

A Study About The Customer Attitude Towards Physical Dimensions of Petroleum retail outlet and its Importance

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Abstract - Fuel retail industry in a developing country like India has experienced a significant shift from a thoroughly monitored market to a semi-regulated business. Till the year 2002, the fuel sector was fully under the control of Indian government. During all these years, the marketing function of organizations received the least importance.

Petrol filling station is a government recognized selling point for petroleum products to users. Customers of petroleum product also seek many facilities in the retail outlet of petrol refill stations just as they do in case of any other product. Marketers of petroleum products have taken this into account and are now showing their concern towards understanding of customers new formats, tying up with best in class operators and Branding of the petroleum filling stations and many more such options to catch the customer attention.

This study was carried out to get the insight into customer behaviour towards petroleum filling stations. This research paper has been extracted out of thesis and one of dimension under study in the study is Physical dimension of Petroleum retail outlet. The study has been carried out upon 300 customer of Rewa and the surroundings areas. Various statistical tools have been applied for analysing the data and findings have also been put forward.

Keywords: Fuel, Retailing of Fuel, Oil-Marketing Companies, Physical dimensions of Fuel refilling stations.

I. INTRODUCTION

Fuel retail industry in a developing country like India has experienced a significant shift from a thoroughly monitored market to a semi-regulated business. Till the year 2002, the fuel sector was fully under the control of Indian government. During all these years, the marketing function of organizations received the least importance. The division was the only retailing function. The market was the seller's market. The Indian consumers had no choice other than to purchase commodities from government sector oil firms.

The players are becoming more customers centric and once the market becomes fully deregulated in coming years with a number of members becoming twice of the today, the fight on the amount will fall and the game will be to increase consumer commitment by presenting various assistance to the client.

Thus it becomes important to know the hierarchical level of services which need to be given to produce client satisfaction and increase consumer commitment. The customer behaviour and expectations on outlets situated on highways and suburbs are diverse from consumer sections encouraging terminals within city limits. This points at obtaining various arrangements at fuel refilling outlets on roadways and in rural areas which will help in building

faithful customers. Also, there can be a number of services, but which are more important for a particular outlet always remains a matter of study.

The production examination was arranged to discuss the CRM actions taken by remarkable players of the businesses in the Petroleum Sector. The largest public sector oil company IOCL also looked at the competition with similar ease. Launching of premium fuels, snap services, quick Lube change, automatic car wash and multi-product dispensing pumps and tying up with many banks for promoting the business were the initiatives which oil marketing companies had taken.

II. REVIEW OF LITERATURE

Kalibrate Tech, 2014 has identified seven petroleum retail value chain mainly; location, facility, merchandising, price, operations, brand & competition, etc. Located site selection is a complex process. It is important to understand how a new location will impact their existing network and the competition in addition to understanding consumer behavior, natural barriers, the back side of demand, etc. The facility is the second most important link in the value chain. It includes parking facilities, availability of basic utilities (toilet, drinking water, etc.), which, may drive to the customer to the comfort level. Merchandising is all about

offering the right products and services, at the right time with the right attitude. Having the correct product mix, adequate inventory, fresh merchandise, and a clean, neat appearance are required for success.

Babasab Patil (2012), conducted a study titled, “Customer satisfaction on Bharat gas agencies in Coimbatore”, and he concluded that the gas agency is well established in providing satisfactory after-sales services to its customers. By understanding and recognizing the analysis and view of most of the clients are begetting positive attitude towards that appropriate local gas supplier company and are happy with its assistance such as availability of punctual and reliable services of performance, Staff assistance, Qualified Technicians, etc.

Vimal Priyan & Karthihaiselvi (2010) in their study, “Customers' opinion towards Indian gas dealers”, found that, most of the customers are of the opinion that there is a delay in providing cylinder. It is suggested that there should be one more dealer in Sivakasi so as to distribute gas cylinder quickly. Majority of the customers prefer Indian gas for the reasons like economy, convenience, time saving and cleanliness. As LPG has been moved towards buyers market, the dealer should provide better customers service that his competitors in order to have repeated sales, increased clientele. Good quality fuel, the accurate quantity of fuel, basic facilities, friendly and well-dressed staff, quick and efficient service, good looks and spacious layout of the outlet and availability of ATMs at the outlets are key factors which contribute to consumers experiences. As per **R Krishna Kumari, Dr. N Yesodha Devi, (2016)** attempt shall be made to employ separate attendees for air pressure checks at every fuel stations and vehicle cleaning is desired at all petrol bunks. They moreover suggested that retail outlet should make use of additional employees to steer clear of the problems of postponed service. The complaint system shall be introduced and brought to the attention of the outlet owner so as to recognize the consumers problems instantaneously.

III. RESEARCH DESIGN

Descriptive and analytical research design methods are used in this research. The present study limits its scope to consumer behavior towards petroleum products with special reference to Hindustan Petroleum Corporation Ltd. The geographical region chosen for the study is five major cities of Madhya Pradesh.

Sampling:

Sampling area for the study were five prominent cities of Madhya Pradesh: Rewa, Satna, Umaria, Sagar, and Chhatarpur. Sample size adopted for the study is 300 respondents using personal vehicles. Equal respondents have been selected from the above 5 sub urban areas by giving equal representation to the five different income groups. As given in the following table.

Sample type:

Sample Characteristics are those that reflect in the sample respondents, all customer irrespective of their Gender, belonging to specified sub urban areas of Madhya Pradesh and having the specified income levels, are mentioned.

Data collection

Neutrality and precision were the 2 factors which were duly considered while collecting the data at every point. In this study, both primary data and secondary data sources have been put to use, but the foremost prominence was assigned to the primary data. The study is based principally on primary data. The primary data for this research study was gathered through well-structured questionnaire. Responses were taken from respondents to bring out the miscellaneous characteristics of respondents. Questionnaire consisted of multiple choice question, close-ended questions, dichotomous type and likert scale question were included in the study. The questionnaire was assessed by a number of people for their proficient contribution and comment before being confirmed. All the questions were assembled sensibly and confusing questions were kept away.

Tools of analysis:

The data which was collected was processed and investigated. The procedure implies editing, coding, classification and tabulation of collected data. The requirement for appropriate presentation happens since the statistical data in their unrefined form approximately challenge conception. In this study responses have been coded in the SPSS 21.0 version. **Bar Charts, Pie Charts** have also been used to represent the demographic profile of the respondents. Data analysis has been carried out by using simple percentage method for each parameter of special independent and dependent variables of the study. Additionally, ANOVA, independent sample t-test have been used to analyze the hypotheses at 5% level of significance.

Reliability Analysis:

Physical dimension

There were 6 items in the construct physical dimension. The value .856 indicates that the items are good enough to measure the customers’ attitude towards physical dimensions .

Table 3.1: Case Processing Summary

Case Processing Summary			
	N	%	
Cases	Valid	50	100.0
	Excluded ^a	0	.0
	Total	50	100.0

a. Listwise deletion based on all variables in the procedure.

Table 1.2: Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.856	6

Objectives:

To study and analyze the customer’s perception regarding physical dimensions of Petroleum Retail Outlet.

Hypotheses:

H₀₁(a): There is no significant difference in consumers’ preference towards of physical dimensions of petroleum retail outlet with respect to type of vehicle.

H₀₁ (b): There is no significant difference in consumers’ preference towards of physical dimensions of petroleum retail outlet with respect to income.

Demographic Profile of the Respondents

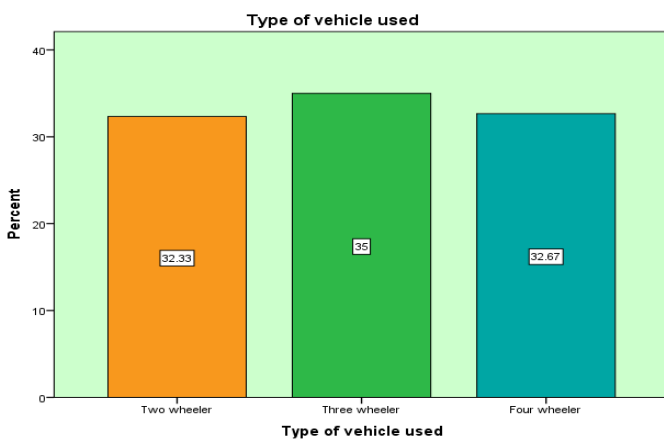
Type of vehicle used

It is observed from the following table that according to 164(54.7%) responses there were generally the owner of 2 wheelers while as per table 60 (20%) users of 3 wheelers were there. These were the mainly the auto rickshaw drivers. As per 76 (25.3%) responses there were the owners of 4 wheelers also who were also contacted for their opinions regarding the study.

Table 3.3 Showing the type of vehicle used

Type of vehicle used	Frequency	Percent
Two wheeler	164	54.7
Three wheeler	60	20.0
Four wheeler	76	25.3
Total	300	100.0

Graph 3.3: Showing the type of vehicle used



IV. DATA ANALYSIS AND INTERPRETATION

Data analysis was carried out by showing Frequency and percentage of some variables under the construct Physical dimension. Afterwards these statements were combined together by compute variable option in SPSS and hypothesis testing was carried out.

Physical Dimensions of petroleum retail outlet:

4.1 Whether the respondents look for modern-looking equipment and fixtures.

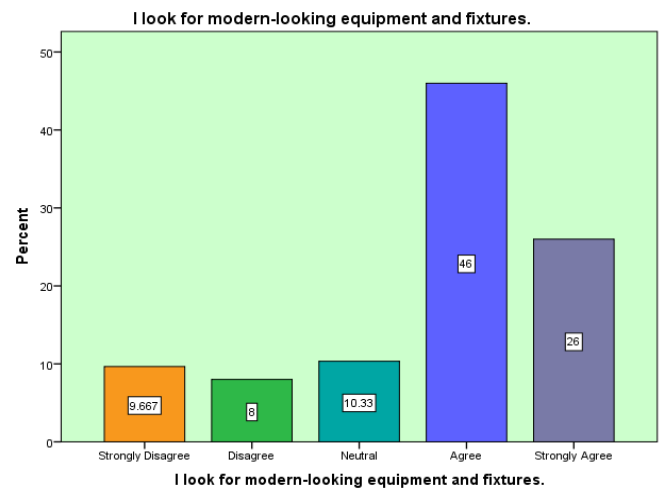
It is observed from the following table that 72% respondents were having positive opinion for modern

looking equipment and fixtures as they have indicated that they search for such features whenever they visit the retail outlet. 10.3% respondents were not having any firm opinion regarding the statement and 15.7% respondents were against the view. Hence, it can be said that modern looking equipment and fixtures enhance the ambience of the retail outlet in case of the product like petroleum also and also attracts the customer attention.

Table 4.1: Showing the responses of the statement whether the respondents look for modern-looking equipment and fixtures.

Whether look for modern-looking equipment and fixtures.	Frequency	Percent
Strongly Disagree	29	9.7
Disagree	24	8.0
Neutral	31	10.3
Agree	138	46.0
Strongly Agree	78	26.0
Total	300	100.0

Graph 4.1: Showing the responses of the statement whether the respondents look for modern-looking equipment and fixtures.



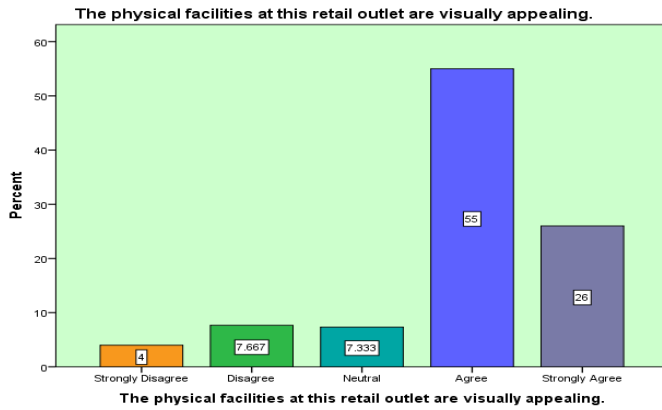
4.2 The physical facilities at any retail outlet should be visually appealing.

Higher number of respondents that is, 81% respondents were in strong favour of the statement that the physical facilities at any retail outlet are visually appealing which attracts more customers. 11.7% respondents were holding the view that physical appearance of petroleum retail outlet least matters in their purchase decision. 7.3% respondents were unbiased regarding the view. As more respondents were favouring the view, it can be said that physical facilities of petroleum retail outlet which are visually appealing as well are one of the factor which motivates the customers to buy these products.

Table 4.2: Showing the respondents’ opinion regarding the statement whether the physical facilities at any retail outlet should be visually appealing

The physical facilities at any retail outlet should be visually appealing.	Frequency	Percent
Strongly Disagree	12	4
Disagree	23	7.7
Neutral	22	7.3
Agree	165	55
Strongly Agree	78	26
Total	300	100

Graph 4.2: Showing the respondents' opinion regarding the statement whether the physical facilities at any retail outlet should be visually appealing.



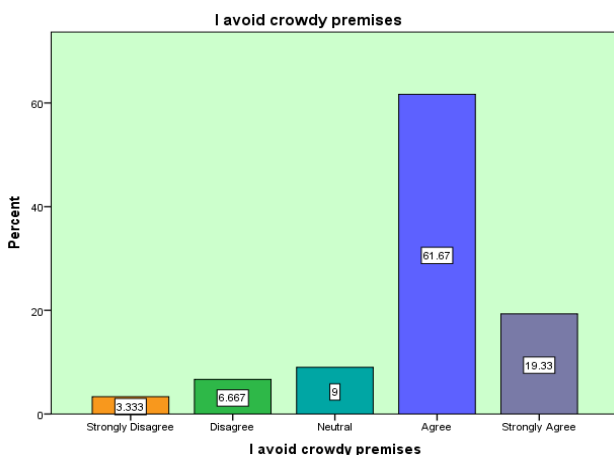
4.3 Avoidance of crowdly premises:

81% respondents were in favour of the statement that they keep away from crowdly premises. 9% respondents were neutral and 10% respondents were not in support of the view. Hence it can be said that people prefer to go the retail outlet where they may not have to wait for long so that they may get quick service.

Table 4.3: Showing the respondent's opinion regarding the avoidance of crowdly premises

I avoid crowdly premises	Frequency	Percent
Strongly Disagree	10	3.3
Disagree	20	6.7
Neutral	27	9.0
Agree	185	61.7
Strongly Agree	58	19.3
Total	300	100.0

Graph 4.3: Showing the respondent's opinion regarding the avoidance of crowdly premises



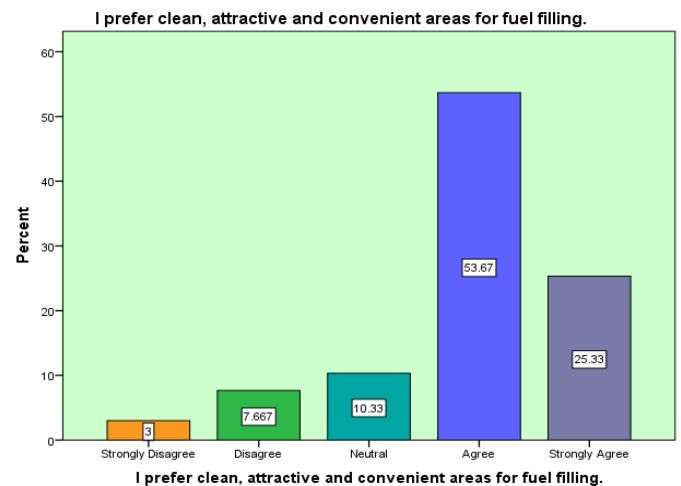
4.4 Respondents' preference towards clean, attractive and convenient areas for fuel filling.

79% respondents were favouring the view that they prefer clean, attractive and convenient areas for fuel filling. 10.3% respondents were neither agree nor disagree with the view and 10.7% respondents were not favouring the view.

Table 4.4: Showing respondent's preference towards clean, attractive and convenient areas for fuel filling.

I prefer clean, attractive and convenient areas for fuel filling.	Frequency	Percent
Strongly Disagree	9	3.0
Disagree	23	7.7
Neutral	31	10.3
Agree	161	53.7
Strongly Agree	76	25.3
Total	300	100.0

Graph 4: Showing respondent's preference towards clean, attractive and convenient areas for fuel filling.



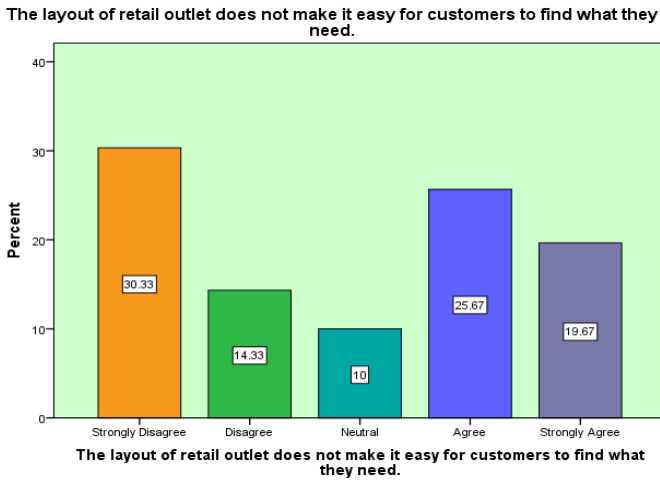
4.5 The layout of retail outlet does not make it easy for customers to find what they need.

It can be observed from the following table that 45.4% respondents indicated that the layout of the retail outlet has no role in enabling the customers to find what they need. 10% respondents were unbiased regarding the statement. 44.6% respondents were not favouring the statement that the layout of retail outlet has no role in making easy for customers to find what they need.

Table 4.5: The layout of retail outlet does not make it easy for customers to find what they need.

The layout of retail outlet does not make it easy for customers to find what they need.	Frequency	Percent
Strongly Disagree	91	30.3
Disagree	43	14.3
Neutral	30	10.0
Agree	77	25.7
Strongly Agree	59	19.7
Total	300	100.0

Graph 4.5: The layout of retail outlet does not make it easy for customers to find what they need.



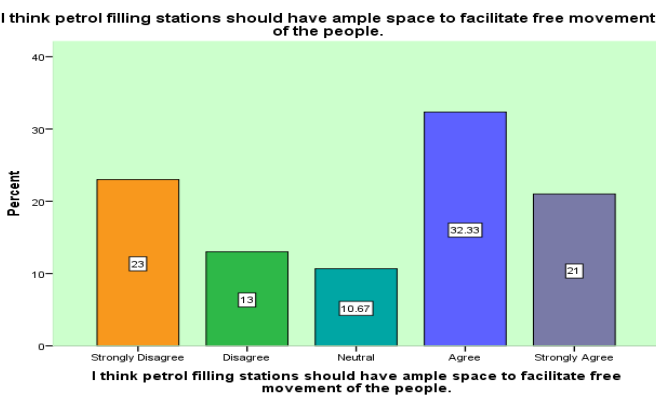
4.6 Petrol filling stations should have ample space to facilitate free movement of the people.

According to the following table 53.3% respondents were supporting the view that petroleum filling stations should have sufficient space to make possible free movement of the people. 36% respondents were disagreeing with the view while 10.7% respondents were neutral in this regard.

Table 4.6: Showing the respondents’ opinion towards ample space in Petrol filling stations to facilitate free movement of the people.

Petrol filling stations should have ample space to facilitate free movement of the people.	Frequency	Percent
Strongly Disagree	69	23.0
Disagree	39	13.0
Neutral	32	10.7
Agree	97	32.3
Strongly Agree	63	21.0
Total	300	100.0

Graph 4.6: Showing the respondents’ opinion towards ample space in Petrol filling stations to facilitate free movement of the people.



5. Hypotheses Testing:

H₀1(a): There is no significant difference in consumers’ preference towards of physical dimensions of petroleum retail outlet with respect to type of vehicle.

It is observed from the following table that there are 3 kinds of vehicles owners which comprise of 97 Two wheeler owners, three wheeler owners and 98 four wheelers owners were there. The mean value of their responses was 3.5997, 3.5492 and 3.5782 respectively. The respective values of std. deviation for three groups are as, .58068, .56089 and .53685. The mean values suggest that responses are mostly towards the higher side of the five point scale.

Table 5.1 : Showing the Descriptive for difference in consumers’ preference towards of physical dimensions of petroleum retail outlet with respect to type of vehicle

Descriptives

Physical Dimension

	N	Mean	Std. Deviation
Two wheeler	97	3.5997	.58068
Three wheeler	105	3.5492	.56089
Four wheeler	98	3.5782	.53685
Total	300	3.5750	.55823

The following ANOVA testing table shows that the value .813 is higher than the p-value 0.05. it indicates that the null hypothesis is accepted that there is no significant difference in consumer preference towards physical dimensions of petroleum retail outlet with respect to type of vehicle. The calculated f-value .207 is less than the table value of 2.99 at 5% level of significance with degrees of freedom being v₁=2 and v₂=297 and hence could have arisen due to chance. This analysis supports the null hypothesis and it can be concluded that the customers of all the 3 categories; two wheelers, three wheelers and four wheelers have equally high preference towards physical dimensions of petroleum retail outlet.

Table 5.2: Showing the ANOVA testing for consumers’ preference towards of physical dimensions of petroleum retail outlet with respect to type of vehicle

ANOVA

Physical Dimension

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.130	2	.065	.207	.813
Within Groups	93.044	297	.313		
Total	93.174	299			

H₀₁ (b): There is no significant difference in consumers’ preference towards of physical dimensions of petroleum retail outlet with respect to income.

The descriptive table shows that highest mean value is for the income group “above 8, 00,000” 3.8222 with std. dev. .42171. Subsequent mean value (3.6500) is found for the income group “6, 00,001 - 8, 00,000” with std. dev.44436. Next income group “2, 00,000 - 4, 00,000” is associated with the mean value 3.5528 with std. dev. .59856. The mean value 3.4833 and std. dev. .59856 is found for the respondents falling in the income group “4, 00,001 - 6, 00,000”. Lowest value of mean is obtained for the respondents included in the income group “below 2, 00,000” which is wqual to 3.3667 having the value of std. dev. .60662.

Table 5.3: Showing descriptives for difference in consumers’ preference towards of physical dimensions of petroleum retail outlet with respect to income.

Descriptives				
		N	Mean	Std. Deviation
Physical Dimension	Below 2,00,000	60	3.3667	.60662
	2,00,000 - 4,00,000	60	3.5528	.59856
	4,00,001 - 6,00,000	60	3.4833	.59715
	6,00,001 - 8,00,000	60	3.6500	.44436
	Above 8,00,000	60	3.8222	.42171
	Total	300	3.5750	.55823

The above ANOVA testing shows that the significant value is .000 which is less than 0.05 indicating the rejection of null hypothesis thereby stating that noticeable difference exists in consumers’ preference towards of physical dimensions of petroleum retail outlet with respect to income. The calculated value of F=6.123 is slightly higher than the table value 6.26 at 5% level of significance with degrees of freedom being v1=4 and v2=295. This analysis does not support the hypothesis and it can be said that respondents on the basis of their income are differently concerned about the physical dimension of the petroleum retail outlet.

The calculated f-value .207 is less than the table value of 2.99 at 5% level of significance with degrees of freedom being v1=2 and v2=297 and hence could have arisen due to chance. This analysis supports the null hypothesis and it can be concluded that the customers of all the 3 categories; two wheelers, three wheelers and four wheelers have equally high preference towards physical dimensions of petroleum retail outlet.

Table 5.4: Showing ANOVA testing for difference in consumers’ preference towards of physical dimensions of petroleum retail outlet with respect to income.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Physical Dimension	Between Groups	7.143	4	1.786	6.123	.000
	Within Groups	86.031	295	.292		
	Total	93.174	299			

V. FINDINGS AND DISCUSSION

Providing good service at right time makes a retail outlet trustworthy. Higher number of respondents were agreeing that if any retail outlet provides timely and good service at right time, it increases their trustworthiness. The percentage of such respondents was 72.4%. 74.3% respondents were favouring the view that any retail outlet should be able to deliver all the required products when the customers want it. Higher percentages of respondents (82.4%) were agreeing to the statement that error free transactions and records augment the trustworthiness of any retail outlet.

The employees in the retail outlet should be knowledgeable enough to answer the customer’s questions as per 69.6% respondents. The behavior of employees in any retail outlet instills confidence in customers as per 73.3% respondents. For 73.3% respondents’ behavior of respondents was very crucial as they had the opinion that their behavior instills confidence in customers. 73.3% respondents were favouring the opinion that employees of any petroleum outlet should be able to give prompt service to customers. 38% respondents were against the view that employees in any retail outlet should tell the customers exactly when the services will be performed.

77.3% respondents were favouring the view that any retail outlet should handle returns and exchanges transparently. 42.3% respondents were in favour of the statement that showing sincere interest in solving any customer related problem shows the capability of the staff.

VI. CONCLUSIONS & SUGGESTIONS

Following are the concluding points of the study based on the findings of the study.

1. Personal and commercial drivers are more influenced by economic, rational, concrete and functional purchase dimensions namely convenience and price.
2. The survey showed that the primary consideration was quality and quantity of the fuel. They developed an image of a petrol bunk by considering their service also. An equally important criteria was the attractive physical aspects of the retail outlets.
3. Factors like right quantity, quality, price, clean environment, reliability and transparency in services, customer care service are crucial

irrespective of type of vehicle. The new concepts such as restaurants, ultra modern electronic vending machine at fuel stations are not much popular with the people. This may be attributed to causes like lack of time and resistance to change. Although people look for modern looking fixtures in the filling stations that are visually appealing.

4. Crowdy premises are also not liked by customers. The customers of all three kinds of vehicles had equally high preference towards physical dimensions.
5. Good service at right time was expected by most of the respondents hence it came out to be one of the important factor in maintaining trust among customers of fuel as well.
6. Error free sales transactions are also one of the factor which add to the trustworthiness of any retail store. In case of fuel also such situation exists.

Suggestions

The research is focused on the two wheeler, three wheeler and four wheeler customers who buy fuel at different prices and in different amount; petroleum retail outlets in the selected sub Urban Areas of Madhya Pradesh. The research also covers at some length the role of dealers and policy makers in influencing consumer purchase decision regarding Petroleum products.

Based on the current study and its several findings, following suggestions have been put forward:

1. Attractive physical aspects of the retail outlets has been given importance by the retailers.
2. Along with right quantity and quality, price, clean environment, reliability and transparency in services, customer care service are crucial irrespective of type of vehicle. Hence every effort should be made in order to achieve these aims.
3. Crowdy premises are also not liked by customers. Hence retailers should try to have proper entry and exit of the vehicles from the outlet so that the place may not look crowdy.
4. The customers of all three kinds of vehicles had equally high preference towards physical dimensions. Hence retailers should try to focus on maintenance of good infrastructure as well as out appearance of the filling stations.

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