

The Study on Impact of Service Standards at petroleum Retail Stores on Customer Satisfaction using SPSS

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ABSTRACT

The objective of research was to study various factors influencing the consumer satisfaction at the petroleum Retail Outlet in the given locality. To understand the consumer satisfaction, we performed a survey consisting of 60 sample size consumers at the different retail outlets. In our survey we have asked total number of 12 questions, consisting of 4 demographic, 7 psychographic and 1 cross tabulation question consisting of 10 factors. To analyze the data obtain from different sample we have applied various statistical test such as chi square, t-test. We conducted face to face interview and generated the response in the form of questionnaire in the city of Rae Bareilly. The research project was confined to the city of Rae Bareilly, it was a geographical constraint.

Keywords: Customer satisfaction, Retail outlet, Service Standard

INTRODUCTION

Research Problem: To study the service standard of retail outlets to measure customer satisfaction

Research Objectives: Following are the research objectives for the above mentioned research problem-

- To study the impact of friendliness of service personnel on customer satisfaction
- To study the impact of promptness of handling of complaints on customer satisfaction
- To study the impact of variety of products on level of customer satisfaction
- To study the impact of services provided on level of customer satisfaction
- To study the impact of quality of product on level of customer satisfaction
- To study the difference in satisfaction level of male and female
- To check the customer satisfaction level of different age groups

Scope of the project:

This project aims to study the service standards of retail outlets. We have taken majorly 3 retail outlets into consideration (Reliance Jais, IOCL Raebareli and Reliance Raebareli) in order to study and measure customer satisfaction. Various factors have been taken into consideration to analyze the customer satisfaction of retail store. Moreover 5 factors have been taken into consideration as, which is descent number and bore good and robust the results, however, there may be other factors too which may influence the customer satisfaction at retail store. As customer satisfaction is of trivial importance store success depends upon how customer is satisfied when he or she goes for filling Petrol or Diesel at retail outlets.

This study is important for retail outlets service provider, in order to understand the factors that are interlinked with level of customer satisfaction. The project is based on quantitative research techniques wherein various quantitative research techniques are applied to the various field of marketing. It involves the construction of questionnaire, the scale marketer's use, the information to obtain and understand needs of individuals in the marketplace and to create strategies and marketing plans.

BACKGROUND OF RESEARCH WORK

VARIABLES DESCRIPTION

A survey is a way of collecting information from a population sample that is intended to make the results generalized to a wider population. For conducting a survey independent and dependent variables are used. . The variable that is changed or controlled in a scientific experiment is the independent variable. It is the cause or reason for a result. On the other hand dependent variable is used to measure the affect of independent variable.

For our research we have taken certain independent variables and dependent variables. The independent and dependent variables were used again to derive variables for statistical analysis of crosstab, chi-square test, independent t test and paired t- test. The complete descriptions of all the variables used are given below:-

Independent Variable – Any variable that can be stated as influencing or impacting the dependent variable is referred to as an independent variable (IV).

IV influence the DV in + or – way; variance in DV is caused by IV; (explanatory or predictor variable).

Following are the independent variables used for the survey:

1. Friendliness of service personnel
2. Promptness in handling of complaints
3. Variety of products
4. Quality of products
5. Services provided

Dependent Variable - A dependent variable (DV) is measurable and quantifiable variable in nature. It is the most crucial variable to be analyzed in a given research study.

DV is the variable under study that is monitored; (criterion variable or predicted variable).

In this project, Customer Satisfaction has been taken as the dependent variable.

Moderating Variable – Moderating variable are the ones that have a strong contingent effect on the relationship between the independent and dependent variables. They have the potential to modify the direction and magnitude of the above stated association. Presence of moderating variable modifies the original relationship between IV and DV.

Following are the Moderating variables used for the survey:

1. Age - Further divided into five intervals
2. Gender - Male and Female

RESEARCH METHODOLOGY

Sample Profile:

A total of 60 samples have been taken into consideration. The table below shows the sample profile.

SAMPLE PROFILE (N=60)				
S.No.	Variable	Grouping	Frequency	Percentage
1	Gender	Female	21	35.00
		Male	39	65.00
2	Age	20-30	37	61.67
		31-40	15	25.00
		41-50	5	8.33
		51-60	3	5.00
		61 and above	0	0.00
3	Marital Status	Single	32	53.33
		Married	28	46.67
4	Employment Status	Salaried	16	26.67
		Self-employed	19	31.67
		Homemaker	7	11.67
		Student	18	30.00
		Retired	0	0.00
		Not Working	0	0.00

S.No.	Variable	Grouping	Frequency	Percentage
5	Visiting Frequencies	Once in a day	25	41.7%
		Once in 3 days	22	36.7%
		Once in a weak	13	21.7%
6	Types of Vehicles owned	Two Wheeler	31	51.70%
		FourWheeler	20	33.3%
		BOTH	9	15.0%
7	Preferred RO	Reliance Jais	21	35.0%
		IOCL Raebareli	22	36.7%
		Reliance Raebareli	17	28.30%
8	Customer Satisfaction	High	37	61.7%
		Low	23	38.3%

Questionnaire Design:

Questionnaire having total number of 12 questions, consisting of 4 demographic questions, 7 psychometric questions and 1 for cross tabulation consisting of 10 factors, is used for the survey. The questionnaire asked the respondents age, sex and marital status, and all factors mentioned previously.

In the questionnaire three different types of scales have been used, they are as follows:

Nominal scale – This is the lowest level of measurement. Here, numbers are assigned for the purpose of identification such as gender, sex etc. For demographic questions, nominal scales have been used.

Semantic Scale - Semantic Differential (SD)/ Semantic scale is a type of a rating scale designed to measure the connotative meaning of objects, events, and concepts. The connotations are used to derive the attitude towards the given object, event or concept. For psychometric questions, nominal scales have been used.

Likert Scale - The Likert Scale is a 5- or 7-point scale that offers a range of answer options — from one extreme attitude to another, like “extremely likely” to “not at all likely.” Typically, they include a moderate or neutral midpoint.

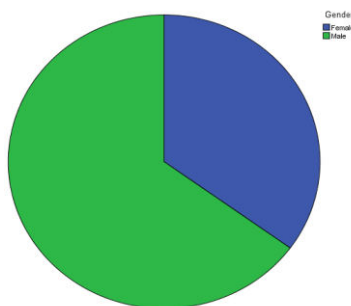
Research Design:

We carried out our survey for the data collection in Rae Bareilly and Jais over 60 respondents who were randomly selected belonging to different- demographic, geographic and psychographic segments. Further the data was assimilated in SPSS and was processed in order to test what kind of relationship exists (If at all any) between our chosen independent and dependent variables.

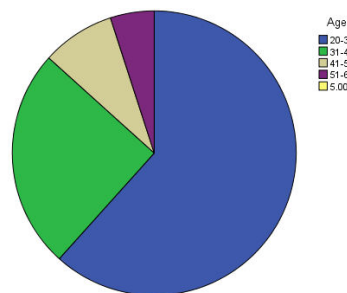
This project is based on **Descriptive Research** analysis. Descriptive research takes up the bulk of surveying and is considered conclusive in nature due to its **Quantitative** nature. Descriptive research is pre planned and structured in design so the information collected can be statistically inferred on a sample/population.

PIE CHART REPRESENTATIONS OF DEMOGRAPHIC FACTORS

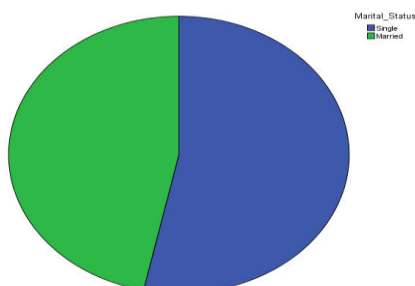
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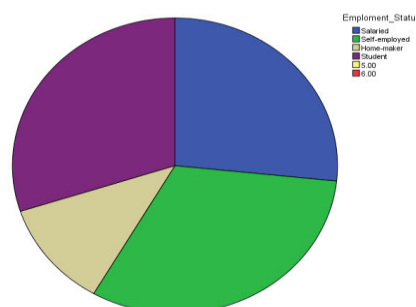
AGE GROUP



Marital Status



Employment Status



Employment status

RESEARCH STATISTICS

Under this project work, apart from the theory part, we have gathered primary data using questionnaire and tried to analyze the data to gain an insight into the consumer’s satisfaction based on various service standards. We have done several tests to check the customer satisfaction level with respect to several factors and have given some recommendations based on it.

Chi Square Test –

- The chi-square statistic (χ^2) is used to test the statistical significance of the observed association in a cross-tabulation.
- Variables for Chi Square test using Cross Tabulation –

Independent Variables	Hypothesis	Inference
Gender	H0: There is no relation between gender and Customer satisfaction	Chi value = 0.280 (P > S) Confidence level=95% S =0.05
	H1: There exists significant relation between gender Customer satisfaction	
	H0: There is no relation between age and Customer satisfaction.	Chi value = 0.059 (P = S)

Independent Variable	Dependent Variable
Staff Friendliness	Customer Satisfaction
Promptness of handling complaints	
Variety of Products	
Quality of Products	
Service Standard	

Age	H1: There exists significant relation between Age and Customer satisfaction	Confidence level=90% S =0.05
Education	H0: There is no relation between Employment and Customer satisfaction	Chi value = 2.026 (P > S)
	H1: There exists significant relation between Employment and Customer satisfaction	Confidence level=95% S =0.05
Preferred RO	H0: There is no relation between Preferred RO and Customer satisfaction	Chi value = 0.167 (P > S)
	H1: There exists significant relation between Preferred RO and Customer satisfaction	Confidence level=95% S =0.05
Staff Friendliness	H0: There is no relation between Staff Friendliness and Customer satisfaction	Chi value = 0.015 (P < S)
	H1: There exists significant relation between Staff Friendliness and Customer satisfaction	Confidence level=95% S =0.05
Promptness of handling complaints	H0: There is no relation between Promptness of handling complaints and Customer satisfaction	Chi value = .039 (P < S)
	H1: There exists significant relation between Promptness of handling complaints and Customer satisfaction	Confidence level=95% S =0.05
Variety of Products	H0: There is no relation between Variety of Products and Customer satisfaction	Chi value = .000 (P < S)
	H1: There exists significant relation between Variety of Products and Customer satisfaction	Confidence level=95% S =0.05
Quality of Products	H0: There is no relation between Quality of Products and Customer satisfaction	Chi value = .005 (P < S)
	H1: There exists significant relation between Quality of Products and Customer satisfaction	Confidence level=95% S =0.05
Service Standard	H0: There is no relation between Service Standard and Customer satisfaction	Chi value = .603 (P > S)
	H1: There exists significant relation between Service Standard and Customer satisfaction	Confidence level=95% S =0.05

T- Test –

Independent Sample t test was performed to check-

- Whether customer satisfaction varies with gender.
- Whether customer satisfaction varies with different age groups.
- Whether overall services provided varies with gender and different age groups.
- Whether staff friendliness varies with gender and different age groups.
- Whether complaint handling promptness varies with gender and different age groups.

RESULTS

Independent Sample t –test

Table for Variances of Parameters -

Standard significance level = 0.05

Parameters	Null Hypothesis (H0)	Alternate Hypothesis (H1)	Significance Level (Test of Equality of variances)	Analysis
Gender	Equal variances of Male and Female	Variances of male and female are not equal.	0.362	H0 accepted
Age	Equal variances of Younger and Older Age groups.	Variances of Younger and Older Age groups are not equal.	0.916	H0 accepted

Table for t-test –

Parameters	t value	Df	Significance level	Mean Difference	Remark
Gender	0.521	58	0.604	0.06960	Mean of male and female are significantly indifferent.
Age	0.051	58	0.959	0.00962	Mean of Young and Older Age groups are significantly indifferent

Interpretation –

To check whether satisfaction level varies with gender -

t= 0.521

Sig. level =0.604 (P>0.05)

Therefore H0 accepted that there is no variation in the satisfaction level of male and female.

To check whether satisfaction level varies with age group-

t= 0.051

Sig. level =0.959 (P>0.05)

Therefore H0 accepted that there is no variation in the satisfaction level among different age groups.

Other Parameters –

Gender vs Services provided, Friendliness of staff personal, and Complaint handling.

Table for Equality of variances -

Parameters	Null Hypothesis (H0)	Alternate Hypothesis (H1)	Significance Level (Test of Equality of variances)	Analysis
Services Provided	Equal variances of Male and Female	Variances of male and female are not equal.	0.342	H0 accepted
Friendliness	Equal variances of Male and Female	Variances of male and female are not equal	0.749	H0 accepted
Complaint handling	Equal variances of Male and Female	Variances of male and female are not equal	0.985	H0 accepted

Table for t-test –

Parameters	t value	Df	Significance level	Mean Difference	Remark
Services Provided	-0.583	58	0.562	-0.10989	Mean of male and female are significantly indifferent.
Friendliness	1.022	58	0.311	-0.20879	Mean of male and female are significantly indifferent
Complaint handling	-2.176	28	0.034	-0.47619	Mean of male and female are significantly different

● **Age vs Services provided, Friendliness of staff personal, and Complaint handling**

Parameters	Null Hypothesis (H0)	Alternate Hypothesis (H1)	Significance Level (Test of Equality of variances)	Analysis
Services Provided	Equal variances of Younger and Older Age groups.	Variances of male and female are not equal.	0.727	H0 accepted
Friendliness	Equal variances of Younger and Older Age groups.	Variances of male and female are not equal	0.724	H0 accepted

Parameters	t value	df	Significance level	Mean Difference	Remark
Services Provided	-0.0363	58	0.718	-0.96151	Mean of Young and Older Age groups are significantly indifferent.
Friendliness	1.108	58	0.272	0.31731	Mean of Young and Older Age groups are significantly indifferent
Complaint handling	0.910	28	0.0367	0.28846	Mean of Young and Older Age groups are significantly indifferent.
Complaint handling	Equal variances of Younger and Older Age groups.	Variances of male and female are not equal	0.068		H0 accepted

CONCLUSION

On the completion of the analysis of the data collected for this project, following conclusions are drawn:

- There is an impact of friendliness of staff personnel on customer satisfaction
- There is an impact of promptness of handling complaints on customer satisfaction
- There is an impact of variety of products on customer satisfaction
- There is an impact of quality of products on customer satisfaction
- There is no impact of services provided on customer satisfaction
- There is no variation in the satisfaction level of males and females
- There is no variation in the satisfaction level of different age groups

LIMITATIONS

1. Restricted to Rae Bareli only
2. Small sample size
3. Uninterested respondents

RECOMMENDATIONS

Based on theoretical and statistical analysis, we recommend the following to the RO Owners for improving the service standards:

1. The Indian retail market is still a growing market and is open for experimentation and analysis. Retailers need to strategize their marketing plan to increase their profit margin and sales

2. The Indian consumers differ largely according to the demographics and therefore suitable steps should be taken to attract customers from all over the country.
3. The statistical analysis clearly shows that there is no effect of age and gender on customer satisfaction, so the retailers can target consumers across the groups of these two domains together
4. There is an impact of staff friendliness, complaint handling, variety and quality of products on customer satisfaction and therefore retailers need to keep a continuous check on these factors
5. Although there is no impact of services provided on customer satisfaction, retailers need to focus on this parameter too, as the impact can vary depending upon the sample size

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