



## Customers' Attitude Towards Distribution Pattern of Liquefied Petroleum Gas(Lpg)

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### ABSTRACT

33.6 million Indian homes use LPG as their primary cooking fuel, with 90% of rural homes still dependent on some form of biomass. The use of clean fuels such as liquefied petroleum gas (LPG) instead of the biomass-based fuels used for cooking in India would be beneficial in several ways. Numerous challenges are faced when considering the increased use of LPG; these include ensuring adequate supply and accessibility, increasing affordability, effective pricing policies, and reaching the people. The LPG agency could benefit from a study on customers' attitude towards distributions pattern of LPG, as this information could assist in the development of possible strategies for market segmentation, suitable pricing, and standardization.

### KEYWORDS :

#### INTRODUCTION

Liquefied Petroleum Gas (LPG) is increasingly becoming the preferred choice of fuel in the world. The increase in patronage could be attributed to its affordability, efficiency and environmental friendliness. Like other energy sources, there are challenges that impede the smooth supply of LPG resulting in shortage. Liquefied Petroleum Gas (LPG) is an environment friendly fuel used widely in household kitchens, industries and commercial establishments. LPG consumers are tied to LPG distributor with very little freedom to choose their distributors. Such a vast and complex marketing activity requires proper discipline among the LPG distributors from whom the entire LPG customers are serviced. LPG as a source of fuel is increasingly becoming popular among public. This is because it is affordable, clean and efficient in the distribution of goods and services. LPG marketing is unique. There is a network of over 13,000 LPG distributors in the country to meet the requirement of LPG consumers.

#### STATEMENT OF THE PROBLEM

Domestic LPG today is subsidized and hence is distributed only by public sector oil marketing companies. As LPG distribution is controlled, each distributor has a specified area of operation and customers can avail the cylinders only if they are residing within the area of operation of a distributor. The use of India's indigenous production of LPG has not been able to keep pace with increasing demand. For availing the new connection customer has to approach the nearest distributor. LPG for household use is now increasing in importance in Sivakasi. Though there is a lot of LPG innovative service available at the reach of consumers in market in Tamil Nadu, the LPG distributors concentrate more in prompt delivery service. A study on the users of Liquid petroleum gas is to be made to create awareness quality, customers' services, and safety of LPG and refill LPG facility. Hence the present study is made to analyze the consumers' attitude towards distribution pattern of Liquefied Petroleum Gas.

#### OBJECTIVES OF THE STUDY

- To analyze the demographic profile of LPG customers in Sivakasi
- To study the usage of LPG for household use by customers in the study area
- To evaluate the satisfaction level of respondents towards agency services.
- To find out the problems and offer valuable suggestions based on the study.

#### METHODOLOGY

The present study is mainly based on primary data. The required primary data were collected through the questionnaire with 120 sample respondents. The data collected is classified and analyzed keeping in view, the objectives of the study. For the purpose of analysis the statistical tools like Chi-Square Test and Ranking Techniques are used. The following hypotheses have been made for the purpose of the present study:

- There is no significant association between the demographic profile of the respondents and level of satisfaction towards LPG Distribution.

#### ANALYSIS AND INTERPRETATION

##### PERSONAL PROFILE OF THE CUSTOMERS

There has been considerable growth in domestic consumption of liquefied petroleum gas (LPG). A family's socioeconomic status is based on family income, education level, occupation, number of earning members in the family, their income and soon. A study is made to know the profile of the customers to analyze their attitude towards usage of LPG for household use.

Table 1: PERSONAL PROFILE OF THE CUSTOMERS

Gender	No. of Customers	Percent
Male	44	36.70
Female	76	63.30
Total	120	100
Nature of the Family	No. of Customers	Percent
Joint family	15	12.50
Nuclear family	105	87.50
Total	120	100
Number of members	No. of Customers	Percent
1or 2	30	25.0
3-5	82	68.30
Above 5	8	6.70
Total	120	100
Earning Members	No. of Customers	Percent
1	23	19.20
2	77	64.20
3	19	15.80
More than 3	1	0.80
Total	120	100
Category of the Job	No. of Customers	Percent
Government employee	14	11.67
Private employee	64	53.33
Business	20	16.67
Professional	12	10
House wife	10	8.33
Total	120	100
Monthly Income	No. of Customers	Percent
Below ₹ 5000	12	10
5000-10000	64	53.33

10000-15000	24	20
Above 15000	20	16.67
<b>Total</b>	<b>120</b>	<b>100</b>

Source: Primary data

It can be inferred from the Table 1 that 36.70 per cent customers are male, while 63.30 per cent are female as majority of the registration of customers is taken in the name of female members. 87.50 per cent of the customers belong to Nuclear family. 68.30 per cent customers have three-five members in the family. Among 64.20 per cent of the customers' family there are two earning members and 53.33 per cent of the customers are private employees. A majority of the customers belong to the income group of ₹ 5000-10000. The interest shown by people with lesser income may be due to expenditure on fuel for household and to minimize the same to balance their monthly budget.

**USAGE OF LPG FOR HOUSEHOLD USE**

Using energy efficiently while reducing the consumption of resources is the most important contribution to environmental protection. One of the key obstacles to LPG penetrating lower-income customer segments is the price of LPG appliances and the cylinder.

**Table 2: USAGE OF LPG FOR HOUSEHOLD USE**

Number of cylinders at Home	No. of Customers	Percent
One	24	20.0
Two or more	96	80.0
<b>Total</b>	<b>120</b>	<b>100</b>
Name of the Distributor	No. of Customers	Percent
Balaji	13	10.80
Indane	42	35.0
Jeyanthi	4	3.30
Venkateshwara	56	46.70
Deepak	5	4.20
<b>Total</b>	<b>120</b>	<b>100</b>
Years of Connection	No. of Customers	Percent
Before 2005	74	61.70
Between 2005-2010	35	29.20
After -2010	11	9.20
<b>Total</b>	<b>120</b>	<b>100</b>
Brand of Gas Stove	No. of Customers	Percent
Butterfly	37	43.50
Preethi	20	23.50
Surya	13	15.30
Sun flame	9	10.60
Pigeon	6	7.10
<b>Total</b>	<b>85</b>	<b>100</b>
Reason for purchasing from agency	No. of Customers	Percent
Availability of branded stoves	21	30
Reasonable price	11	15.72
After sales service	38	54.28
<b>Total</b>	<b>85</b>	<b>100</b>
Reason	No. of Customers	Percent
Not happy with the services of the previous distributor	13	44.80

Number of cylinders at Home	No. of Customers	Percent
Want to move to an LPG distributor closer to home	16	55.20
<b>Total</b>	<b>29</b>	<b>100</b>

Source: Primary data

The above table 2 shows that 80 per cent of the customers have owned two or more cylinders and usage of a cylinder last only for a month and so there arise a need to have two or more cylinders. 46.70 per cent of the customers have chosen distributor as Venkateshwara Agency for the reason timely response for customer queries. 61.70 per cent of the customers have got their connection from a particular agency before 2005 and till date they continue their patronage. 43.50 per cent of the customers have purchased Butterfly gas stove from their distributors and 54.28 per cent of the customers have purchased gas stove from the agency because of their after sales service plan implemented by them. 55.20 per cent of the customers feel to have the distributor closer to home as it is convenient for them.

**DISTRIBUTOR SERVICES**

Customer loyalty or customer retention is about how long the Gas agency can keep a customer by providing better services. In this study, customer satisfaction was expressed in terms of what the customer thinks about the agency by virtue of their quality distribution of gas, service provided value and so on.

**Table 3: DISTRIBUTOR SERVICES**

Satisfaction level	No. of Customers	Percent
High	75	62.50
Medium	28	23.33
Low	17	14.17
<b>Total</b>	<b>120</b>	<b>100</b>
TATKAL scheme	No. of Customers	Percent
Yes	24	20
No	96	80
<b>Total</b>	<b>120</b>	<b>100</b>
Reason	No. of Customers	Percent
Delay in supply	45	47
During emergency	30	31
Family function	21	22
<b>Total</b>	<b>96</b>	<b>100</b>
Size of the Cylinder	No. of Customers	Percent
Big	1	0.80
Small	119	99.20
<b>Total</b>	<b>120</b>	<b>100</b>
Usage of a Gas Cylinder	No. of Customers	Percent
Up to 30 days	16	13.30
30 days to 45 days	62	51.70
45 days to 60 days	27	22.50
Above 60 days	15	12.50
<b>Total</b>	<b>120</b>	<b>100</b>
Alternative Source of Fuel	No. of Customers	Percent
Firewood/cow dung	16	13.30
Kerosene	29	24.70
Coal	18	15.0
Induction stove	57	47.5
<b>Total</b>	<b>120</b>	<b>100</b>

Source: Primary data

The result shows that 62.50 per cent of the customers are highly satisfied with the agency service as it is at their reach and no waiting pe-

rod for connection. 80 per cent of respondents have not availed the TATKAI scheme . 99.2 per cent of the customers are using small size domestic cylinders. t51.70 per cent of the maximum customers are using their gas cylinder ranges between 30 days to 45 days. 47.5 per cent of the customers is using induction stove as additional source of energy.

**Reason for Using LPG for Household Use**

LPG gas attracts the consumer for cooking for various reasons during the survey, the customers who use LPG gas for cooking were asked to rank the reasons in the order of importance. Computation of total scores for each of the different forms of customers shows the following results.

**Garrett Ranking Technique**

The Garrett ranks are calculated by using appropriate Garrett ranking formula. Based on the Garrett ranks, the Garrett's table value is ascertained.

**Table 4: REASON FOR USING OF LPG FOR HOUSEHOLD USE**

Reasons	Garrett mean score	Rank
Easy for cleaning the vessel	52.58	III
Easier and quicker to cook	49.63	IV
Economy	38.38	VII
Cleanliness in the kitchen	44.32	VI
Convenient	47.08	V
Prestigious item	53.61	II
Environment friendly	54.12	I

**Source: Primary data**

According to Garrett's ranking technique table "Environment friendly" is foremost reason for using LPG for household use; the second foremost reason is prestigious item. By using LPG it maintains Cleanliness in the kitchen and it is ranked as sixth. Finally economy is ranked as seventh.

**LEVEL OF SATISFACTION OF CUSTOMERS**

The customers' opinion between dependent variable and independent variable has been studied by means of Chi-square test.

**Table: 5  
Result of Chi-square Test**

Particulars	Value	D.f	Sig.	Inference
Earning members in the family	3.225	6	.780	Accepted
Monthly income of the family	4.027	8	.855	Accepted
Nature of the family	2.565	2	.277	Accepted
Category of the job	3.178	6	.786	Accepted

**Source: Computed data**

The Chi-Square value for the association between earning members in the family and their level of satisfaction towards the services offered by the distributor was obtained as 3.225 with 6 degrees of freedom and a significant probability is .780 which it is more than 0.05. The null hypothesis is accepted. Person Chi-Square is 4.027 and its significance is .855 which is more than 0.05, so the null hypothesis is accepted. There is no association between the monthly income of the family and the level of satisfaction towards the Direct Benefit Transfer of LPG.

Person Chi-Square is 2.565 and its significance is .277 which is more than 0.05, so the null hypothesis is accepted at 5% level of signifi-

cance. There is no association between the Nature of the family and level of satisfaction towards the services offered by the distributors.

Person Chi-Square is 3.178 and its significance is .786 which is more than 0.05, so the null hypothesis is accepted and it is concluded that at 5% level of significance, there is no association between Job category and level of satisfaction towards the services offered by the distributors.

**SUGGESTION OF THE CUSTOMERS**

The researcher has collected suggestions from the LPG customers regarding minimizing the usage of LPG and some factors are identified and are analyzed as below.

**Table: 6  
Suggestion of the customers**

Suggestion	Mean score	Rank
Prepare all ingredients ready for cooking	4.27	I
Avoid reheating of food	4.25	II
Match the burner to the vessel. small vessel to small burner	4.15	III
Cover the vessel while cooking.	4.09	IV
Cook larger quantities and store for later consumption	4.08	V
Pressure cookers very good at saving energy	3.99	VI
Add enough water so cooking can be done	3.98	VII
The color and height to be checked	3.93	VIII
Use metal and not clay pans for cooking	3.88	IX
Using the simmer position to save gas	3.80	X

**Source: computed data**

It is observed from table 6 that the statement "Prepare all ingredients ready for cooking" tops the list with mean score of 4.27 points; this followed by "Avoid reheating of food" with mean score of 4.25 points and "Using the simmer position to save gas with mean score of 3.80 points is the lowest score opinion among the customers regarding fuel consumption.

**SUGGESTIONS**

- Most of the customers have an opinion that there is a delay in supplying the LPG cylinder; LPG godowns may be installed in few more places as the study area is vast. Hence they can reduce the time delay in distribution.
- There should be some more dealers in Sivakasi central area, this would help in increasing the sales and in turn, it would improve the service quality on distribution.

**CONCLUSION**

In the study, it is being understood that the customer's service with regard to agency that the quantity and price is the government considered by the customers while choosing their agency. Consumers mainly concentrate on the best services of the agency especially for the correct quantity of cylinder. A penalty system should be established whereby LPG suppliers are compelled to pay a hefty fine for any cylinder found to be underweight and for failure to adopt common cylinder regulators/ valves. This would instill confidence in LPG among the urban poor.

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