A COMPARATIVE STUDY OF THE ACTIVITIES OF PETROLEUM PRODUCTS RETAIL OUTLETS

By

Kabiru Bala

B.Sc.(Hons) 1985; M.Sc.,1990

A Thesis Submitted to the Postgraduate School,
Ahmadu Bello University, Zaria, Nigeria in
Partial Fulfillment of the Requirements for the Award
of **Degree of Master of Business** Administration **(M.B.A)**

SEPTEMBER, 1998

DECLARATION

I hereby declare that this thesis has been prepared by me and is solely the record of my research work. It has not been presented in any previous application for a higher degree.

All quotations are specifically acknowledged by means of references.

15/9/98

Kabiru Bala

-- September, 1997 --

CERTIFICATION

This thesis entitled; "A Comparative Study of the Activities of Petroleum Products Retail Outlets" by Kabiru Bala meets the regulations governing award of the degree of Master of Business Administration (M.B.A) of the Ahmadu Bello University, Zaria, Nigeria and is approved for its contribution to knowledge and literary presentation.

....
CHAIRMAN, SUPERVISORY COMMITTEE — 25/9/98 Date

M.N. MAITURARE

....
MEMBER, SUPERVISORY COMMITTEE — 29/9/98 Date

....
HEAD, DEPARTMENT OF BUSINESS ADMINISTRATION — Date

DEPT. OF BUSINESS ADMIN. A.B.U. ZARIA

....
DEAN, POSTGRADUATE SCHOOL — 17/03/01 Date

DEDICATION

This work is dedicated to all my Lecturers at the Department of Business Administration, Ahmadu Bello University, Zaria, Nigeria

ACKNOWLEDGEMENTS

Firstly, I want to thank the Almighty for His divine guidance and inspiration.

I have enjoyed the co-operation of many individuals and organisations too numerous to mention. I am grateful.

However, I would particularly like to acknowledge the intellectual stimulation provided by my supervisor, Mallam Nasiru Maiturare who contributed immensely towards the success of this work.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABSTRACT

A comparative study of petroleum products retailing was conducted in Kaduna, Kano and Zaria. Five different companies were studied and only Public Limited Companies (PLC) were considered. The companies were Mobil, Total, Texaco, Unipetrol and Agip. It was discovered that there is increasing competition among the major retailers. The companies respond to competitive strategies In different ways. Also, the retailers engage in the "exclusive" kind of distribution. Consequently, there is need for greater product differentiation in the producl ranges of the various companies.

LIST OF APPENDICES

CHAPTER - ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The petroleum industry has experienced tremendous development since the discovery of oil in commercial quantities in 1956. Initially, Shell Petroleum Development Company was granted the sole rights of oil exploration in Nigeria. The first oil exports were started by Shell in 1958. After independence in 1961 other companies were also granted rights in line with government's policy of increasing the pace of exploration in the country. Such companies included Mobil, Agip, Elf, Texaco, Chevron, etc.

Petroleum has since become very important to the Nigerian economy. In fact on a global scale, Nigeria ranks as the 6th largest producer of oil. Accordingly, government's role has changed from a regulatory one to that of direct involvement. Consequently, in 1971, the Nigeria National Oil Company (NNOC) was set up to establish and strengthen government control of the industry. Presently, government participation stands at 60% in shell, Chevron, Mobil, Agip, Elf, Texaco and Pan Ocean, which are the major foreign investors in the Nigerian petroleum industry.

In 1977, a fusion of the Ministry of Petroleum Resources and the NNOC gave birth to the Nigerian National Petroleum Corporation (NNPC). Currently, the NNPC consists of five subsidiaries as follows:

1. Oil and Gas
2. Refineries
3. Petrochemicals
4. Pipelines and Products Marketing
5. Petroleum Inspectorate

It is through these subsidiaries that the NNPC provide customer services in the downstream sector by transporting crude oil to the refineries and moving petroleum products to existing and future markets through a network of pipelines and depots.

The major customers in the downstream sector are the subsidiaries of the companies that participate in the upstream sector. It is these companies that control the retail outlets for the refined petroleum products.

1.2 PROBLEM STATEMENT

There is an increasing number of retail outlets (stations) for petroleum products. One on hand, the major companies that participate in the sector are increasing their stock (stations) while on the other there is an increasing number of independent marketers. consequently, buyers have more choices and the market has become more complex.

There is therefore a need for the companies to consider the strategies they could adopt in the increasingly competitive Nigerian Petroleum retail market.

1.3 AIM AND OBJECTIVES OF THE STUDY

1.3.1 Aim

The main aim of this work was to compare the activities of the retail outlets of five different companies.

1.3.2 Objectives

These were as follows:

i. to establish the common products retailed by the outlets;

ii. to study the organisational hierarchies;

iii. to establish the sales turnover for the common products;

iv. to study the competitive strategies and responses that the companies adopt.

1.4 SCOPE

The study was conducted in Zaria, Kaduna, and Kano. Only Public Limited Companies were considered. In other words, independent marketers were not considered.

Five different companies were studied in all. An attempt was made to study two different outlets for each company selected. The companies were; Mobil, Total, Texaco, Unipetrol, and Agip.

1.5 METHODOLOGY

The methodology adopted for this project was two-fold. Firstly, literature survey was conducted by consulting relevant journals, and text books. This provided the theoretical framework for conducting the practical aspects of the project.

Secondly, field data was collected and analyzed. Two methods of data collection were employed. These were:

i. By the use of questionnaires

ii. Personal interviews

A questionnaire was initially designed and administered for a pilot study. From the results of the pilot study, a more comprehensive questionnaire was made. A copy of the questionnaire is shown in appendix 1.

The questionnaire was administered to respondents in Zaria, Kaduna, and Kano. The respondents were the Managers of the retail outlets sampled for the study. Two respondents were selected for each company in each of the towns, making up a total of ten questionnaires in each town and 30 questionnaires in all. The total returns of the questionnaires was considered adequate for analysis (see Section 3.1).

The personal interviews were conducted in order to clarify some issues in the questionnaire.

The data generated was subjected to simple descriptive analysis.

Finally, conclusions were drawn and appropriate recommendations made.

CHAPTER - TWO

LITERATURE REVIEW

2.1 RETAILING

Retailing, or retail distribution as it is sometimes referred to is an important aspect of most businesses today. Howe (1992) considers it as an "essential and not insignificant part of total economic activity ....". A special attribute of retail distribution is that it is a part of the workings of the economy which affects everyone on a daily basis. This has been occasioned by the availability of a wide range of manufactured products. Individuals are affected either as consumers of these products or employees or both. Moreso that manufacturing is gaining greater significance on the economy.

The days are gone when the marketer made and offered the consumer just 'anything'. There is now a wide range of choices with the result that a competitive balance has been necessitated between manufacturers, distributors and retailers. In fact, the present norm is that a manufacturer will make what he can sell, rather than sell what he can make, Chisnall (1992). As a result, the retail business has become more dynamic, with competing organisations always making concerted efforts to create consumer interest in their products. Consequently, the nature of competition in retail marketing has been plagued by the adoption of new strategies. Petroleum products retailing in particular, has experienced these new strategies in the form of new attractive packaging for lubricants and digital machines for fuel dispensing.

2.2 FUNCTIONS OF RETAIL DISTRIBUTION

There are various perspectives as regards to what constitutes the functions of retail distribution. Simply put, it is what retailers are observed to do. But this is too empirical. Howe (1992) believes that the primary function of retailing is bridging the gap between producers and consumers. This enables producers to specialise in manufacture and the latter to obtain a range of goods with their money.

The central function of retailing, is the assortment of goods to make them available, in small lots for the consumer. It is therefore necessary to anticipate consumer demand and its nature and to make available a concentrated variety of goods for the convenience of the consumers. The concentrated variety of goods will differ from business to business. In petroleum products retailing for instance, there are different grades of lubricants and oils. The goods are mostly differentiated in terms of cost or quality.

McClelland (1966) opined that the retailer must be regarded "from a logistical point of view as one who receives a variety of articles ------ and on the basis of inefficiently and irregularly received instructions sorts them to their appropriate destinations". Howe (1992) identified five unique retailing functions within this focus. These are:

- Physical movement of goods
- Availability of a range of goods

- Change of ownership
- Advice to potential customers
- Other services to customers.

All the above factors have been referred to in the ensuing discussions. What needs to be pointed out, however is that it is by providing the appropriate distributive services efficiently that one class of retailer assumes greater or lesser importance in the sector. And within any one type of retailer, the recognition of the need for particular services and the ability to provide these efficiently will determine the "survival, profitability and growth of individual retailing enterprises.

2.3 RETAIL PRICING

Pricing is a fundamental factor that affects retail policy. The price policy for a retail is simply an overall guide to pricing and consists of a set of rules which the retailer follows in making day-to-day pricing decisions, Mason and Mayer (1978). The retailer is likely to have more than one policy if a variety of products are sold. Pricing is affected by a number of factors. Mason and Mayer listed the following as the major ones:

(a) Type of goods
(b) Retailer cost structure
(c) Demand structure
(d) Market structure

2.3.1 **Type of Goods**

The type of goods offered often affect pricing decisions. This is moreso where great product differentiation exists and the consumer is probably searching for some unique aspect of the merchandise. The retailer thus has some leeway in prices for this type of product. The consumer will make a major effort to acquire a particular brand.

2.3.2 **Retailer Cost Structure**

The cost structure of the retailer is also important. Mason and Mayer (1978) believe that costs are difficult to establish for the multiple product retailer. Every effort should however be made not to price individual products below the overall cost structure of the company.

2.3.3 **Demand Structure**

Demand structure is normally discussed with reference to elasticity. Elasticity is usually defined as the "percentage response in the quantity sold to percentage change in price". It should always be computed in percentage terms instead of absolute units to allow for comparisons of demand sensitivity for different products.

There is another complicating problem in pricing decisions for the retailer. This is cross elasticity of demand especially when products or outlets have close substitutes.

Generic and brand influences are also foods for thought for the retailer. Generic refers to industry-wide demand while brand refers to the individual brand which the retailer offers. For instance, in the former case, petrol is basically inelastic. As observed in recent years, even large increases in price do not greatly affect the quantity purchased. However, brand elasticity could be high. Small charges in price can for a particular brand cause major shifts in the quantity purchased. The probability of brand elasticity for a product is likely to manifest where consumers do not perceive major differences between the products offered by various retailers. This probably accounts for why manufacturers try to establish brand differentiation in their products.

2.3.4 **Market Structure**

Market structure is usually affected by the number and size of competitors and the amount of product or store differentiation, which in turn affect pricing. Depending on circumstances, the market structure may assume any of the following characteristics.

i. Pure Competition
ii. Monopolistic Competition
iii. Oligopoly
iv. Pure Monopoly

2.3.4.1 **Pure Competition**

Pure competition exists where a product is perceived to be homogeneous, Mason and Mayer (1978). Brand preference is normally weak or even non-existent and a large number of alternative sources may be available. Essentially, market forces may dictate the price for these products. Consumers obtain the product at the lowest economically feasible price. The retailer has little control over price and must fix his price at the prevailing market prices.

2.3.4.2 **Monopolistic Competition**

Monopolistic competition is characterised by many firms offering for sale weakly differentiated products. Each firm has a limited kind of monopoly based on the manipulation of the various elements of the retailing mix.

In this type of market, retailers have a limited amount of influence over price. Management will have an upper hand in establishing prices if it is successful in differentiating the outlet.

Retail outlets in this type of market structure have some leeway in fixing prices. If a firm raises its prices it can expect a decline in sales because some customers may switch to lower price brands or even to other outlets selling the same item at lower price. Also, the company may be able to sell more units of an item at lower price than at a higher price. Where a large number of substitutes are available, as in the petroleum products market for example, the degree of price elasticity is a function of the number of rival competitors and the "extent to which the products or outlets offered are differentiated in the minds of customers" Mason and Mayer (1978). Obviously then, the less the degree of product differentiation, and the larger the number of competitors, the higher the elasticity of demand for the firms offerings.

2.3.4.3 Oligopoly

This is the type of market structure which manifests where a small number of retailers dominate sales in an area. Retailers in this type of market structure occupy sufficiently prominent market positions to influence the decisions and actions of competitors. There is, so to say an interdependence among them, which extends to pricing, customer service and other similar aspects of competition. For instance, price cuts by a firm will be marched by competitors so as to prevent the price-cutting firm from gaining customers.

On the other hand, unilateral price increases will be largely ignored because, presumably, retailers who do not raise price will gain the business lost by the firm which raises its price. Thus, in oligopolistic market models, retailers will tend to refrain from independently raising prices above a going rate for fear that they will experience a substantial decline in profits, sales and market share. They are also not likely to cut prices drastically because price cuts will be marched by competitors.

2.3.4.4 Pure Monopoly

A monopoly, according to Bowden (1986) is `a market structure in which there is only one seller. In order words, it is the opposite of pure competition, where individual firms have no power over the market. A monopoly, on the other hand has power to influence the market price, Lipsey (1983). By reducing its output, the monopoly can force prices up and force the price down by increasing the output.

However, Bowden (1986) believes that no producing firm, in the present day, with pure monopoly can escape the influence of consumer demand. For instance, at prices which are too high, the monopolist is bound to loose customers. Also, if the monopolist is making good profits, this will tempt potential competitors. In the final analysis, it will suffice to say that "some kind of actual or potential competition" is always present either in the same product or some substitute product.

2.4 RETAIL COMPETITION

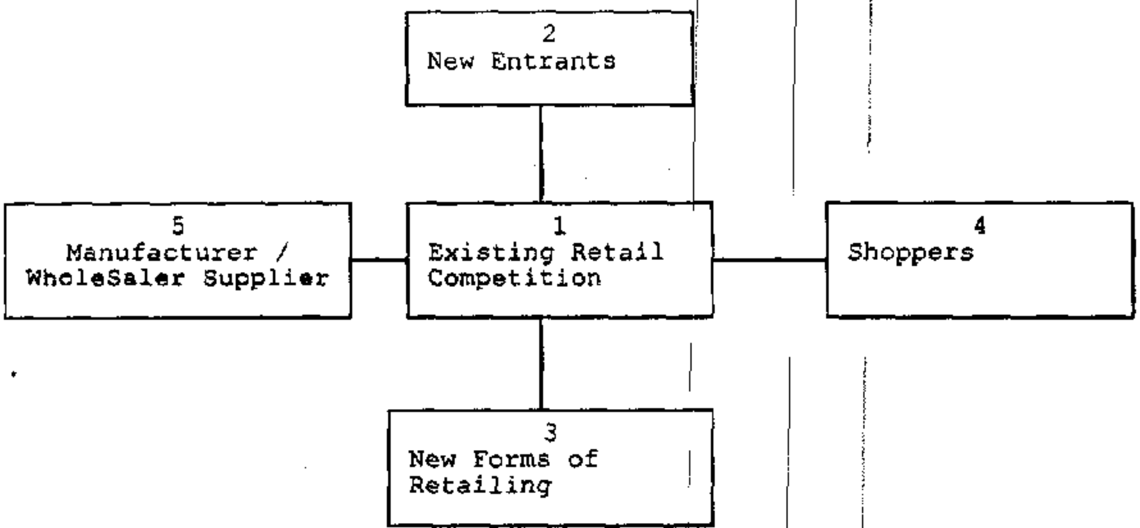
Retailers of all shapes and sizes perennially compete with each other McClelland (1966). Economic analysis often assumes that industries exist where firms all produce identical, homogeneous products, Ireland (1992). Actually, such industries are the exception rather than the rule. An industry more often than not produces a wide variety of products because its products are interdependent. The nature of demand may also stimulate the provision of variety.

The provision of a variety of products in an industry stimulates competitive operation of the market forces of supply and demand that consumers are satisfied at the lowest resource cost, Howe (1992).

2.4.1 **Factors To Be Considered In Retail Competition**

There are many ways by which the factors that affect retail market competition can be identified. Howe (1992) opined that the `actors' or participants in retail markets can be identified by adapting Porter's `five-forces framework' as shown in the figure below.

FIGURE-1: Five Forces Framework



Source: Howe 1992.

Box 1 relates to competition among existing retailers (or producers) of the same product, simply offering consumers with the same product (or service). Each of the retailers makes profit through its relationship with suppliers and consumers by convincing the latter that it offers the best value for money.

Boxes 2 and 3 make up two more dimensions of retail competition. In retailing, new entrant competition is a usual possibility. This is because market entry costs for many forms of retail distribution are low. Also, diversification from one form of retail business to another is readily possible.

The forces in boxes 4 and 5 also influence retailer profitability and strategy. The relationship between retailers and their customers more often than not influence the retailers' strategic decision making.

2.4.2 Forms of Retail Competition

A retailer must carefully appraise the precise nature of the competition to see how he can fit into the picture. This is because from experience, it is generally believed that it is difficult to make good profits where there is keen competition, Buskirk and Buskirk (1979). The *forms of competition can be* broadly categorised into three, according to Howe (1992). These are:

i. Horizontal Competition

ii. Intertype Competition

iii. Vertical Competition

2.4.2.1 **Horizontal Competition**

Mason and Mayer (1978) defined horizontal competition as that between two independent retailers of the same group. It also encompasses the possibility of entry into a retail market by more retailers of that group. Within the scope of horizontal competition, the struggle for customers between competing petrol stations, for instance can be analyzed. Another example, pharmaceutical stores, can be cited. Howe (1992) believes that among competitors having similar cost structures, "competition tends to take the form of marginal price differences, competition in service..... and, particularly in respect of `corner shop', location".

2.4.2.2 **Intertype Competition**

Intertype competition according to Palamountain's (1955) analysis is `competition between different forms of distribution'. More specifically, it is the competition between different types of firms selling the same product. Sometimes intertyper competition is viewed as a subset of horizontal competition since all sales are at retail. This type of competition is the most representative model of retail competition today.

2.4.2.3 **Vertical Competition**

Vertical competition consists of webs of horizontally coordinated and vertically aligned establishments at each level operated at an optimum scale so that marketing functions within the system are performed at the most advantageous level or position, Davidson (1970). The outcome of this vertical relationship depends upon the relative bargaining strengths of the participants, Palamountain (1955).

Vertical systems require enormous capital investment and their networks seek to provide maximum economics and efficiencies in promotion, technology and the competence of management. In this system, monetary activities are coordinated from the point of production to the point of ultimate distribution.

2.4.3. <u>Competitive Responses By Retailers</u>

According to McClleland (1966), there are three major dimensions of competitive response at the disposal of retail organisations, viz: Price, Location and Service.

2.4.3.1 <u>Price</u>

Retail pricing, although complex, is one way that retailers can respond to competition. It must be borne in mind that although there may be alternative retail outlets to consumers, they are characterised by limited price consciousness and price sensitivity and even a tendency in some cases to judge the quality of the product by its price. It can thus be seen that price may not necessarily be the only variable upon which consumers base their choice of retail outlets.

For a healthy competitive price strategy, retailers must make decisions on price promotions based on such variables as timing, choice of products and comparative price levels of other national brands. Decisions should also be taken relative to price levels for the same products in different geographical locations.

2.4.3.2 **Location**

This involves the siting of new outlets and sometimes the closure of existing ones. It is an important variable in the ever-increasing competitive retail environment.

Howe (1992), outlines three general issues that should be considered. These are population size, distinction between convenience and shopping goods and geographical or locational monopoly. Population size supports a particular retail establishment. Obviously, this is determined by the size of the of the `catchment area population and the frequency of purchase per head of the population. If retail outlet is located in a particular place, it is the expenditure of the existing population of the centre and that of `immigrant' consumers from outlying areas that provides an adequate sales turnover. In this regard, a good forecast is of utmost importance.

Distinction should be made between convenience and shopping goods. Goods of convenience, as the name implies comprise goods of convenience (with regard to the former) and is an important aspect of consumer requirements. Shopping goods are those with higher unit price, but purchased less frequently and customers try to make comparisons of attributes of the products, e.g., price and quality.

The small corner shops usually enjoy some form of geographical or locational monopoly. The absence of new competition is occasioned by the `patronage or loyalty' which the shops enjoy. By offering `convenient location, a retailer may be able to significantly improve his turnover.

Bowlby et at (1984) opined that there are a range of techniques available to retail managers in making store location decisions. Howe (1992) summarised them as follows.

"These may be broadly divided into search techniques

designed to determine particular geographical areas which are appropriate to individual categories of retailer, store viability techniques which involve forecasting sales turnover for individual stores in a particular location and assessment of micro factors at a particular store location which influence sales levels".

Dawson (1979), however considers sub-urbanisation as the major locational change to have taken place in retailing. He wrote that it is a `potential area of conflict' between competing groups of retailers - increasingly successful sub-urban retailers and those located at the centre of cities which are becoming increasingly less successful, the major problem being that price changes by competitors are quickly known where retailers are free to fix their own prices.

Buskirk and Buskirk (1979), on the other hand, identified nine major factors to be considered when siting a retail location. These are:

Size of trading area
Area's growth patterns
Traffic patterns
Location of competition
Supporting institutions
Buying habits of target market
Zoning & building regulations
Physical nature of premises
Security

Specifying the size and structure of retail market areas is a potentially useful way of summarising the number and characteristics of potential customers. As the area from which the bulk of a company's customers are drawn is called its "trading area", it is therefore imperative to note that this area will certainly overlap where there are alternatives to the product being offered.

Mason and Mayer (1978) opined that the shape of trading areas is typically specified by central place theory and that a retailer's source of ideas about the structure of market areas is the gravity model which states that: "the volume of purchases by consumers and the frequency of trips to an outlet are a function of

the size of the store and the distance between the store and the origin of the shopping trip".

It is important to take into account all the relevant external environmental conditions that affect local area growth, which in turn affect locational decisions. Careful investigation of economic conditions, competition, positive/negative climate that bears on legal, social and technological issues. The developments follow a predictable pattern. When they are thoroughly studied, it is easier to make "educated guess" about what will happen in future.

Traffic pattern is normally applied to both vehicular and pedestrian traffic. Accessibility is of utmost importance to both kinds of traffic. This is because a poor site (with regards to traffic) will have an adverse effect on profitability even in a desirable area of a community.

While considering a suitable location, the exact location of competing outlets should be identified. Actually, healthy competition should be encouraged. Buskirk and Buskirk (1979) wrote that "in many instances new merchants want to locate near the competition whose clientele is the same as the one they seek. They want customers to see their store during a shopping trip to the competitor". It must however be mentioned that the presence of competition also has its drawbacks, depending of course on certain factors such as size of trading area, the type of product that the retailer sells, the size of the retailer and the number and nature

of the competitors. McDonald and Tideman (1993) went on to say that `unique product ranges can enable retailers to break into the most established shopping locations with a considerable degree of success'.

Some retail outlets should be located near other types of businesses either for technical support or for traffic generated by the other operation. For example, a vulcaniser has affinity for petrol stations where there are lots of potential puncture customers. So also is wheel balancing operation. Retailers should take time to carefully select a target market to which they intend to sell. And therefore, retail outlets location decisions should include an analysis of the buying habits of the target market. According to Buskirk and Buskirk (1979), a study of buying habits tries to determine;

- Where the customers buy
- When they buy
- How they buy
- What they buy

Obviously, new outlets should be located where its potential customers buy. Also the location should accommodate when and how they buy.

Sometimes, government planning regulations do not permit the siting of certain businesses at certain locations. Local regulations should therefore be checked before a final decision can be sanctioned. An example was sited of a local distributor of oil

(petrol) who bought a prime corner lot that he thought was perfect for a filling station. He later discovered that the lot was zoned for residential buildings, Buskirk and Buskirk (1979).

The physical nature of a location should also be given serious consideration when a retail location is being contemplated. It may be too small or oddly shaped and may scare potential customers away. A good example of the effect this can cause can be seen in petrol stations in times of acute fuel shortage.

Finally, it must be said that security has become a major problem. There are rampant cases of petty thefts and even outright armed robbery. Some locations pose larger risks than others and due cognizance to this should be given. Moreover, insurance in high risk-locations is likely to be difficult to buy. Where it is successfully negotiated, the premiums will certainly be on the high side.

In summary, location is critical to the success of most retail operations. It is a two-phase process. Firstly, a good community is essential. Secondly, a good site in the community is also of utmost importance.

2.4.3.3 **Service**

Services to customers can be described as either primary or supplementary. According to James et al (1970), primary services are offered to customers for the benefits they provide. The service itself is the object of the transaction. Supplementary

services, on the other hand are designed to facilitate or aid in the sale of a product or primary services. Clearly then, retailers can improve their competitive advantages by improving the quality of their supplementary services. Examples of supplementary services in the petroleum products retailing include free service and air.

All services offered by a retailer cost money. For example, additional employees who will offer the service may be needed. Such costs should be balanced against additional revenue. In evaluating the merits of a particular service to customers, a retailer should consider the cost, consumer demand, alternative sources of the service, and competition, James et al (1970). However, the retailer should periodically review wether there is need to continue offering a particular service, Mason and Mayer (1978).

2.5 RETAIL ORGANISATION AND MANAGEMENT

All business activities must be organised towards achieving the objectives of the firm. The type of organisational structure selected depends on factors such as the size of the establishment, the types of goods and services offered, location of the outlet etc. The basic effect of a retail organisation simply is to satisfy customer needs while making profit.

Mason and Mayer (1978) opined that organisation is not particularly important for small retailers who may have a few employees only. In such cases, the retailer should set his objectives and approach them in the best way possible.

Petroleum products retail outlets fall in the category of small retail outlets and an attempt was made to draw an appropriate organisational structure from the results obtained from field data.

2.6 CUSTOMER BEHAVIOUR

Customer behaviour, just like human behaviour, is difficult to understand, let alone predict. Ehrenberg (1972), Mayer (1978) and Buskirk and Buskirk (1979) concurred on this. There are for instance pre-purchase needs and decisions that have to be made on whether to buy, what to buy, what not to buy and at what cost.

There is also the question of the buying situations which are highly varied. Some products are bought frequently, while others are bought at longer intervals. Some products are pre-packaged and graded (e.g. engine oil) and with different varieties (grades).

Promotional support is also important in shaping consumer behaviour. The type of promotion and content of an advertisement copy are also very important. Consumption levels of certain products also differ among individuals. For instance, a person who travels by road frequently is likely to consume more lubricants than one who does not.

From the discussions so far there abound many buying situations. However, when a consumer has to choose between different manufacturers' brands of a product, which are similar (there is little or no perceived differences), in quality, price and availability, it might appear equally "rational" to buy any of the products. Empirically however, it has been found that most people tend to develop habits of buying the some brand or a small number of brands fairly regularly, Ehrenberg (1972).

In summary, consumer buying habits are important to retailers because the where, when, what and how of buying provide many important keys to retailing decisions' Buskirk and Buskirk (1979).

CHAPTER - THREE

ANALYSIS OF QUESTIONNAIRE

3.1 RETURN OF QUESTIONNAIRE

The major survey instrument for this study was a questionnaire. A preliminary questionnaire was designed and administered for a pilot study. Based on the results obtained from the pilot study, the questionnaire was modified and administered to respondents in Kaduna, Zaria, and Kano. The respondents were the Managers of the stations chosen for the study. Ten questionnaires were administered in Kaduna and Kano, two for each one of the Companies selected. In Zaria Nine questionnaires were administered. This is because there are only two Agip Stations; one of which has not been operational for period of about seven months, prior to this study. It was therefore, felt that response data from such station would not be adequate. Also data on sales of petrol, kerosine, and diesel from Kano were not used for analysis because there have been shortages of supply for several months before this research work. It was therefore, felt that the data will also be biased; so it was discarded. In fact, in some cases, there were no response at all.

All the questionnaires returned were useable for analysis. The total returns of 26 questionnaires in all, which represents approximately, 87 per cent was considered adequate for analysis. The returns are shown in Table 3.1 below:

TABLE - 3.1: Returns of Questionnaires

Company	Unipetrol	Mobil	Texaco	Total	Agip	Total
Kaduna	2	2	2	1	2	9
Kano	2	1	2	2	1	8
Zaria	2	2	2	2	1	9

SOURCE: Field Survey, 1997.

3.2 ORGANIZATION AND MANAGEMENT

From the results of the responses obtained, about organizational hierarchy, most of the stations seemed to have an organizational structure as represented in Figure-1 below:

FIGURE-2: Organizational Structures

In all the stations, there was a Manager, who provides overall leadership. He manages the activities at the station. He is vested with overall authority. All other employees take instructions directly from him interestingly, only one station was managed by a woman.

Some of the stations, about 15 per cent had Assistant Managers. In such cases, their duties are just to assist the Manager in the performance of his duties and to act in his capacity during his absence.

Depending on the size of the station and the quantity and type of products that it stocks, a sales assistant is employed. The Sales Assistant is essentially a Cashier. He is responsible for cash receipts and general sales records in the stores. In some stores, 7 per cent in all, the Manager also acts as the Chief Accounting Officer. This is not surprising as such stations are small in size. This means that employing a Sales Assistant will increase the overhead cost which, in turn will reduce profitability.

In all the stations, pump operators are employed approximately based on the total number of pumps installed in the station. This includes pumps for all products (i.e., Petrol, Diesel, and Kerosine). They are answerable to the Manager and their numbers ranged between 3, where three pumps are installed and 15, where six pumps are installed. The former case is an extreme one as on the average, it has been found that 16 Operators are employed per pump.

Security men are employed in all the stations studied. They are also answerable to the Manager directly. Here also, their number is dependent on the size of the station. In nearly 40 per cent of the stations, the security men also work as cleaners.

In all but one of the responses obtained workers at the stations are not employed by their parent companies. This was a Texaco Station in Kaduna. It should rather be considered as an exception (most likely a mistake).

The Managers are in some cases dealers with the parent companies while in others they are employed by dealers. Products are supplied by all the companies, by requisition from their district offices. Payment is made in advance in all the companies before supplies are made.

The response to the question of staff strength varied. Although most respondents indicated that it was adequate, there was one indication of under staffing. This was at an Agip Station in Zaria. This corroborates the fact that in that same station 3 pump operators are employed while four pumps are installed in all. There was also one response that indicated over-staffing which was at a Unipetrol Filling Station also in Zaria. It was however found that the number of the members of their staff for each category was not indicated.

3.3 RETAILING STRATEGIES

It is worthy of note that in all the stations studied, petrol and lubricants are retailed. In nearly 62 per cent of the stations gasoline (diesel) is retailed while in about 82 per cent, Kerosene is sold. Surprisingly, all the outlets where gasoline is not sold were in Zaria.

The average daily sales of petrol, kerosene, and gasoline are indicated in Table 3.2 below

TABLE-3.2: Average Daily Sales of Products in Litres

Location/Town	Petrol	Kerosine	Diesel
Kano	16,200	5,052	3,700
Kaduna	14,427	5,000	3,000
Zaria	12,000	3,300	4,300

SOURCE: Field Survey, 1997.

It must be stated here that the figures are only the average. There are extremes. Especially for petrol where a respondent indicated an average daily sales of 30,000 litres, while another indicated 9,200 litres. These were the upper and lower extremes.

3.3.1 Innovation

An innovation in the dispensing methods of petrol is currently going on in the retail business. It is being contemplated by all the companies. This is the introduction of digital machines for indicating sales volume and price. In response to the question of whether digital machines are installed, only responses from Mobil Stations answered in the affirmative. It should be mentioned that African Petroleum, although not one of the companies selected for the study was the pioneer in the installation of digital machines for dispensing petrol. Mobil probably followed suit as a response to the competition.

All the positive responses also indicated that there was significant increase n average daily sales of petrol after the installation of the digital machines. This should actually be anticipated because consumers of petrol-motorists and others, are likely to perceive the digital machine as being accurate. It measures to the nearest whole number, both for volume dispensed and the accompanying price.

3.3.2 Location

The issue of location of the outlets is an important one although it was not referred to in the questionnaire. However, observations were made during the physical process of administering and retrieving the questionnaire. All the stations visited had the attributes of good locations especially for petroleum products retail. They were mostly located along busy roads and business districts. Vehicular traffic patterns ensures a continuous stream of customers. This also probably explains why in many cases, they were sited closely. In other words, they were mostly sited near their competitors. There were situations where competing stations were either located adjacent to or and directly opposite the competition. Competition in this context is taken to mean a petrol station of the same parent company or of another company. But as mentioned earlier, the market, i.e., the size of trading areas is big enough to accommodate most of the retailers. There is so to say, the existence of healthy competition. Essentially, the petrol retail market is a pure competition market, since petrol is of a single grade in this country.

3.3.3 Competition Responses

However, as the marketing of petroleum products is developing competition is becoming keener. Some companies are introducing innovation in the form of `store differentiation'. Prominent among those selected for the study are Unipetrol and Agip. Unipetrol has commissioned and sanctioned a particular design for all its retail outlets. Prototypes have already been built in Zaria and Kano. Other sites are being considered. It is expected that by the year 2000 about 400 of such stations would have been constructed nationwide.

There is also another dimension in the response to competition. Some companies provide secondary services to entice the customers. In this regard, Unipetrol and Total stations provide free air and service if certain items are bought from their product range.

3.3.4 Sales of Lubricants

All the outlets selected for the study are engaged in the retail of lubricants. Only the lubricants produced by the parent company are retailed. The types of lubricants are:

i. Engine Oil

ii. Gear Oil

iii. Brake/Clutch Oil

iv. Grease

The ranges are indicated in Table-3.3 below.

TABLE - 3.3: Ranges of Products

Product	Unipetrol	Total	Texaco	Mobil	Agip
Engine Oil 4 litres	XL Super Unilube Versatol SAE-40	Quartz 5000 Quartz 2500 RUBIA H-40 Motor Oil Plus	Havoline Premium URSA Heavy Duty	XHP Super HD-40	Super HD-40 XRB-40 Diesel Sigma D
Gear Oil 4 litres	EP-90 EP-140	85 W 90 85 W 140	85 W 90 85 W 140	RODO 140	Rotra
Brake/Clutch Oil 1 litre	Dot 3 (500 ml)	.HBF 1	Universal	3 1	Dot 3 1 1
Grease 500 grams	B-3	EP-2 EP-3	MARFAK 3		

SOURCE: Field Survey, 1997.

The outlets generally consider engine oil to be the highest income earner among the lubricants. From table 3.3, it can be seen that all the companies have different grades of engine oil. Unipetrol, Texaco, Mobil, and Agip each has three grades, while

Total has four grades. One of the grades in the Agip range, XRB-40, Diesel Sigma-D is for use with diesel engines.

A closer look at the products from the companies shown that the actual products are supposedly the same. this is because in all cases, the product names are the same, the difference being in the names by which the products are being marketed (trade names). Table-3.4 illustrates this point.

TABLE - 3.4: Product and Trade Names

Product Name	TRADE NAME				
	Unipetrol	Total	Texaco	Mobil	Agip
20 W 50	XL Super	Quartz 5000	Havoline	XHP	Super
HD-40	Unilube	Quartz 5000	Premium	Super	HD-40
SAE-40	Versatol	ROBA H-40	URSA HD	SAE-40	---

SOURCE: Field Survey, 1997.

Although, the products are supposedly the same in quality, the prices vary. In the first grade category, the Mobil XHP is the most expensive, with a price tag of N820:00 on the average, while the lowest is the Unipetrol XL Super which carries a price tag of N560:00. The average price for each grade is shown in Table-3.5 below.

TABLE - 3.5: Average price for Grades

Grade	Average Price (N)
First Grade	729:00
Second Grade	639:40
Third Grade	604:25

SOURCE: Field Survey, 1997.

The differences from the averages are quite significant in some cases. For instance, there is a difference of N209:00 between the mean price and the cheapest brand of the first grade. This represents about 29 per cent. Also, there is a difference of about N169:00 between the mean price and the most expensive brand, which represents about 23 per cent. In all, the remaining cases however, the difference is less than 5 per cent. The prices for the various grades are shown in Table - 3.6 below.

TABLE - 3.6: Price of Various Categories of Engine Oil

Category	Unipetrol	Total	Texaco	Mobil	Agip
1st Grade	560	750	765	820	750
2nd Grade	520	650	640	687	700
3rd Grade	520	650	630	617	-

SOURCE: Field Survey, 1997.

It can be seen from the above table that in all the companies the difference in price between the second and third grades, where they exist, is insignificant.

There are some observations worthy of mention. Firstly, although the different brands from various companies are supposedly the same in quality, there are significant differences in price. Each company claims that its products are of superior quality. Secondly, the prices reported are those of packaged products in 4 litre gallons. There is another way that is employed in the sale of the SAE 40. The product is supplied in bulk and is sold in multiples of a litre. All the companies are engaged in this type of sales. This is a good strategy for many reasons. Prominent among these is the fact that packaging invariably increases the final cost of the product, which is eventually borne by the consumers. In this way however, the additional cost is avoided. The price for 4 litres of this category ranged between N400:00 and N500:00 between the companies.

Another reason has to do with issue of the quantity purchased by different categories of consumers. Motor cyclist for example purchase the product in small quantities and a 4 litre gallon may not be justified.

In response to the question of whether changes in packaging have been introduced, only respondents from Mobil outlets answered in the affirmative. There were accompanying increases in price of approximately 14 per cent. They also believe that the products had been improved qualitatively, as claimed by their parent companies. It was gathered that Agip has also made some innovations in their packaging. But the innovations have not been introduced into the market. It is not known yet whether there will be an accompanying price change when they are eventually introduced.

Total and Texaco have changed their packaging a few years earlier and this accounts for the negative responses from their outlets. Perhaps the respondents did not consider the changes recent.

It has been observed that the most popular way by which the companies differentiate their product ranges is by using unique designs shapes and colours for their gallons. On the whole, the respondents from Mobil consider the introduction of new packaging a success.

Strikingly, respondents indicated that the first grade oils are the most frequently purchased.

Another important lubricant is gear oil. There are only two types as indicated by the responses from all the companies. They are nevertheless marketed by different trade names. The prices of these products are shown in Table-3.7 below.

TABLE - 3.7: Prices of Gear Oil from the Company

Product Name	COMPANY				
	Unipetrol	Total	Texaco	Mobil	Agip
HP-90	550	650	715	770	650
HD-40	550	650	715	770	---

SOURCE: Field Survey, 1997.

Interestingly, the prices for the two products are the same in each of the companies. But, as in the case of engine oil, there are significant differences in price among the companies.

The packages for other products (Brake/Clutch Oils) varied. Some are in 1 litre containers while others were in 500 ml containers (Brake/Clutch Oils). For grease, the quantities were given in Grams and Kilograms. The smallest container weighed 400gms by Unipetrol with a price tag of N90:00. The brake oils range between N150:00 and N250:00. On the whole it was not possible to make a comparison of the prices for this class of products.

The response to the question of business performance was varied. While about 60 per cent indicated that it is positive nearly 25 per cent indicated that they could do better.

CHAPTER - FOUR

CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

The following conclusions were drawn from the analysis

i. Petroleum products retailing is becoming increasingly more competitive with many participants engaged in all types of competition - horizontal, vertical inter-type.

ii. Each participant (the companies) produces a wide range of products which are supplied to their outlets. These products are supposedly the same as similar products from other companies although marketed under different trade names.

iii. Although, only five companies were studied, the other major ones (e.g. National Oil, AP., Elf, etc) are likely to have identical product ranges with the ones reported.

iv. Prices of the products vary between the companies and in some cases the differences could be quite significant. This probably depends on the perceived quality (by the companies) or the production cost. Alternatively, it could be a pricing strategy that exploits the general consumer inclination to assume that more expensive products are more qualitative.

v. In view of increasing competition, perhaps, some retail outlets are introducing some secondary services in order to entice consumers to patronise their product. This will enable them to achieve high sales, maintain, and probably expand their segment of the market.

vi. The companies respond to competitive strategies in different ways. While some engage in store differentiation others engage in product differentiation and the introduction and adoption of innovations.

vii. The management of retail outlets is flexible. The number of employees normally depends on the size and capacity of the outlets.

viii. Workers at the retail outlets are employed by the management of the outlets which may comprise a dealer or a manager, or both.

ix. The retailers are engaged in the `exclusive' kind of distribution. this means that they sell only the products of their parent companies. The agreements prohibits them from directly handling a competitive line of products.

x. Digital machines are being introduced in dispensing petrol. Claims were made on increased sales as a result of the innovation.

xi. Apart from engine oil and gear oil, other lubricants are not adequately differentiated.

4.2 RECOMMENDATIONS

i. In order to boost sales, parent companies should take due cognizance of the products most frequently purchased and consequently produce more units of such products.

ii. Companies that have not introduced digital machines for the sale of petrol should consider doing so. Otherwise, such companies outlets will eventually loose their segment of the market to the competition.

iii. Since petrol is an inelastic product, companies should consider acquiring or constructing more outlets. This will greatly enhance their sales turn-over.

iv. There is the need for greater product differentiation in the product ranges of the various companies. This is more so with products such as grease, brake/clutch oil, automatic transmission fluid and oil treatment.

v. Further studies should be conducted on consumer preferences, affordability and their general perception of the products.

REFERENCES

1. Bowden, E. V. (1986): Economics: The Science of Common Sense South-Western Publishing Company, Cincinnati, Ohio.

2. Bowlby, S. et al (1984): "Store Location: Problems and Methods", Retail and Distributive Management, London.

3. Buskirk, R. H. and Buskirk, B. D. (1979): Retailing. McGraw Hill Book Company, London.

4. Chisnall, P. M. (1992): Marketing Research. McGraw Hill Book Company, London.

5. Davidson, W. R. (1970): "Changes in Distributive Institutions", Journal of Marketing, Vol 34.

6. Dawson, J. A. (1979): The Marketing Environment, Groom Helm Ltd. London.

7. Ehrenberg, A. S. C. (1972): Repeat Buying, Theory and Applications. North Holland, Netherlands.

8. Fifield, P. (1993): Marketing Strategy, Butterworth Heineman Limited, London.

9. Howe, W. H. (1992): Retailing Management, Macmillan Education Limited, Houndmills, Basingslane Hampshire. RG21 2XS.

10. Ireland, N. J. (1992): Product Differentiation and Non-Price Competition, Brazil, Blackwell Limited, Oxford.

11. James, D. L., Walker, B. J. and Etzel, M. J. (1970): Retailing Today, Harcourt Brace Jovanovich, New York.

12. Lipsey, R. G. (1983): An Introduction to Positive Economics, Weidenfeld and Nicolson, London.

13. Mason, J. B. and Mayer, M. L. (1978): Modern Retailing, Theory and Practice, Business Publications Inc.

14. McClelland, W. G. (1966): Costs and Competition in Retailing, Macmillan and Company, London.

15. McDonald, M. H. B. and Tideman, C. C. S. (1993): Retail Marketing Plans, Butterworth Heineman Limited, Oxford, U.K.

16. Palamountain, J. C. (1955): The Politics of Distribution, Harvard University Press, Cambridge Massachussets.

APPENDIX - 1

QUESTIONNAIRE

COMPARATIVE STUDY OF THE ACTIVITIES OF PETROLEUM PRODUCTS RETAIL OUTLETS (Five Different Companies)

This questionnaire has been prepared as part of an academic research to determine the activities of petroleum products retail outlets. Information received will be treated confidentially.

1. Company Name:..

2. Town:..

3. The following is a possible organisational hierarchy for a typical station:

(a)	Manager	( )
(b)	Accounts Clerk	( )
(c)	Clerical/Sales Assistant	( )
(d)	Technician	( )
(e)	Pump Operators	( )
(f)	Security Men	( )
(g)	Cleaners	( )

It the same for your station? Yes ( ) No ( )

4. In question (3) above, indicate the number of staff you have for each category in the boxes provided, if your answer is Yes.

5. If the answer is No make the necessary adjustments.

6. Are your workers employed by the parent company?
Yes ( ) No ( )

7. How would you rate your staff strength?

Understaffed ( ) Adequate ( ) Overstaffed ( )

8. Tick the products that you stock in the list provided below:

(a)	Petrol	( )
(b)	Gasoline (Diesel)	( )
(c)	Kerosine	( )
(d)	Lubricants	( )
(e)	Others (Specify).................................	

9. How do you procure the products from the parent company?

   (a) By Requisition ( )
   (b) Others (Specify)..................................

10. Do you always pay for an order before supply is made?

    Yes ( ) No ( )

11. Specify the number of pumps you use for the following products.

    (a) Petrol ( )
    (b) Kerosine ( )
    (c) Gasoline (Diesel) ( )

12. What is your estimated daily sales of the following products?

    (a) Petrol N...................
    (b) Kerosine N...................
    (c) Gasoline (Diesel) N...................

13. Indicate the type of pumping machine you use for dispensing your products.

    (a) Analogue ( ) (b) Digital (Computer) ( )

14. If you use digital machines, how long ago did you install them?
    .... Months/Years

15. Was there a significant increase in average daily sales after you introduced the digital machines?

    Yes ( ) No ( )

16. Indicate the lubricants you sell by ticking the appropriate box in the list below:

    (a) Engine Oil ( )
    (b) Gear Oil ( )
    (c) Brake/Clutch Fluid ( )
    (d) Others (Specify)..................................

17. Do you have different grades of the products listed in question 16 above?

    Yes ( ) No ( )

18. If the answer to question 17 is Yes, specify the grades and the prices in the table provided below:

Engine Oil	Grade	Capacity/Container	Price
a			
b			
c			
d			
Gear Oil	**Grade**	**Capacity/Container**	**Price**
a			
b			
c			
d			
Brake/Clutch	**Grade**	**Capacity/Container**	**Price**
a			
b			
c			
d			
Other/Specify	**Grade**	**Capacity/Container**	**Price**
a			
b			
c			
d			

19. Has your company introduced some changes in your packaging system recently?

Yes ( ) No ( )

20. If the answer to question 19 is Yes, was there an accompanying price change?

Yes ( ) No ( )

21. Has your company claimed any improvement in the qualities of the products?

Yes ( ) No ( )

22. In your opinion, was there an improvement in the qualities of the products?

Yes ( ) No ( )

23. Nature of price change as a result of the introduction of new packaging.

Positive ( ) Negative ( )

24. Indicate the old and new prices of the products in the table provided below and indicate the grade most frequently purchased.

Engine Oil	Grade	Old Price	New Price	Grade Most Frequently Purchased
1				
2				
3				
4				

Gear Oil	Grade	Old Price	New Price
1			
2			
3			
4			

Brake/Clutch	Grade	Old Price	New Price
1			
2			
3			
4			

Others/Specify	Grade	Old Price	New Price
1			
2			
3			
4			

25. How would you consider the effect of new prices on your overall sales of the products?

Positive ( ) Negative ( )

26. On the whole, would you consider the introduction of new packaging a success?

Yes ( ) No ( )

27. How would you consider your business overall?

Positive ( ) Negative ( )

28. Any other information you may consider relevant:............

....

....

....