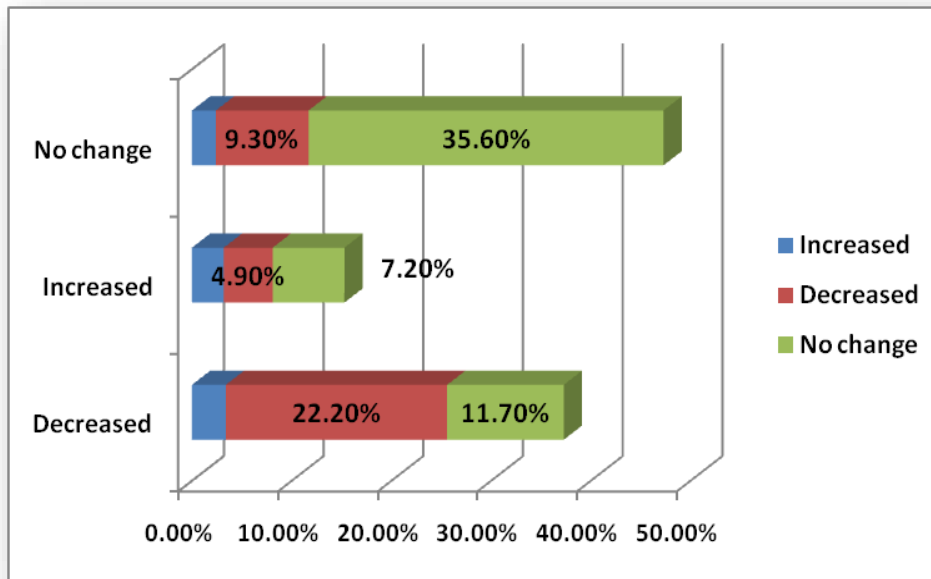
Chi-square test has been conducted to test this relationship and it is found that there is significant relationship between effect on income and the opinion of respondents at 1% level of significance.

Table 30: Fraction of respondents reporting change in savings			Change in the amount of savings			Total
			Decreased	Increased	No change	
After effect of demonetization on income	Increased	Count	27	25	19	71
		Expected Count	26.5	10.8	33.6	71.0
		% of Total	3.4%	3.2%	2.4%	9.0%
	Decreased	Count	176	39	74	289
		Expected Count	108.0	44.2	136.8	289.0
		% of Total	22.2%	4.9%	9.3%	36.5%
	No change	Count	93	57	282	432
		Expected Count	161.5	66.0	204.5	432.0
		% of Total	11.7%	7.2%	35.6%	54.5%
Total		Count	296	121	375	792
		Expected Count	296.0	121.0	375.0	792.0
		% of Total	37.4%	15.3%	47.3%	100.0%

(Pearson Chi-Square = 156.665, df = 4, p = 0.000)

Table no. 30 shows the relationship between effect on income of respondents and the amount of savings. It is found that maximum 54.5% of the respondents reported no change in income out of which maximum 35.6% respondents reported no change in savings. 36.5% respondents reported decrease in income out of which 22.20% respondents reported decrease in savings.

**Fig.30: Fraction of respondents reporting change in savings**

Chi-square test has been used to test the relationship and it is found that there is significant relationship between change in income and change in the amount of savings of respondents due to demonetization.

Table 31: Fraction of respondents reporting change in income			After effect of demonetization on income			Total
			Increased	Decreased	No change	
Monthly income	0-5000	Count	10	50	114	174
		Expected Count	15.6	63.5	94.9	174.0
		% of Total	1.3%	6.3%	14.4%	22.0%
	5000-10000	Count	18	48	104	170
		Expected Count	15.2	62.0	92.7	170.0
		% of Total	2.3%	6.1%	13.1%	21.5%
	10000-20000	Count	19	103	108	230
		Expected Count	20.6	83.9	125.5	230.0
		% of Total	2.4%	13.0%	13.6%	29.0%
	20000-50000	Count	14	51	80	145
		Expected Count	13.0	52.9	79.1	145.0
		% of Total	1.8%	6.4%	10.1%	18.3%
	50000-100000	Count	7	28	19	54
		Expected Count	4.8	19.7	29.5	54.0
		% of Total	0.9%	3.5%	2.4%	6.8%
	>100000	Count	3	9	7	19
		Expected Count	1.7	6.9	10.4	19.0
		% of Total	0.4%	1.1%	0.9%	2.4%
Total		Count	71	289	432	792
		Expected Count	71.0	289.0	432.0	792.0
		% of Total	9.0%	36.5%	54.5%	100.0%

(Pearson Chi-Square = 31.669, df = 10, p = 0.000)

Table 31 shows the relationship between monthly income of respondents and effect on income. It is found that most of the respondents i.e. 29.00% have income between Rs. 10,000- Rs. 20,000 out of which maximum 13.6% respondents reported no change in their income. Maximum 54.5% respondents reported no change in their income out of which maximum 14.4% respondents are having monthly income up to Rs. 5,000/-per month.

Fig.31: Fraction of respondents reporting change in income
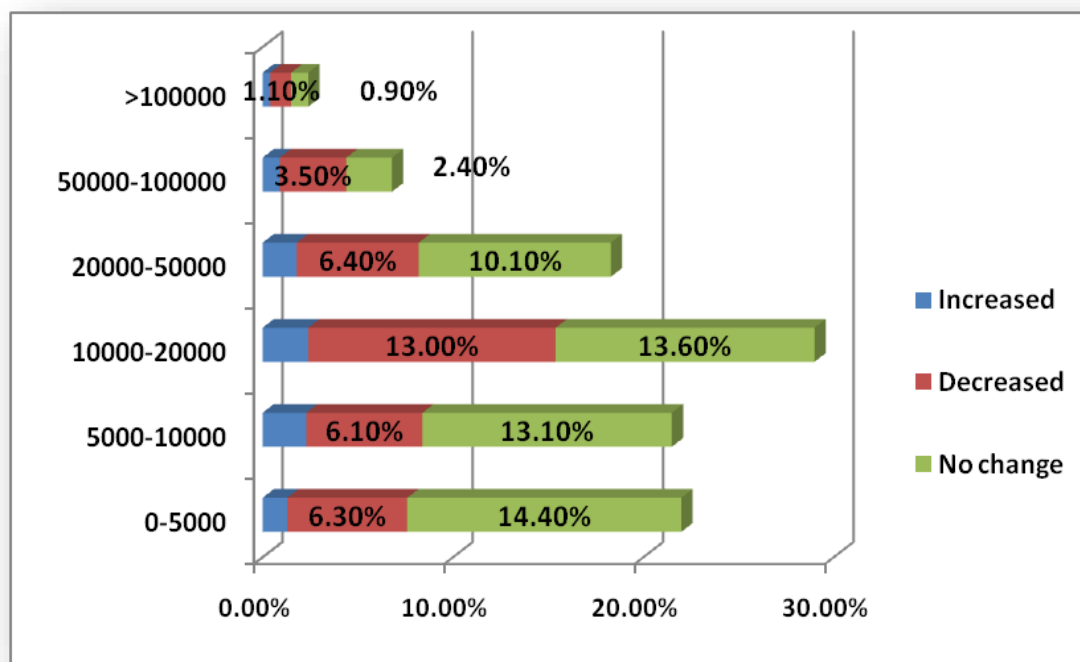
Chi- square test has been conducted to check the strength of relationship between two variables and it is found that there is significant relationship between income level and effect of change in income at 1% level of significance.

Table 32: Changes in ways to save- before and after demonetization

Asset class	Used to store savings		
	Before	After	Difference
Cash	286	243	-43***
Bank	375	455	80***
Gold	47	38	-9**
Lending	17	16	-1
Real estate	9	4	-5
Financial instrument	31	23	-8**
Any other	27	13	-14**

(N=792, *** =1%, **= 5%)

Table no. 32 shows the asset class wherein people keep their savings. It is found that respondents have ceased to keep 'cash' as a mode of saving after demonetization and is significant at 1% level. It is noticed that use of bank deposit as an asset class is increased after demonetization and is also significant at 1%.

Table no. 33: Paired Samples Correlations			
	N	Correlation	Sig.
Changes in ways to save before and after demonetisation	792	.391	.000

Table no. 34:Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Changes in ways to save before and after demonetisation	.107	1.457	.052	.006	.209	2.073	791	.039

Table no. 33 shows paired correlation between changes in ways to save before and after demonetization and the correlation coefficient of 0.391, however low, is found to be significant at 1% while the overall change is found to be significant at 5%, t-value being 2.073 as per table no 34.

5. Findings and Conclusion:

Studies have been conducted after demonetization to its impact. Some studies were survey based while some were focusing more on macroeconomic indicators. Present survey has been conducted with 792 respondents from Nagpur city with maximum 217 respondents were working in private sector and maximum of them (303) were graduates. 65% were male while 35% were female respondents. Average income of the respondents were between Rs. 10,000 to Rs. 20,000. 55% of the respondents reported no change in their income post demonetization while maximum 35% respondents opine the decision of demonetization as 'good'. 34% of the respondents feel that 'crack down on black money' as the main reason behind demonetization and similar percentage of respondents opine that demonetization partly served its purpose. 62% respondents faced problems immediately after demonetization and the main problem according to 38% respondents was loss in income due to waiting in queue for a long time at Bank/ATM. 74% of the respondents fill that the problems they faced were temporary in nature. Respondents are almost equally divided over how Government has handled demonetization. 53% respondents think that the economic slowdown between Nov 2016 and March 2017 was due to demonetization.

Use of statistical tests suggests that there is relation between occupation of respondents and change in their income due to demonetization however no relation is found with their opinion about demonetization. The relation between income and opinion on demonetization is found to be significant. Change in income after demonetization and change in the amount of savings has significant relation so as their monthly income and the effect on income. It is also concluded that respondents reduced to keep cash as an asset class which lead to increase in bank deposits.

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