CHAPTER IV

RESEARCH METHODOLOGY

4.1 INTRODUCTION

In the previous chapter, the different literatures pertaining to the current study have been thoroughly reviewed and thereby identified the research gap and framed the objectives accordingly. Research methodology consists of different steps that are generally adopted by a researcher to study the research problems and research objectives. In this chapter, the methodology adopted by the researcher for conducting this study is discussed in detail.

4.2 STATEMENT OF THE PROBLEMS

Sizeable Refining Capacity Additions Turning India into a Global Refining Hub, Oil and gas accounts for 41 percent of India’s energy consumption and there is unlikely to be any significant scaling down of dependence on these fuels in the next five to ten years. The sustained economic growth in the country over the last five years has led to a concurrent growth in energy demand across industrial, transportation, commercial, and residential sectors. To meet this considerable demand for oil, the petroleum industry is expanding its refining capacity to drive output and distribute petroleum products through proper channel. However, this could widen the gap between domestic demand and supply of petroleum products. A substantial increase in the domestic supply of
petroleum products and increase in prices of petroleum products are likely to discourage the distribution channel. Owing to the rising consumption of oil and other allied products, the Government has framed favorable policies to promote exploration and production. This move has caused a quantum leap in domestic petrol and diesel supply. Government policies have also supported the retailers of petroleum products in the country.

The natural and technological limitations in enhancing global oil production are likely to restrain supply from keeping pace with demand in the long term. This, in turn, could lead to a continued increase in the base-level prices of crude oil. In India, the pricing of petroleum products has to be regulated by the government. Though international crude oil prices have come down in the short term, they are expected to rebound and rise in a sustained fashion in the long term. The oil and gas sector will have to strategize to deal with volatile prices on the supply side and there arises a gap between the vendors and the retail distributors and the retailers may not able to maintain the regularity in distribution of the products, they will ultimately lose their loyalty. A gap analysis is the only source available to the retailers to estimate the actual demand for the products and the possibility to equalize the demand.

With margins under pressure, Indian retailers have begun to integrate with value-added products such as air fillings, smart Shoppe, petrol cards and invest in methods to improve the customers’
relationships. Moreover, in response to the regulated product prices in the domestic market, the private sector retailers have moved to sell major shares of their products in the local market.

In this study, the gap analysis is mainly used to find out and analyze the gap that exists in the Retail Petroleum distribution outlets situated in the study area of in and around Chennai and also to suggest measures to close/bridge the gap between the expectations and perceptions of their customers. This will definitely result in the growth of retail petroleum outlets along with customer satisfaction and customer retention.

4.3 IMPORTANCE OF THE STUDY

The main reason for gap analysis beginning very important to firms is the fact that gaps between customer expectations and customer experiences lead to customer dissatisfaction. Consequently, measuring gaps is the first step in enhancing customer satisfaction. Additionally, competitive advantages can be achieved by exceeding customer expectations. Gap analysis is the technique utilized to determine where firms exceed or fall below customer expectations.

Customer satisfaction leads to repeat purchases and repeat purchases lead to loyal customers. In turn, customer loyalty leads to enhanced brand equity and higher profits. Consequently, understanding customer perceptions is important to a firm’s performance. As such, gap analysis is used as a tool to narrow the gap between perceptions and
reality, thus enhancing customer satisfaction. Moreover, this will help the retailers to improve their business consistently and continuously.

4.4 **SCOPE OF THE STUDY**

This study explores the service gap that exists in the retail petroleum outlets in the study area of in and around Chennai. This study captures the perception of the customers about the retail service practices adopted by the different petroleum retail outlets chosen for the study. This study has several applications for effectively managing the retail services that are being utilized in petroleum retail outlets. Clearly this study provides information to organization to help them gain greater understanding and insight so as to focus greater attention to improve their management of satisfied services to their customers. This study might also be useful to other agencies who share a similar organizational hierarchy and culture and who are seeking to improve and enhance their management of retail distribution outlets. Finally the study might also lead to revisions, improvements and modifications to the models of effective retail management practices pertaining to the minimization of the service gap in the study units.

4.5 **OBJECTIVES OF THE STUDY**

4.5.1 **Primary Objective**

- To identify and analyze the service gap that exists in the retail petroleum distribution outlets situated in the study area of in and around Chennai.
4.5.2 **Secondary Objectives**

- To explore and analyze the Customers expectations and their level of satisfactions with the services of retail petroleum outlets.
- To list out and analyze the customers perceptions on various retail service dimensions.
- To find out the various actual facilities/services offered to customers by the retail outlets.
- To identify and analyze the pre-dominant factors that affect service gap in retail distribution.
- To explore the retailers perceptions on their retail service competencies.
- To examine the relationship among the factors of retail service competencies.
- To summarize the findings with legitimate measures and to extend valuable suggestions to close/minimize the service gap.

4.6 **Hypotheses Formulated**

The following null hypotheses have been formulated and tested.

1. There is no significant relationship between the items related to various services of retail outlets.

2. There is no significant difference between expected physical aspects and actual physical aspects.

3. There is no significant difference between expected reliability and actual reliability.
4. Problem Solving is independent of agreement level.

5. Corporate Policy is independent of agreement level.

6. There is no significant relationship between the factors of retail service competencies and effectiveness of retailer’s goals.

7. There is no association between the clusters of retail service quality standards and retail service employees’ performance standards.

8. There is no association between the clusters of retail service quality standards and retail service organizational commitments.

9. There is no association between the clusters of retail service quality standards and retail service customer orientation.

10. There is no association between the clusters of retail service employees’ performance standards and retail service organizational commitment.

11. There is no association between the clusters of retail service employees’ performance standards and retail service customer orientation.

12. There is no significant association between the clusters of retail service organizational commitment and retail service customer orientation.

13. There is no significant relationship between motivating customers and future planning prospects.
4.7 RESEARCH DESIGN

The study is a descriptive in nature as the researcher aims at analyzing the service gap that exists in petroleum retail outlets. It also analyses the expectations and perceptions of customers and perception of petroleum retailers about the service practices of the petroleum distribution concern.

4.8 UNIVERSE

The retail outlets of major oil companies located in and around Chennai and the customers using any vehicle with Two wheelers, Three wheelers, Four wheelers, etc of the same outlets constitute the universe of the study.

4.9 PILOT STUDY

The researcher has conducted a pilot study in and around Chennai selecting only 100 respondents covering 40 petroleum retail outlets and 60 of their customers, to verify the overall structure and the effectiveness of questionnaire. The respondents were very frank to expose their views and they provided reasonable comments on some aspects and confirmed the validity of all items in the questionnaire.

4.10 SAMPLING DESIGN

To study the service gaps that exist in the retail petroleum distribution outlets in the study area of in and around Chennai, the respondents of both retail outlets and their customers have been chosen according to the convenience of the researcher. The customers selected
range from the various vehicles used for their personal or for private purposes and the retail outlets dealing with various brands of petroleum products located in and around Chennai alone are considered for the study. The meticulous and methodical analysis could be feasible only when an appropriate sampling technique is adopted.

The present study has chosen convenient sampling technique for its research on the gap analysis of retail outlets. The respondents who were the customers of retail petroleum outlets in the study areas were not only falling in different categories, but also in their nature of employment, usage of vehicles, their behavior and perceptions, etc.

4.10.1 Sample Size

The researcher was originally aimed at collecting primary data from the total of 1000 respondents of both retail outlets and their customers with a break up of 400 retail outlets and 600 customers for the study purpose. Accordingly the structured questionnaires were prepared, tested their validity and reliability and then issued the questionnaires to all the targeted respondents. But the researcher was able to collect filled in questionnaires from 345 retailers (out of 400) and 595 customers (out of 600). Finally primary data collected from 306 retailers and 594 customers were taken and considered for analysis purpose as the data collected from 40 respondents (39 retailers and 1 customer) were incomplete and hence they were ignored.
4.10.2 Sample Units, Areas and Period

The sample retail outlets of leading oil companies situated in and around Chennai were selected as sample for the study. The chosen leading oil companies were IOC, HPCL, BPCL, RPL, SHELL and ESSAR. The sample retail outlets of leading oil companies and their customers were chosen according to the convenience of the researcher covering most of the areas in and around Chennai. The primary data were collected for a total period of six months during July – December 2010.

4.11 SOURCES OF DATA AND TOOLS FOR DATA COLLECTION

This study is mainly based on Primary data. The primary data were collected from the sample respondents using structured questionnaires on the basis of their perceptions relating to different thought provoking ideas about the service gaps. The detailed and structured two different set of questionnaires were administered (one set for the retail outlets and another one for the customers) among the samples of both retail outlets and their customers, comprises all the important information essentials for the study on the various dimensions of service gaps.

The secondary data relating to the various concepts of service gap were also gathered from the published papers and books, various Magazines, internet sources, etc in order to strengthen the theoretical base. The data relating to the profile of oil companies and also the literature reviews were also collected from the various research articles published in reputed journals both at the national and international level.
and also from the oil company websites, websites of national dailies namely The Hindu, Business Line, Economic Times and the websites of Ministry of Petroleum and Ministry of Information & Statistics in India. Wherever necessary, personal interactions were also made with some of the employees and officials of sample retail outlets and oil companies.

4.12 FRAMEWORK OF QUESTIONNAIRE

The required primary data were collected from the respondents of both Petroleum retail outlets and their customers. The instruments used for collecting the data were structured questionnaires. Two set of questionnaires were prepared and administered among the respondents. One set was used to collect data from the Retailers and the other one was used to collect data from the customers of the chosen outlets. Both the questionnaires were including the dichotomous questions, multiple choice questions, statement type of questions and suggestive questions. Keeping in mind the objectives of the study, hypotheses and the size of data required to carry out this research work, total questions were decided and given in the questionnaire. The prepared questionnaires were pre-tested and revised based on the pilot study and fully tested and valid questionnaires were used for final survey purpose.

4.13 OPERATIONAL DEFINITIONS OF CONCEPTS USED

Service: A deed, a performance, an effort.

Service Gap: The gap between services expected and services perceived by the customers.
**Customer Gap:** The gap between customer expectations and customer perceptions.

**Provider Gap/Company Gap:** There are four provider gaps and these in sum total are the cause of the customer gap. They are the shortfalls within the service firm. To close the customer gap, the provider gap has to be bridged.

**Quality:** It is the totality of features and characteristics of a product or service that bears on its ability to satisfy given needs.

**Service Quality:** From the provider’s perspectives, the degree to which the service’s features conform to the organization’s specifications and requirements; from the customer’s perspective, how well the service meets or exceeds expectations and how much satisfaction it provides.

**Gaps Model:** Developed model of service quality.

**Servicescape:** A built service environment i.e., all aspects of the physical environment in which the service occurs.

**SERVQUAL:** A scale designed to measure customer perceptions of service quality along five key dimensions: reliability, assurance, tangibles, empathy, and responsiveness of the service provider.

**Customer service:** All customer-provider interactions other than proactive selling and the core product delivery that facilitate the organization’s relationship with its customers.

**Facilitating services:** Supplementary services related to the production and marketing processes of physical goods.
**Service capacity:** They physical facility in which the service is performed or rendered; the personnel whose labours fashion the service and their skill level; and/or the equipment that enables the service to occur.

The terms Retail outlets, Retailers, Retail petroleum distribution outlets, Retail petroleum outlets, Outlets are interchangeable used in this thesis.

**4.14 STATISTICAL TOOLS USED FOR DATA ANALYSIS**

The Statistical significance has been exploited by using appropriate statistical tools for the purpose of arriving at logistic and conscious conclusion on the basis of perception of the respondents about service gap in petroleum retail outlets that prevail in the sample sectors. Some of the following statistical tools were used to analyze the collected data.

Percentage Analysis, Factor Analysis, Cluster Analysis, Analysis of Variance, Chi-square Test, Co-efficient of Correlation, t-Test, Reliability Test, Weighted Average Method, Discriminant Analysis, Likert Rating Scale, Principal Component Analysis Method, Kaiser-Meyer–Olkin (KMO) and Bartlett's Test, Total Variance Explained and Rotated Component Matrices and Kolmogorov - Smirnov value Test.
4.15 LIMITATIONS OF THE STUDY

- Selection of the respondents depended on their availability & willingness to support the study and hence the retailers and the customers’ perspective obtained throughout the study might be limited to those who have a minimum degree of readiness to examine the retail service practices.

- The study is primarily based on the opinions of respondents on the questions raised in the questionnaire and hence it is prone to an element of subjectivity in the responses, which have been sought to be minimized through offering multiple choices to pick up from and through careful wordings of the questions. The study aims to capture the phenomena as applicable to the Indian context only.

- Due to the time and money constraints, the study area was confined to in and around chennai only, sample size of customers and retail outlets considered for this study were only 594 and 306 respectively.

- The results of the study cannot be generalized as it is fully based on primary opinion based data which will differ from time to time, place to place, person to person and industry to industry.

- Some of the respondents have not at all returned the filled in questionnaires and some have returned the questionnaires with incomplete answers for some of the questions because of their
busy schedule and illiteracy and those questionnaires were not considered for the study purpose.

4.16 SCHEME OF CHAPTERIZATION

The entire study is presented in six chapters.

The first chapter is framed to give a brief introduction of the petroleum industry and petroleum products, their growth, developments and contributions to the economy.

The second chapter presents an insight into gap analysis, various concepts of gap analysis and service quality gap model.

The review of literature is found with respective identification of theoretical approach related to the various concepts and dimensions of service gap in the third chapter.

The research methodology covering the statement of problems, objectives of the study, hypotheses, research design, sources of data collection and data analysis tools, etc. are given in the fourth chapter.

The fifth chapter explores the analysis and interpretation of primary data collected from both retail petroleum distribution outlets and their customers, being the essence of our research.

The sixth chapter concludes with the summary of findings, conclusions and suggestions on the basis of study.
4.17 CONCLUSION

Every study is an effective one only if it is analyzed by applying a sequential and a systematic research method. To have accuracy in the research and to provide valuable suggestions on the basis of the research, a methodology is imperative one and it has been presented in this chapter. The application of methodology and the outcome of results of analysis are the essence of any research work. Hence, it is important for the researcher to analyze the primary data collected adequately from the sample respondents of both retailers and customers using relevant statistical tools and the results are discussed and presented in the next chapter under the title Data Analysis and Interpretation.