

A STUDY ON THE INCREASE IN FUEL PRICE AND ITS INFLUENCE ON SELECTION OF MODE OF TRANSPORT AMONG PEOPLE WITH SPECIAL REFERENCE TO COCHIN CITY

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Abstract: The sudden increase in the use of private vehicles contributed to the increase in traffic congestion, road accidents and pollution. The rise in ownership of private vehicles is caused by, among others, the problem of public transports being unable to fulfil the public's needs. This made the commuters prefer to use their own vehicles rather than public transports. Based on this scenario, a study has been conducted particularly in Cochin city to study the factors that can diminish the problem of traffic congestion. The main objective of this study is to form a model of shifts of transportation modes from private vehicles to public transports (buses) based on the 'fuel price increase' factor to see the change in vehicle preference. From this study, it can also be concluded that the effects of fuel price increase influenced the shift of preference from private to public transports with the types of vehicles and the rate of price increase as variables. Petrol has become an indispensable part of our day-to-day life, and we can't imagine our life without it. But the petrol prices are sky rocketing, and it is eventually going to affect each and everything that we use in our day to day life. Poor people are already working hard to earn square meal a day and this hike is definitely going to paralyze these already-burdened people. Within three years petrol price has increased 10 times and is still increasing. It is nothing but adding fuel to the fire.

Key words : Private vehicles, Public transport, fuel price

INTRODUCTION

India being one of the largest and growing consumer of energy in the world has been relying heavily on fuel for production and consumption purposes. The growing demand and increasing fuel prices have always been an issue for general public. The rising fuel prices is a common context all over the world especially in India. Newspapers and other media's have been inundated with never ending news of the pricehike.

Fuel has become an indispensable part of our day-to-day life, whether it be petrol or diesel. The rising fuelprices are eventually going to affect all major sectors like transportation, automotive, FMCG etc. The transportation sector plays a significant role in the growth of an economy. Transportation includes movement of people, goods and services etc. Most common modes of transport are railway, road, airwaysand waterways. People choose the mode based on various factors like transportation cost, safety, convenience etc. Petrol prices have hit record heights across the country with 102.24 per litre and diesel prices at 95.01 per litre in Kerala. A lot of public outcries has been expressed through various petitions andstrikes over the price hike. The rise in fuel prices and merging of diesel and petrol prices will lead to perceptible changes in how people and goods move in the country. The choice of prospective vehicle buyers would definitely get influenced. This increase in price will change the perception of people towardsthe mode of transportation.

At this point of time, it is required to have a close look on major reasons for the petrol price hike and how such increase influence people in choosing the mode of transport.

STATEMENT OF PROBLEM

Fuel prices are increasing and this price hike is becoming uncomfortable for the common people. Whatever be the reason they are suffering from this drastic situation and this change in fuel prices will have an impact on the selection of transport among people. This study aims to understand the causes of rising prices and its influence on selection of mode of transport among people. For the convenience the study was limited to Cochin city.

OBJECTIVES

1. To identify the reasons for price variation in fuel prices.
2. To study how the price hike influences people in choosing mode of transport.

SCOPE OF STUDY

The study is conducted to find out the reasons of increasing fuel prices and its influence on selection of mode of transport among people. As the topic is very vast and deep to study it is difficult to collect data and evaluate it. So i collected the required data from my area, Kochi. Responses from 60 respondents at different age groups were collected and evaluated.

RESEARCH METHODOLOGY

The study takes the form of descriptive in nature. For collection of data both primary and secondary sources of information have been used. Accordingly primary data was collected with the help of structured questionnaire from a sample of respondents. Samples were selected on the basis of convenience sampling. Secondary data was collected from published sources such as online journals and websites. These sources provided much help for the successful completion of the work.

LIMITATION

The study is focused on the region of Kochi. Therefore, the results of this study not necessarily generalize about the entire country. Time was another major constraint. The data acquired from questionnaire is subject to personal bias of respondents. Hence the results of the study might not be sufficient enough to give a full onset of the views of people.

REVIEW OF LITERATURE

(Angelo Martino, Giuseppe Casamassima, Davide fiorello, 2009) This study looks at the ways in which the transport of goods is influenced by significant variations in oil prices and focuses on carrier's responses in the various transport sectors. It investigates the relation between oil prices and transport sector, by taking into account the evidence of impact of recent price hikes on transport business and their response. The spike in oil prices in the first half of 2008 has been taken as an opportunity to carry out an evidence-based analysis of transport sectors reactions.

(PK Narayan, S Narayan 2010) The goal of this paper is to model the impact of oil prices on Vietnam's stock prices. We use daily data for the period 2000–2008 and include the nominal exchange rate as an additional determinant of stock prices. We find that stock prices, oil prices and nominal exchange rates are cointegrated, and oil prices have a positive and statistically significant impact on

stock prices. This result is inconsistent with theoretical expectations.

(Dhani Setyawan, 2013) This study tries to analyse the impact of fuel price hike to the Indonesian economic sector. This study utilizes the IO table analysis of Indonesia 2005 classification of domestic transactions on the basis of producer prices. This study examines the impact of the increasing 10%, 20% and 30% of fuel prices to the economic sector. The analysis found that the increasing fuel prices would have a devastating effect on the transportation sector whether by land, air and water. The government should preserve the sectors which exposed the largest impact from increasing of fuel prices.

(Mohd Azizul ladin, Hussin AM Yahia, Hamza Irtemih, Amiruddin bin ismail, 2014) This study was conducted particularly in the UKM (universiti kebangsaan Malaysia) to form a model of shifts of transportation modes from private vehicle to public transports based on fuel price increase factors. Responses from 100 respondents were collected including students and faculties of UKM especially who use cars and motorcycles as their main transport. The data was then analysed using logistic model and linear regression analysis. The study concluded that the effects of fuel price increase influenced the shift of preference from private to public transport.

(Marianne Delsaut, 2014) This paper is in line with the current reflections about changes in travel behaviour due to increase in fuel prices. The analyst research on fuel price in railways and in roadways. Through the study it was found out that an increase in 10% in fuel price leads to a fall of 1.4% in road traffic while in the long run, it leads to a fall of 2.8%. Furthermore, the rise in fuel price is likely to urge driver to adopt an eco-driving behaviour in order to reduce fuel consumption

(MK Anand, 2016) This article particularly talks about the impact that rising fuel prices have in the economy. Particularly that of the agricultural sector. It analyses deeply on the implications of these persistent rise - both direct and indirect. The findings of this research have stronger implications than commonly recognised; for inflation cost and cost of implementing the policy on food securities.

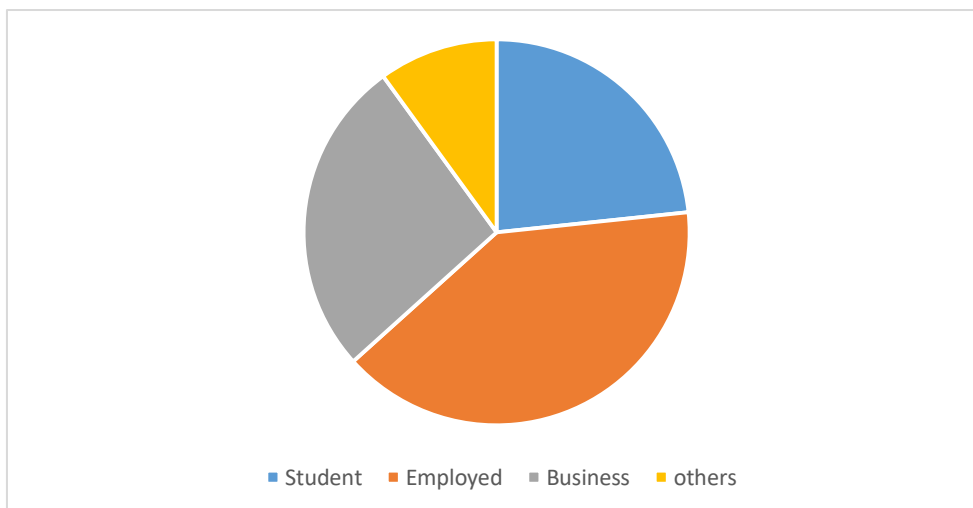
DATA ANALYSIS AND INTERPRETATION

Table 1 showing status of the respondents

Status	No. of respondents	Percentage
Student	14	23
Employee	24	40
Business	16	27
Others	6	10
Total	60	100

Source: primary data

Figure1 showing status of the respondents



Source: primary data

Interpretation

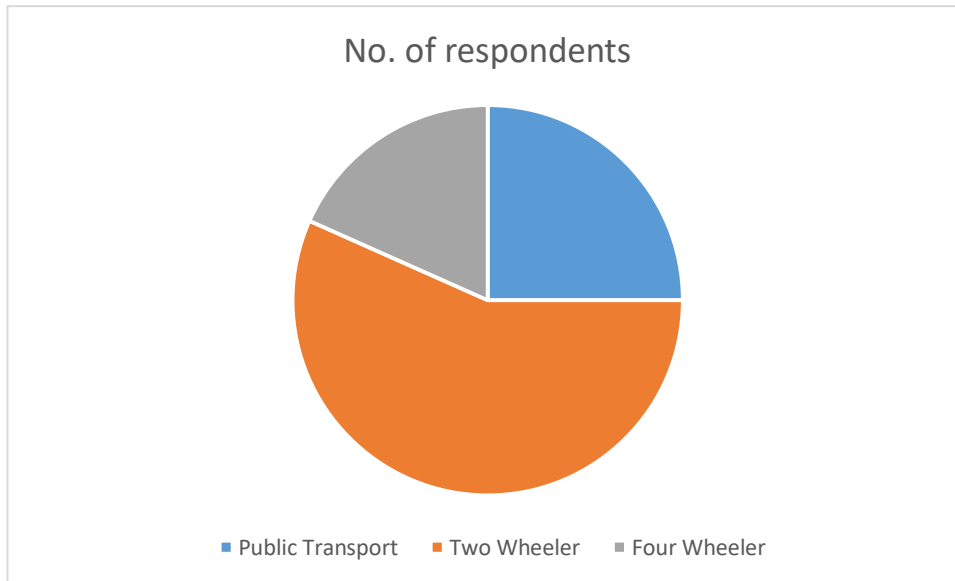
From the above graph and table we can understand that 40% of the respondents are employed, 27% has their own business, 23% are students and 10% are engaged in other jobs.

Table 2 showing mode of transport used by respondents

Mode of transport	No. of respondents	Percentage (%)
Public Transport	15	25
Two Wheeler	34	57
Four Wheeler	11	18
Total	60	100

Source: primary data

Figure 2 showing mode of transport used by respondents



Source: primary data

Interpretation

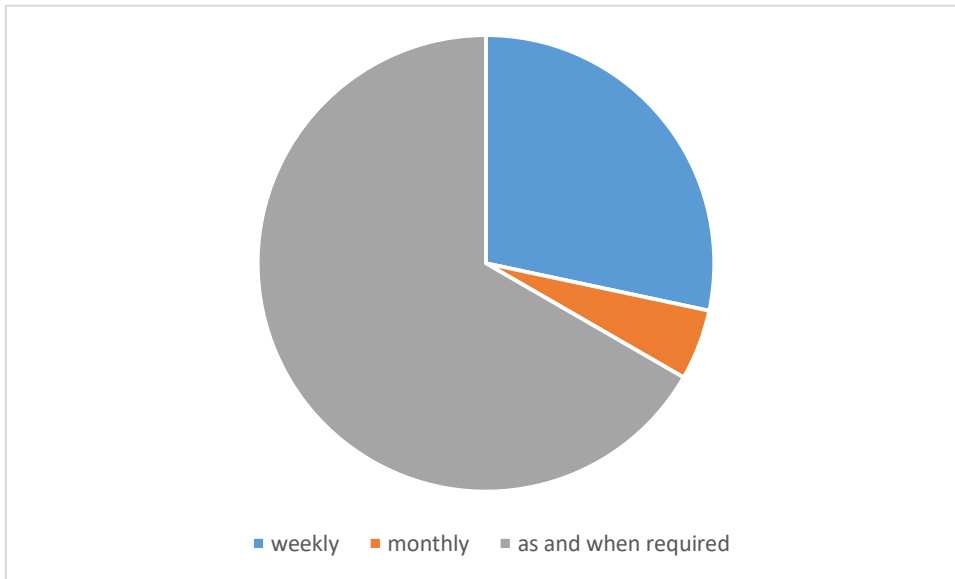
From the above survey figure More than half of the respondents, that is 57% use two wheelers for travelling. 25% of respondents use public transport and the remaining 18% travel in four-wheeler more often.

Table 3 showing how frequently the respondents are filling fuel for their vehicles:

Frequency	No. of respondents	Percentage (%)
weekly	17	28
monthly	3	5
as and when required	40	67
total	60	100

Source: primary data

Figure 3 showing frequency of filling fuel by respondents



Source : primary data

Interpretation

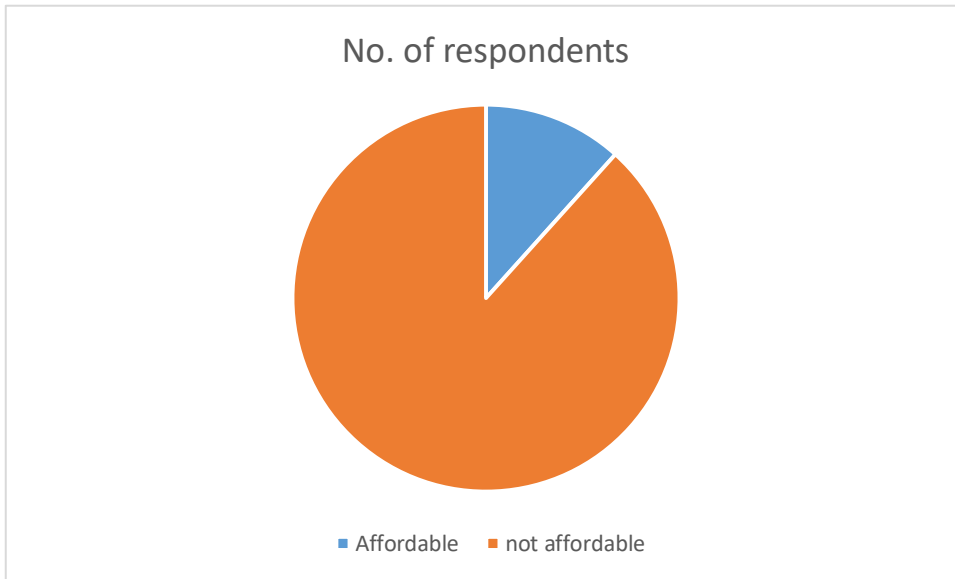
From the above figure it is clear that 67% of the respondents are filling fuel as and when required. 28% of the respondents of the study reveals that the frequency of filling fuel is weekly and only 5% are filling monthly.

Table 4 showing Opinion on fuel price hike

opinion	No. of respondents	Percentage (%)
Affordable	7	12
not affordable	53	88
total	60	100

Source : primary data

Figure 4 showing opinion on fuel price hike



Source: primary data

Interpretation:

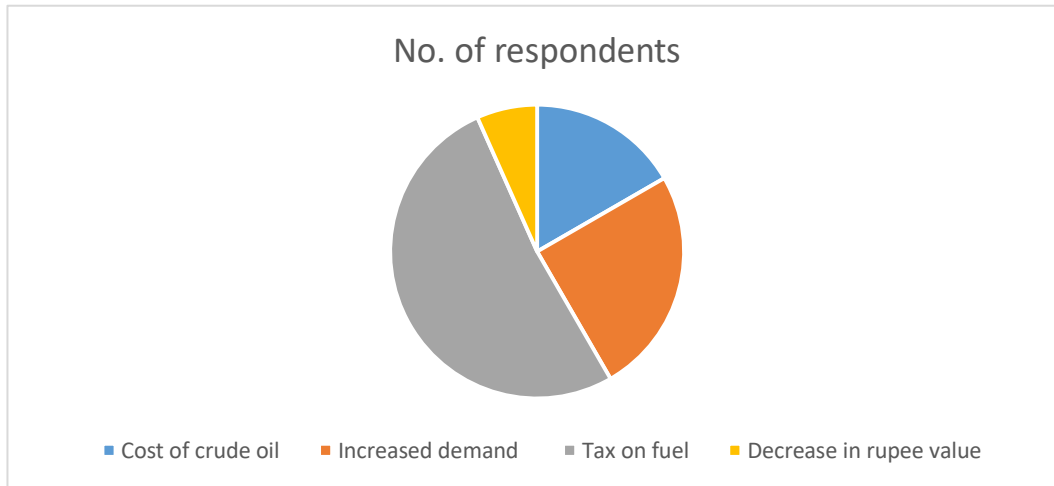
From the above table and figure it is very clear that 88 % respondents of the survey said that the price hike is not affordable. only 12% said that price hike is affordable.

Table 5 showing Reasons for increase in fuel price:

Reasons	No. of respondents	Percentage (%)
Cost of crude oil	10	17
Increased demand	15	25
Tax on fuel	31	52
Decrease in rupee value	4	7
Total	60	100

Source: primary data

Figure 5 showing reasons for increase in fuel price



Source : primary data

Interpretation

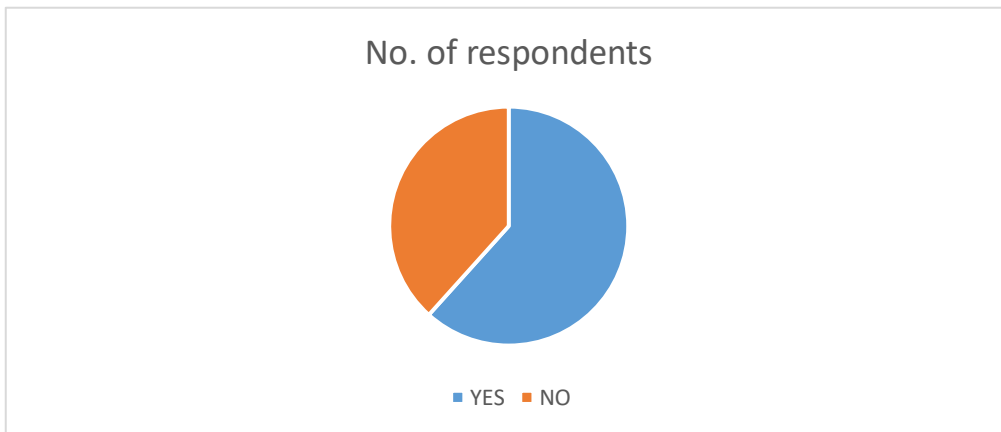
From the above study we can understand that 52% of the respondents agreed that the reason for fuel price hike is tax imposed on fuel. 25% of them thinks that it is because of increase in demand. And the remaining 17% and 7% says that it is the cost of crude oil in international market and decrease in rupee value respectively.

Table 6 Showing whether fuel price hike reduced the use of private vehicles:

Response	No. of respondents	Percentage (%)
Yes	37	62
No	23	38
Total	60	100

Source : primary data

Figure 6 Showing whether fuel price hike reduced the use of private vehicles:



Source : primary data

Interpretation

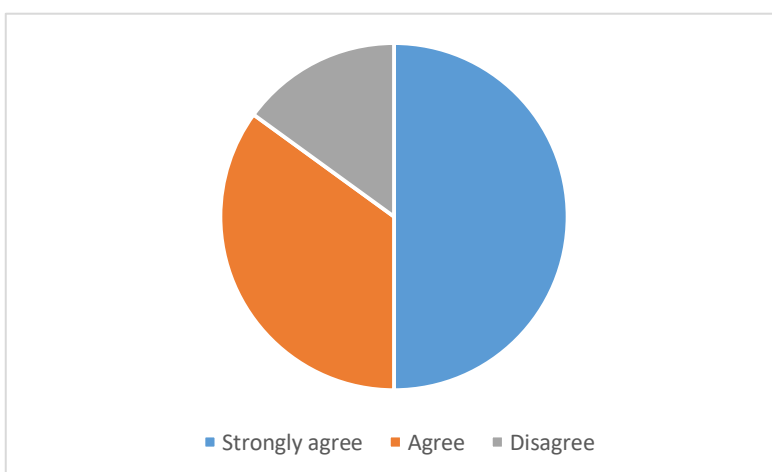
Based on above table and figure we can say that 62% of the respondents agree that fuel price hike reduced their use of own vehicle and 38% says that it didn't influenced their vehicle use.

Table 7 showing Essential commodities price fluctuation with fuel price hike:

Opinion	No. of respondents	Percentage (%)
Strongly agree	30	50
Agree	21	35
Disagree	9	15
Total	60	100

Source : primary data

Figure 7 showing Essential commodities price fluctuation with fuel price hike:



Source : primary data

Interpretation

From the above figures it is clear that 50% of the respondents strongly agree that the price of commodities will fluctuate with fuel price. 35% of them agrees to this statement and only 15% of them disagrees to this statement.

SUGGESTIONS

- ❖ Increase the use of public transport as it can be a better way of not being dependent on fuel prices.
- ❖ Electric and hybrid vehicles needed to be promoted.
- ❖ Government should introduce new measures to control the fuel price.
- ❖ Use alternative fuels like ethanol, biofuel etc.
- ❖ Introduction of CNG driven vehicles will help to combat high fuel prices.

CONCLUSION

One of the most important factors that decide the future of Indian economy is the price of petroleum products. After all a small increase in the price of this has got widespread impact on the Indian Economy. If the price of fuel increases, it increases the transportation cost & the cost of various products, thereby making the companies to increase the price of these products. This causes inflation in the Indian market and the performance of the economy is affected. Strong economic growth of India and other developing countries in Asia have increased the demand of fuels, which has resulted in price hike of fuel. The solution lies in finding an alternate source of energy and reducing the government taxes on fuel. Though the idea is good it is not a practical approach to this heavily discussed issue. Another solution that can be implemented is to create awareness among public about the need to increase the use of public transport. This is the only viable solution in front of us.

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