



A study on hike in Petroleum price and its impact on managing Household Finances

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1. Abstract

Petrol has become an essential part of our day to day life, and that we can't imagine our life without it. But the petrol prices are sky rocketing, and it's eventually visiting affect each and everything that we use in our day to day life. Poor people are already working hard to earn for survival every day and this hike is unquestionably visiting already over-burdened people. Within three years petrol price has increased 10 times and remains increasing. It's nothing but adding fuel to the fireplace. Petrol hike directly or indirectly affects all the main sectors like transportation, textiles, auto, FMCG etc, for manufacturing & transportation. This affects the costs of daily essential commodities which are transported on daily basis.

Keywords: Indispensable, Price Hike, Household finances

2. Introduction

Increase in fuel price will also result in increasing FMCG prices. This has a severe impact on everyone, especially households. They spend more than half of their income on day to day expenses and only a tenth on fuel. Once started, it's a chain reaction that affects everyone. When the price of petroleum goes up, the cost of transportation goes up, and when the cost of transportation goes up, the price of goods goes up. As the price of this product goes up, people gradually loosen their pockets. The chain continues to expand. These ups and downs are challenging people. This clearly sent a shock wave to the general public who are working very hard to achieve their goals for both sides. Price increases affect low-wage or fixed-paid middle-class families

more compared to high-wage white-collar classes. The existing middle class is under pressure. The average person has no other option but to shift the burden to a chain reaction with customers when doing business. India imports oil from different countries. We don't have enough oil to meet the requirements of huge population. If there is increase in international price then India will also have to bear petroleum price hike. Increase in number of vehicles are also causing hike in petrol prices. Development of biodiesel is required now, and the government, needs to allocate more money to the development of alternative energy sources, as well as the development of high-capacity commodities and public transport systems. It is to be remember that "Natural resources are not something we inherit from our forefathers but something we borrow from our children"

3. Literature Review

India's fuel price dynamics

Retail prices for gasoline and diesel are **theoretically fluctuating. In other words, it is fixed at the world crude oil price.** This means that if oil prices fall, retail prices should fall, and vice versa. But this **isn't really happening. This is mainly due to the bidirectional liberalization of oil prices** in India. As global oil prices fall and prices fall, the government **imposes new taxes and obligations** to ensure that **additional income is generated.** Consumers should **ideally benefit from lowering the price of their pumps, forcing them to pay the amount they have already paid or pay more for each liter** of fuel. The main **beneficiaries of this destruction of price liberalization are** the government.

Why are crude oil prices rising now?

Prices collapsed in April 2020 after a pandemic spread around the world and demand collapsed. However, as the economy eased travel bans and factory production recovered, global demand improved and prices recovered. As Saudi Arabia voluntarily reduced its daily production, controlled production of crude oil was another important factor behind the rise in oil prices amid rising demand.

Objectives of Research:

1. To study effect of fuel prices on households management.
2. To study the impact of fuel prices on household finances.
3. To find the reasons for hike in fuel price.

Research Methodology:

Research Design: The conducted study is a descriptive research study. Characteristics of various variables of the population have been described in this research.

Sampling universe and population: The study is conducted in the capital of Uttar Pradesh, "Lucknow". Individuals using two-wheelers or four-wheelers, who could have been affected directly and substantially because of the petroleum price hike, were the study population.

Sample size: Data of 410 respondents were collected in the study. Some responses were not appropriate. After rejecting 80 partly filled e and inappropriate responses a total sample of 330 responses has been used.

Variables:

Independent variable: Rise in petroleum prices

Dependent variable: Effect on managing household finances

Study Model:

A questionnaire comprising 6 questions has been used in the study. Question numbers 1 to 3 were related to demographics. While 4 to 6 were framed to analyse the effect of rising petroleum prices on household finances.

This paper studies the impact of the independent variable "rise in petroleum prices" on dependent variables such as "difficulty in managing household expenses", "use of external sources of Financing" and effect on overall budget of the households". The effect of moderating variables such as age occupation and gender also have been taken into consideration.

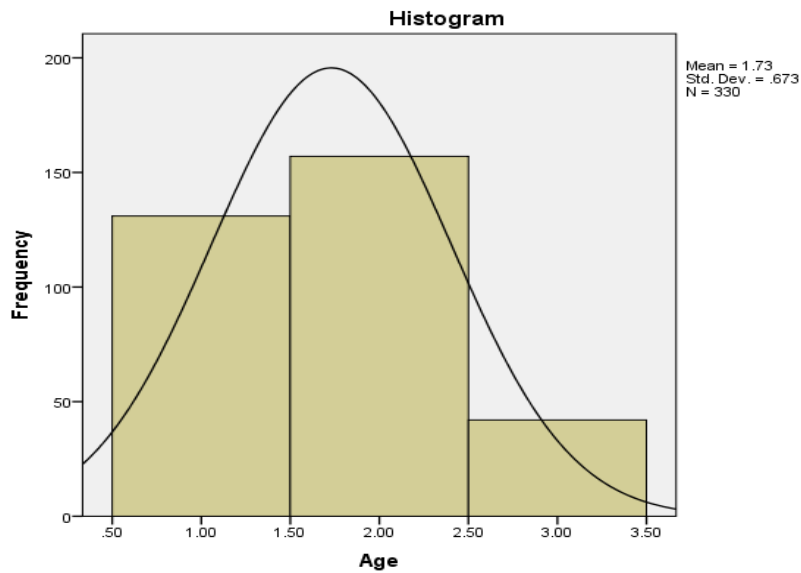
Data analysis and interpretation:

(A) Descriptive Statistics: Descriptive statistics in form of frequency distribution for all the moderating variables are displayed as below-

(1) Age: The frequency distribution of age has been displayed in Table 1. Distribution in form of the Histogram is displayed in Chart 1.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less Than 30	131	39.7	39.7	39.7
	30 to 50	157	47.6	47.6	87.3
	more than 50	42	12.7	12.7	100.0
	Total	330	100.0	100.0	

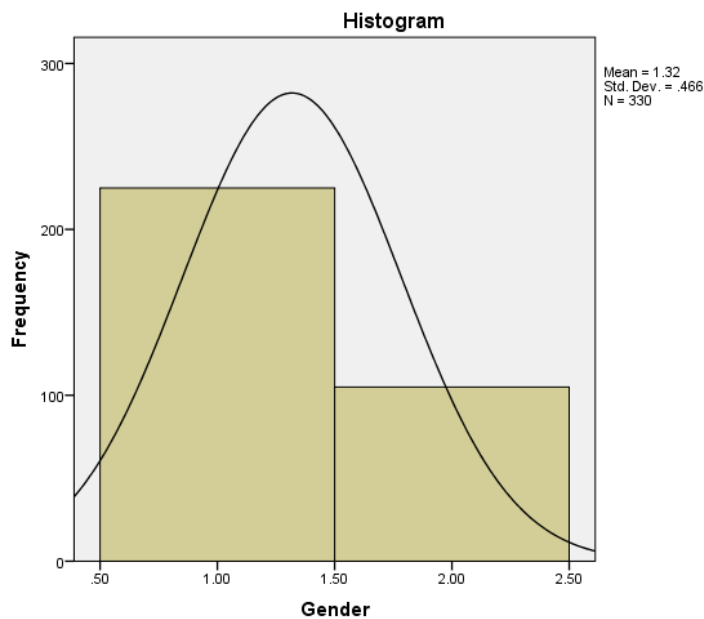
Chart 1



(2) Gender: The frequency distribution of gender has been displayed in Table 2. Distribution in form of the Histogram is displayed in Chart 2.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	225	68.2	68.2	68.2
	Female	105	31.8	31.8	100.0
	Total	330	100.0	100.0	

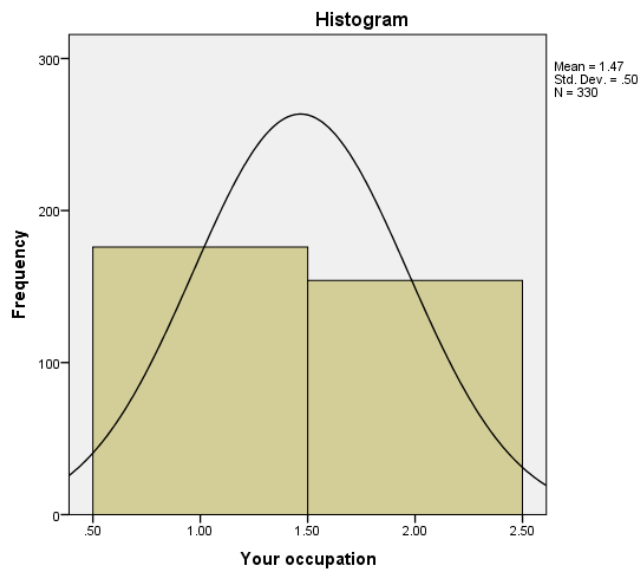
Chart 2



(3) Occupation: The frequency distribution of Occupation has been displayed in Table 3. Distribution in form of the Histogram is displayed in Chart 3.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Salaried	176	53.3	53.3	53.3
	Business/ Self employed	154	46.7	46.7	100.0
	Total	330	100.0	100.0	

Chart 3



(B) Inferential Statistics:

Test of normality: The data is analysed to check whether the responses are normally distributed or not.

Hypothesis 1: Data is statistically significantly different.

H0(*null*): There is no statistically significant difference

H1(*alternate*): There is a statistically significant difference

		Statistic	Std. Error	
Is it difficult to manage household finances because of rising Petroleum prices?	Mean	3.6273	.06994	
	95% Confidence Interval for Mean	Lower Bound	3.4897	
		Upper Bound	3.7649	
	5% Trimmed Mean	3.6970		
	Median	4.0000		
	Variance	1.614		
	Std. Deviation	1.27061		
	Minimum	1.00		
	Maximum	5.00		
	Range	4.00		
	Interquartile Range	2.00		
	Skewness	-.757	.134	
	Kurtosis	-.440	.268	
Do you have to manage finances from external sources because of higher petroleum prices	Mean	4.1000	.06276	
	95% Confidence Interval for Mean	Lower Bound	3.9765	
		Upper Bound	4.2235	
	5% Trimmed Mean	4.2222		
	Median	4.0000		
	Variance	1.300		
	Std. Deviation	1.14018		
	Minimum	1.00		
Maximum	5.00			

	Range	4.00		
	Interquartile Range	1.00		
	Skewness	-1.410	.134	
	Kurtosis	1.337	.268	
The rise in petroleum prices has disturbed the budget and finances of the house	Mean	3.7303	.06286	
	95% Confidence Interval for Mean	Lower Bound	3.6066	
		Upper Bound	3.8540	
	5% Trimmed Mean	3.8114		
	Median	4.0000		
	Variance	1.304		
	Std. Deviation	1.14190		
	Minimum	1.00		
	Maximum	5.00		
	Range	4.00		
	Interquartile Range	2.00		
	Skewness	-.775	.134	
	Kurtosis	.098	.268	

As it is observed from the Table 4,descriptives, that is the skewness of three dependent variables" difficulty to manage finances", management of finances from external sources" and "disturbance in the household budget" are -0.757, -0.1410 and -0.775 respectively. Also, the kurtosis of the respective variables is -0.440, 1.337 and .098

Table 5: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Is it difficult to manage household finances because of rising Petroleum prices?	.252	330	.000	.851	330	.000
Do you have to manage finances from external sources because of higher petroleum prices	.258	330	.000	.750	330	.000
The rise in petroleum prices has disturbed the budget and finances of the house	.202	330	.000	.853	330	.000

a. Lilliefors Significance Correction

As observed from the test of normality (Table 5), the degree of freedom obtained from the Kolmogorov-Smirnova and Shapiro-Wilk tests for all three variables is 0.000. So, null hypotheses is failed to be accepted. The alternate hypothesis is accepted. It can be comprehended that data is not normally distributed. Since, data does not fulfil normality conditions, so non-parametric tests- Mann Whitney U test and Kruskal Wallis H test will be used.

Effect on Gender: Mann Whitney U test is conducted to study whether both the genders are affected equally and facing the same problem significantly. Table 6 represents mean ranks while Table 7 displays significance level.

Hypothesis 2: Both the genders have statistically significant differences.

H0 (*null*): There is no significant difference between the variables

H2 (*alternate*): There is a statistically significant difference between the variables.

	Gender	N	Mean Rank	Sum of Ranks
Is it difficult to manage household finances because of rising Petroleum prices?	Male	225	156.13	35128.50
	Female	105	185.59	19486.50
	Total	330		
Do you have to manage finances from external sources because of higher petroleum prices	Male	225	157.46	35428.50
	Female	105	182.73	19186.50
	Total	330		
The rise in petroleum prices has disturbed the budget and finances of the house	Male	225	137.85	31017.00
	Female	105	224.74	23598.00
	Total	330		

	Is it difficult to manage household finances because of rising Petroleum prices?	Do you have to manage finances from external sources because of higher petroleum prices	The rise in petroleum prices has disturbed the budget and finances of the house
Mann-Whitney U	9703.500	10003.500	5592.000
Wilcoxon W	35128.500	35428.500	31017.000
Z	-2.713	-2.416	-8.034
Asymp. Sig. (2-tailed)	.007	.016	.000

a. Grouping Variable: Gender

Since significance values of all three variables with respect to gender are less than 0.05 so null hypothesis is failed to be accepted and hence alternate hypothesis accepted. Mean ranks also displays that male and female feels different impact of the rising petroleum prices on "difficulty in managing household expenses", " use of external sources of Financing" and" effect on overall budget of the households".

Effect on Age: Kurskal Wallis test is conducted to study whether various age groups are affected equally and facing the same problem significantly. Table 8 represents mean ranks while Table 9 displays significance level.

Hypothesis 3: Age groups have statistically significant differences.

H0 (*null*): There is no significant difference between the Age groups

H3 (*alternate*): There is a statistically significant difference between the Age groups.

	Age	N	Mean Rank
Is it difficult to manage household finances because of rising Petroleum prices?	Less Than 30	131	150.49
	30 to 50	157	161.97
	more than 50	42	225.50
	Total	330	
Do you have to manage finances from external sources because of higher petroleum prices	Less Than 30	131	146.06
	30 to 50	157	169.25
	more than 50	42	212.11
	Total	330	
The rise in petroleum prices has disturbed the budget and finances of the house	Less Than 30	131	178.21
	30 to 50	157	132.32
	more than 50	42	249.89
	Total	330	

	Is it difficult to manage household finances because of rising Petroleum prices?	Do you have to manage finances from external sources because of higher petroleum prices	The rise in petroleum prices has disturbed the budget and finances of the house
Chi-Square	21.646	18.254	58.898
df	2	2	2
Asymp. Sig.	.000	.000	.000
a. Kruskal Wallis Test			
b. Grouping Variable: Age			

Since significance values of all three variables with respect to all three age groups are 0.000, less than 0.05 so null hypotheses is failed to be accepted and hence alternate hypothesis accepted. Mean ranks also displays that different age groups feels different impact of the rising petroleum prices on "difficulty in managing household expenses", "use of external sources of Financing" and "effect on overall budget of the households".

Effect on Occupation: Mann Whitney U test is conducted to study whether both the types of occupation (salaried and Self employed) are affected equally and facing the same problem significantly. Table 10 represents mean ranks while Table 11 displays significance level.

Hypothesis 4: Both the occupations have statistically significant differences.

H0 (*null*): There is no significant difference between the occupation and effect of independent variable.

H4 (*alternate*): There is a statistically significant difference between the occupation and effect of independent variable.

	Your occupation	N	Mean Rank	Sum of Ranks
Is it difficult to manage household finances because of rising Petroleum prices?	Salaried	176	167.41	29464.00
	Business/ Self employed	154	163.32	25151.00
	Total	330		
Do you have to manage finances from external sources because of higher petroleum prices	Salaried	176	161.89	28493.50
	Business/ Self employed	154	169.62	26121.50
	Total	330		
The rise in petroleum prices has disturbed the budget and finances of the house	Salaried	176	196.94	34662.00
	Business/ Self employed	154	129.56	19953.00
	Total	330		

	Is it difficult to manage household finances because of rising Petroleum prices?	Do you have to manage finances from external sources because of higher petroleum prices	The rise in petroleum prices has disturbed the budget and finances of the house

Mann-Whitney U	13216.000	12917.500	8018.000
Wilcoxon W	25151.000	28493.500	19953.000
Z	-.404	-.791	-6.673
Asymp. Sig. (2-tailed)	.687	.429	.000
a. Grouping Variable: Occupation			

Significance values of "difficulty in managing household expenses" and "use of external sources of Financing" are 0.687 and 0.429 which is greater than 0.05. So responses are statistically not different. Sig value of "effect on overall budget of the households" is 0.000 which is smaller than 0.05 so the difference is statistically significant.

Conclusion:

Descriptive study states that highest frequency distribution of the study comprises age- 30-50 years, gender- male and occupation- salaried. It is evident that male and females respondents perceive different degree of impact due to "rise in petroleum prices". It is observed that male respondents face greater challenges than females.

Respondents of age group 30-50 finds the effect of "rise in petroleum prices" more impacting than that of "below 30" followed by least affected category of "more than 50 years"

Salaried respondents faced more difficulties in managing finances by rising petroleum prices than business/self employed respondents. Though, respondents from both the occupation did not face commutative effect on overall budget.

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