Chapter 1

1.1 Introduction

A growing economy means an increase in demand for commodities such as fuel. The price of crude oil has significantly increased over the last couple of years which has grown into a primary concern for the industry and the economy (Donohoe, 2009).

The South African petroleum industry is currently operating as a regulated trade. Regulation is controlled by the Department of Minerals and Energy which entails that margin and pump prices are fixed and new entrants to the market restricted (DME, 2007). The basic fuel price (BFP) is adjusted on a monthly basis which causes the retail price to change on the first Wednesday of the very month.

Deregulation gained momentum in America in the 1970’s with the focus and aim to create competition within the industry, enhancing productive efficiency and competitive prices (DME, 2007). It is aimed to improve the industry by encouraging a open, free market system and maximum competition to keep the price as low as possible.

By improving the petroleum industry, one should justify the perceived value of what the customer gets comparing to what he/she pays for. Unfortunately the cost of fuel has become a phenomenal expense for businesses in our country, which directly influences the cost of all commodities and services. Added services and differentiation are the order of the day at all service stations, but can customers be charged less and is deregulation the answer to improve the downstream activities of the petroleum industry?
1.2 Problem Statement

*Deregulation as an open market system is likely to be implemented in the Petroleum industry of South Africa. To secure the success of the retail petroleum industry by means of business and job opportunities one has to investigate the current evolution of the industry and what factors will have a measurable impact on the retail petroleum industry.*

To improve the petroleum industry, regulation was implemented to ensure fair and realistic prices. This proves to work if compared to deregulated markets, like America, where markets experience daily price jumps (Hicks, 2004).

In the USA and UK prices are reaching R15 (in relation) per litre which sparks a question of how the prices are determined under their deregulated markets comparing to South Africa’s if the price of a barrel crude oil is linked to international markets (Bening, 2008).

In Nigeria, deregulation has had the reverse effect on their economy where the price of fuel increased by seventy percent after a very short time. Today they refer to the change as a pro-rich, anti-poor, neo-liberal capitalistic measure (Deregulation and fuel price hike, Nigeria, 2003).

To improve the industry that drives the economy one has to take the current economical situation into consideration. Unemployment, skills and education are only some to be mentioned. There are currently around four thousand eight hundred retail garages in South Africa, which creates an estimated fifty thousand job opportunities for petrol dispensing staff (SAPRA, 2007).

South Africa is experiencing a negative movement in employment. Some of the latest statistics show an increase from 26.9 percent in 2006 to 32.5 percent in 2007 compared with the economical objectives of halving unemployment by 2014 (Social Issues, 2007)
Deregulation will be the reason that many retailers will be eliminated from the market which could cause thousands of jobs to be terminated (Shoba, 2007). It is currently estimated that there are between ten and thirty percent more service stations than a competitive market can sustain. Deregulation can from this perspective be seen as a way to decrease the amount of retail outlets and there by increase the average stations volume throughput, allowing the retail margin to be reduced (Shoba, 2008). This will have a direct impact that will benefit the motorist and improve the economy. On the other hand, easing regulation can possibly put pressure on the larger Oil Companies to reduce their super profit margins.

The Market of Petroleum Activities Return Mechanism (MPAR) has been used by the Oil Companies to make investment into retail sites. This mechanism ensures their return on investment and has caused them to over invest into retail sites. This has caused the average national throughput of service stations to drop, which put pressure on effective retail operations (SAPRA, 2008).

The concept had brought along the idea of rewarding the Oil Companies to redevelop/upgrade existing sites rather than the continues investing into new ones that emphasise this problem (SAPRA, 2008) It is based on the principle to reduce the amount of new outlets and to attempt to bring the amount of outlets closer to the market demand before deregulation is implemented.

The evolution of the South African petroleum industry has just about started. The decisions to strategically transform the industry are yet another step closer to deregulation. The changing of the pricing structures are designed to apply pressure on all levels of operations and to improve the effectiveness of operations (DME, 2008).

The new pricing model called Task 141 which is going to replace the MPAR formula is base on a Capital asset pricing model. This will reward the investor (Oil Company or retailer) for the investment in retail assets used (DME, 2008).
1.3 Research Objectives

The primary objective of this study is to investigate the current transformation of the industry and to determine what impact the changes will have on the retail petroleum industry. More specifically, the study will focus on strategic recommendations to improve retail operations in industry to remain competitive and profitable.

To achieve the primary objective, the following secondary objectives will be pursued:

• What does the current evolution of the industry entail?
• Is there a lack of skills in the industry among retailers?
• In what ways can the effectiveness of retail operations be improved?
• What impact do BBBEE and the Charter have on the industry?
• What can retailers do in response to deregulation of the industry?

After a thorough literature review, a questionnaire will be administered and an interview will be conducted to accumulate more information regarding the trade and the perceived impact of people involved.

The survey will be conducted through the use of questionnaires which will be distributed to all Engen Petroleum retailers in the Port Elizabeth, Uitenhage, Dispatch, Jeffersys Bay, and Humansdorp. Secondly, an interview will be held with the CEO of SAPRA, Peter Noke.

The criteria used for the focus group are based on industry involvement. SAPRA act on behalf of the retail petroleum industry with all other stakeholders involved.
Data will be collected by means of close-ended and open-ended questions to assure thorough explanations to support the nature of the study. Possible scenarios together with ideas to prepare the retail industry will be summarized and problem areas that need to be addressed to reduce the straining factors will be highlighted.

Recommendations from the findings will be made available to individuals who have or are interested in investing in the retail petroleum industry and to the associations who act on behalf of the industry.

1.4 Methodology

A literature study of journals and internet sources regarding the chain of events that have happen and are in the process of happening was conducted to provide conceptual framework for the study.

1.4.1 Research Paradigms

Quantitative is also referred to as positivistic paradigm. The nature of quantitative research is that it is objective and singular. The researcher is independent of that being researched with no opinion or values towards the results. The discussion is formal, based on set definitions and uses qualitative words to describe variables and findings. The research process is deductive and shows cause and effect which leads to predictions, explanations and understanding. Quantitative research proves to be accurate and reliable through validity and reliability (Collis and Hussey, 2003).

In quantitative methods, questionnaires usually take on the shape of close ended questions. This provides the researcher with data that is numerical once transformed from what was observed, reported and recorded to quantifiable units (Understanding Research, 2008).
Qualitative research, also called phenomenological paradigm, is subjective and multiple due to the fact that the researcher interacts with that being researched and provide opinions on the topic and problems. Qualitative research tends to be informal as it evolves round emerging decisions and design. It is further based on patterns and theories to understand the research problem. The accuracy and reliability of qualitative studies rely on verification (Collis and Hussey, 2003). Qualitative methods of research focus on the quality and the depth of the data.

This study will be based on both qualitative and quantitative methods of research. It is subjective through numerous opinions to determine or project the possible outcomes of the topic. It also includes a deductive research process to indicate cause and effect which will lead the researcher to predict and understand the results of the data.

The complex nature of the study points out the need for in-depth and good quality research to be able to verify and provide reliable information for the use of recommendations.

1.4.2 Sample Design

Sample and design is the process of selecting a group of individuals for the study in such way that they represent the larger group from which they were selected. The individuals selected comprise the sample while the larger group is referred to as the population (Wiley, 1999).

Two types of sample design are found, Probability and Non-probability. Probability is based the random selection of a target group and Non-probability on a specific selection. Probability methods include random sampling, systematic sampling and stratified sampling. In non-probability sampling, members are selected from the population in some non-random manner. These include convenience
sampling, judgment sampling, quota sampling and snowball sampling. (Wiley, 1999)

The advantage of probability sampling is that sampling error can be calculated. Sampling error is the degree to which a sample might differ from the population. When inferring to the population, results are reported plus or minus the sampling error. In non-probability sampling, the degree to which the sample differs from the population remains unknown (Lesser, 2007)

The sampling design from this study emphasises the use of a non-probability method as it is focused to improve the retail petroleum industry, thereby interviewing respondents that is owners/investors or third party companies that serve the industry. It can further more be classified as judgmental sampling as these respondents will be selected on their experience in the industry. The sample includes twenty eight business men and woman in the field and confidentiality will be guaranteed.

1.4.3 Measuring Instruments

A questionnaire will be used as a measuring instrument and an in-depth interview for the collection of the positivistic paradigm will be conducted. This will allow the researcher to gather information from both measures and to compare results to form better findings from data collected. Although the respondents are widely spread the researcher will personally deliver the questionnaires or alternatively contact will be make prior to e-mail the questionnaires to the respondents out of town.

1.4.4 Data Analysis

Due to the nature of the study a non-quantifying method will be adopted.

- Data analysis, will continually take place throughout the study;
- Reduction of the data, that involves sorting, categorizing, prioritizing and interrelating of data;
• Explaining, making sense of the participants actions, goals and motives;
• Theory, qualitative data offering explained;
• Numerical analysis of quantitative data through means, averages, Pearson’s correlation and standard deviation.

1.5 Conclusion

The current changes in the framework of the petroleum industry are focusing on the improvement of the whole supply chain and to prepare the market for deregulation to insure more effective operations on wholesale and retail level.

The fact that the market is oversaturated from a retailer perspective indicates the threat towards retail operations. Who will close their businesses and who will survive and what can be done to optimise the return on investment?

This study investigates the environmental changes regarding Task 141, pre deregulation, and also investigates the retailers’ environment and perspective of the industry.

In chapter two an in-depth discussion will follow regarding the international petroleum markets, focusing on the industry controlling bodies and how the gate price of crude oil is determined. It will also look at international deregulated scenarios.
Chapter Two

Petroleum Industry International

2.1 Introduction

In solving the research problem, this chapter will start off with an in-depth investigation into the International Petroleum Industry. It will look into evolution of the industry in relation to the demand for the product and how the industry evolved and adapted around all other forms of business.

Petroleum, Latin for "rock oil", fuels 60 percent of all energy humans use. The largest volume products of the industry are fuel oil and gasoline (petrol). It also provides the raw material for synthetic cloth, plastics, paint, ink, tyres, drugs and medicines, fertilizer, pesticide and many other products (US history encyclopedia, 2009). The petroleum industries have grown over the last hundred and eighty years from the initial discovery of crude oil into a multi purpose industry where other industries had leverage to produce other products and services. The development of the automotive industry is probably one of the best examples that came into action as a spinoff from the discovery and the refining of crude oil. Attempts to control the oil industry began as early as the 1870’s when the newly-formed Standard Oil Company sought to gain a monopoly in the industry. US governments regulated the oil industry in the 1970’s as they were aiming to reduce import dependency, encourage domestic production, and stabilise prices (US history encyclopedia, 2009).

2.2 History

Imperial Russia produced 3,500 tons of oil in 1825 and doubled its output by the mid-century. After the oil drilling began in what is now Azerbaijan in 1848, two large pipelines were built in the Russian Empire. The 833 km long pipeline to transport oil from the Caspian to the Black Sea port of Batumi (Baku-Batumi pipeline) was completed in 1906 and the 162 km long pipeline to carry oil from Chechnya to the Caspian (Wikipedia, 2009).
The first modern oil refineries were set up by Ignacy Łukasiewicz near Jasło (then in the dependent Kingdom of Galicia and Lodomeria in Central European Galicia), Poland from 1854–56. They were initially small as there was limited demand for refined fuel. They produced oil for artificial asphalt, machine oil and lubricants, in addition to Łukasiewicz's kerosene lamp. As kerosene lamps gained popularity, the refining industry grew in the area (Wikipedia, 2009).

The first oil drilling in the United States began in 1859, when oil was successfully drilled in Titusville, Pennsylvania. In the first quarter of the 20th century, the United States overtook Russia as the World's largest oil producer. By the 1920s, oil fields had been established in many countries including Canada, Poland, Sweden, the Ukraine, the United States, and Venezuela. In 1947, the Superior Oil Company constructed the first offshore oil platform off the Gulf Coast of Louisiana (Wikipedia, 2009).

Petroleum is vital to many industries, and is of importance to the maintenance of industrialised civilisation itself, and thus is a critical concern for many nations (Oil industry, 2009). Oil accounts for a large percentage of the world’s energy consumption, ranging from a low of 32 percent for Europe and Asia, up to a high of 53 percent for the Middle East. Other geographic regions' consumption patterns are as follows: South and Central America (44 percent), Africa (41 percent), and North America (40 percent). The world consumes 30 billion barrels (4.8 km³) of oil per year, with developed nations being the largest consumers. 24 percent of the oil produced in 2004 was consumed in the United States. The production, distribution, refining, and retailing of petroleum taken as a whole represents the world's largest industry in terms of dollar value (Wikipedia, History, 2009).

During the 1960s, multinationals such as Mobil, BP, and Shell had access to more than 80 percent of global oil and natural gas reserves. Western multinationals control just ten percent of the world's oil, while state-run firms exercise exclusive control over roughly 77 percent (Wikipedia, History, 2009).
Earth has yielded 160 billion barrels of oil, with an estimated 330 billion barrels left in the ground. Some estimates suggest that at current production rates the world’s proven oil reserves will last until 2050 (US history encyclopedia, 2009).

2.3 International Controlling Bodies

2.3.1 OPEC

The Organisation of the Petroleum Exporting Countries is made up of twelve countries, Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Nigeria, Qatar, Saudi Arabia and the United Arab Emirates (as per figure 2.1). The principal goal is to determine the best means of safeguarding the Organisation’s interest, individually and collectively. OPEC also pursues ways to ensure stable prices in the international oil market and carries the interest of the producing nations to obtain a steady income from such exports. They also aim to guarantee an efficient supply of petroleum to consuming countries. One of their primary objectives is to ensure fair return on capital to all its members and those who invest into the petroleum industry.

OPEC nations account for two-thirds of the world’s oil reserves and in April 2009 they produced 33 percent of the world’s oil production (Refer to table 2.1). This proves that OPEC has much control of the global market (Wikipedia, OPEC, 2009).

OPEC is seen as the largest entity impacting the world’s oil supplies. According to the Energy Information Administration (EIA) when OPEC wants to increase the price of crude oil, they simply reduce production (Energy Information Administration, 2009).

In the 1973 oil crisis, member countries triggered high inflation when they refused to trade with specific countries. Today their manipulated ways of attempting to control the oil price are still criticized (Wikipedia, OPEC, 2009).
2.3.2 OECD

The Organisation for Economic Co-operation and Development is an international organization of 30 countries that accept the principles of representative democracy and free-market economy. The OECD member countries are high income countries with a high human development index and are regarded as developed countries. As per figure 2.2 members of OECD are America, Canada, Europe, Australia, New Zealand and Japan with Russia quickly gaining recognition for its changing economical policies. Countries like South Africa, India, Greenland, China and Brazil have also been recognized for their economical growth and policies to become future members of OECD (Wikipedia, OECD, 2009).
OECD creates a setting in which governments can compare policy experiences, seek answers to common problems, identify good practices, and co-ordinate domestic and international policies. The mandate of the OECD is broad, covering economic, environmental, and social issues (Wikipedia, OECD, 2009).

<table>
<thead>
<tr>
<th>Name of Refinery</th>
<th>Location</th>
<th>Barrels per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliance Industries</td>
<td>Jamnagar, India</td>
<td>1,241,000</td>
</tr>
<tr>
<td>Paraguana Refining Complex (CRP) - Amuay and Cardón</td>
<td>Venezuela (OPEC)</td>
<td>940,000</td>
</tr>
<tr>
<td>SK Energy Co., Ltd.</td>
<td>South Korea</td>
<td>840,000</td>
</tr>
<tr>
<td>GS Caltex</td>
<td>South Korea</td>
<td>700,000</td>
</tr>
<tr>
<td>Reliance Industries I(^1) (merged)</td>
<td>Jamnagar, India</td>
<td>661,000</td>
</tr>
<tr>
<td>ExxonMobil</td>
<td>Singapore (OPEC)</td>
<td>605,000</td>
</tr>
<tr>
<td>Reliance Industries II(^1) (merged)</td>
<td>Jamnagar, India</td>
<td>580,000</td>
</tr>
<tr>
<td>ExxonMobil</td>
<td>Baytown, TX, USA</td>
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</tr>
<tr>
<td>Ras Tanura</td>
<td>Aramco, Eastern Province, KSA</td>
<td>525,000</td>
</tr>
<tr>
<td>S-Oil</td>
<td>South Korea</td>
<td>520,000</td>
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<tr>
<td>ExxonMobil</td>
<td>Baton Rouge, LA, USA</td>
<td>503,000</td>
</tr>
<tr>
<td>Hovensa LLC</td>
<td>Virgin Islands</td>
<td>495,000</td>
</tr>
<tr>
<td>Refinery Name</td>
<td>Location</td>
<td>Capacity (bbl/d)</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Mina Al-Ahmadi Refinery, KNPC</td>
<td>Kuwait (OPEC)</td>
<td>470,000</td>
</tr>
<tr>
<td>BP Texas City</td>
<td>Texas City, TX, USA</td>
<td>460,000</td>
</tr>
<tr>
<td>Shell Eastern</td>
<td>Singapore (OPEC)</td>
<td>458,000</td>
</tr>
<tr>
<td>Abadan Refinery</td>
<td>Iran (OPEC)</td>
<td>450,000</td>
</tr>
<tr>
<td>Citgo Lake Charles</td>
<td>Lake Charles, LA, USA</td>
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</tr>
<tr>
<td>Shell Pernis Refinery</td>
<td>Netherlands</td>
<td>416,000</td>
</tr>
<tr>
<td>BP Whiting Refinery</td>
<td>Whiting IN, USA</td>
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</tr>
<tr>
<td>BP Rotterdam Refinery</td>
<td>Rotterdam, Netherlands</td>
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</tr>
<tr>
<td>Saudi Aramco Yanbu Refinery</td>
<td>Yanbu, KSA</td>
<td>400,000</td>
</tr>
<tr>
<td>REPLAN (Petrobras)</td>
<td>Paulínia, BR</td>
<td>365,000</td>
</tr>
<tr>
<td>Total Refinery Antwerp</td>
<td>Belgium</td>
<td>360,000</td>
</tr>
<tr>
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<td>Fawley Southampton Refinery</td>
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<td>Sunoco</td>
<td>Philadelphia, PA, USA</td>
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</tr>
<tr>
<td>Chevron</td>
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</tr>
<tr>
<td>Company</td>
<td>Location</td>
<td>Capacity</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Valero</td>
<td>Port Arthur TX, USA</td>
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</tr>
<tr>
<td>Motiva</td>
<td>Port Arthur TX, USA</td>
<td>325,000</td>
</tr>
<tr>
<td>ConocoPhillips</td>
<td>Wood River IL, USA</td>
<td>306,000</td>
</tr>
</tbody>
</table>


2.4 Regulation and Deregulation

As with the differences between first and third world countries, free market systems have helped to minimize control and interference that helps to create an open playing field where competition is optimized to ensure the lowest possible cost of the commodity. Economical regulation is associated with substantial cost, in a form of both inefficient production processes and inefficient mix of services. Deregulation also diminishes the incentive to innovation which can impose much greater cost. Many economists have argued that market provision of services can be significantly more effective than in a government controlled regulated scenario (Bier, Joosten, Glyer, Tracey and Welsh. 2003).

Deciding to deregulate the petroleum market is each country’s own decision. Subject to their economic policies and strategic requirements they might decide to deregulate or keep it regulated. If a country’s government decides to deregulate the market it becomes a free market where any competitor can engage in business and enter their market (DME, Deregulation of the petroleum industry position paper, 2007).

In early stages, to improve the petroleum industry, regulation was implemented to ensure fair and realistic prices. This proves to work if compared to the deregulated markets, like America, where markets have experienced daily price jumps (Hicks, 2004).
In the USA and UK prices have reached R15 (in relation) per litre which raises a question of how the prices are determined under their deregulated markets compared to South Africa’s, if the price of a barrel crude oil is linked to international markets (Bening, 2008).

In Nigeria, deregulation has had the reverse effect on their economy where the price of fuel increased by 70 percent after a very short time. Today they refer to the change as a pro-rich, anti-poor, neoliberal capitalist measure (Deregulation and fuel price hike, Nigeria, 2003).

Records have also been found where countries returned to a regulated market. In Hawaii, deregulation caused a negative impact on the industry as the price of petroleum products increased. Price competition at the retail level is contingent upon wholesale competition. With the franchisor being the supplier, landlord, and franchisor, they in reality control the limited means of competition available at the retail level (Regulating Hawaii’s Petroleum Industry, 2005).

Their findings prove that lower prices would not have occurred with or without legislation and that petroleum prices were neither controlled by retail strategies but by strategies of refineries and suppliers. With the supplier/landlord/franchisor being allowed to compete through vertically integrated retail locations, it provides the supplier with total control of the retail pricing structure of gasoline to the consumer (Regulating Hawaii’s Petroleum Industry, 2005).

Most first world countries petroleum industries currently operate within a deregulated system i.e. United Kingdom, United States, Australia, and Europe. Most developing third world countries still use regulation to control the industry with the odd exception of countries like Nigeria. Each country will decide what will be best and how the decision will support their economical situation. The only constraint today is that the choice to deregulate and the perceived benefits it brings to the country will definitely change if the commodities become scarce and demand exceeds supply.
2.5 Determining the price of Fuel in a Deregulated Scenario

The price consumers pay to fill their cars can be broken up into several entities. Like any other consumer product, this supply chain of several groups is responsible for setting the price of the product (How stuff works, 2009)

Crude Oil

Crude oil accounts for the biggest portion of the fuel price which is about 50 percent that goes to the crude-oil supplies. The price is determined by the world’s oil-export nations, OPEC. The volume of crude-oil these countries produce determines the price of a barrel (1 Barrel = 159.6 Liters) (How stuff works, April 2009).

Refining

Refining cost makes up about 28 percent of the total price. The cost of refining fuels might differ according to the type of crude oil available. Oil can be classified as heavy or light, and as sweet or sour. All these types of crude can be refined in any product but the cost of doing so will vary (How stuff works, April 2009).

Distribution and marketing

Transportation of crude oil to refineries, gasoline to distribution points and then to retailers is all included in the cost of fuel. Marketing the brand of the oil company is also included in the price and these two components accounted for about 8 percent per litre (How stuff works, April 2009).

Taxes

In America, taxes amount to 14 percent of the fuel price. This differs from country to county and includes state sales taxes, oil inspection fee, underground storage tank fees and other miscellaneous environmental fees. In the United Kingdom taxes on fuel had reached 78 percent. (How stuff works, April 2009).
Service Station Markup

In a deregulated scenario there is no set margin built into the pump price for the retailer. Some may add a couple of cents. However some states in America, even though deregulated, have markup laws prohibiting stations from charging less that a certain margin on the wholesale price (How stuff works, April 2009).

2.6 Current Private Firms and their structures

The term super major relates to the six largest, privately owned energy companies (As per figure 2.6). The super majors made their apparel in the 1990’s in response to a severe deflation in international oil price. Since then, many mergers have occurred between large petroleum companies in an effort to improve economies of scale, better response to a rapidly changing oil prices and to reduce large cash reserves through reinvestment.

The main companies currently in the industry are:

- Total S.A;
- Royal Dutch Shell;
- BP;
- Sasol;
• Conoco Phillips;
• Chevron Corp;
• Exxon Mobil.

The profitability of the petroleum industry from the 1870’s supported the development of the industry and shaped the business models as it is known today. Successful industries and companies tend to integrate and grow because of the demand experienced for their products. The focus on core business has grown from recovering and refining crude oil to building brands and down stream activities whereby providing the product to the end user (Answers, Petroleum industry, April 2009).

Petroleum companies are only known for their downstream activities. Their core business relates to the exploration, extraction, refining, transportation and the marketing of petroleum products (Wikipedia, Petroleum Industry, April 2009).

The trend over the past decade indicated strong relationships between the business models used by these companies. Looking at the structure of the petroleum industry, three levels or sectors exist known as upstream, midstream and downstream.

1. **Upstream activity** refers to the searching, recovery and production of crude oil and natural gas. This sector is also known as the exploration and production sector. Many of the oil companies are not involved in all of the upstream activities. They might own shares in refineries or be a subsidiary firm of a refinery. This brings about a shift in focus of core business (Wikipedia, Upstream Petroleum, April 2009).

2. **Midstream activity** in the petroleum industry involves processes, stores and transport of commodities such as crude oil, natural gas, natural gas liquids and sulphur. Midstream operations are usually included in the downstream category (Wikipedia, Midstream Petroleum, April 2009).
3. Downstream activities include oil refineries, petrochemical plants, petroleum product distribution, retail outlets and natural gas distribution companies. The downstream industry touches consumers through thousands of products such as petrol, diesel, jet fuel, heating oil, asphalt, lubricants, synthetic rubber, plastics, fertilizers, antifreeze, pesticides, pharmaceuticals, natural gas and propane (Wikipedia, Downstream Petroleum, April 2009).

The downstream activities in the petroleum industry have always been more complex than the equivalent supply chain in other process industries. Most oil companies’ trade or exchange crude oil and products at key points through the supply chain which means that they have to make a series of complex and interlinked economical decisions to maximise their profit margins (Moore, 2005).

At every stage of the business the petroleum companies exist and specialise in optimising the use of their physical assets. Over the past decade these companies had proof and adapted to structural changes to the global industry that had lead to greater complexity and increase in operational risk (Wood, 2008)

Most of the petroleum firms have been in the market for many years. Mergers and acquisitions commonly occur because of the need for continuous exploration, new products and the battle for market share. A good example of this is Engen that obtained Total and Shell’s downstream activities in African countries (Hitimana, 2008).

The trend over the last decade focused significantly on growth and added value strategies. Building brands adding to their offers through convenience stores, car washes, food and local involvement and the search for cleaner fuels. This has been very successful for all for the firms although none have come up with any core-competencies that differentiate themselves completely from the others (Hitimana, 2008).
2.7 The need for cleaner fuel

2.7.1 Global warming

Global Warming is defined as the increase of the average temperature on Earth. As the Earth is getting hotter, disasters like hurricanes, droughts and floods are getting more frequent (Allianz, 2009).

2.7.2 CO2 Greenhouse gasses

Natural greenhouse gases like carbon dioxide, methane, and nitrous oxide have always been in the atmosphere. Without them, the world’s average surface temperature would be a chilly -18 degrees Celsius. Thanks to the greenhouse effect, however, the average temperature is 14 degrees. Throughout Earth’s history, temperatures have varied greatly, mostly depending on the concentration of greenhouse gases in the atmosphere. All signs now suggest that a major temperature change is happening again, but this time humanity is the cause (Allianz, 2009).

Since the beginning of the industrial revolution, the average amount of carbon dioxide in the atmosphere has increased by nearly 40 percent from an estimated 280 to more than 380 ppmv (parts per million volumes) percent. This increase in CO2’s share of the atmosphere is mostly due to anthropogenic (man-induced) factors, such as burning fossil fuels, deforestation and industrial production.

2.7.3 Current crude oil position

Earth has yielded 160 billion barrels of oil, with an estimated 330 billion barrels left in the ground. Some estimates suggest that at current production rates the world’s proven oil reserves will last until 2050 (US history encyclopedia, 2009). The world’s total production of oil is about to peak, is now peaking, or has very recently peaked. This means that petroleum-based fuels such as gasoline and petro-diesel will soon be markedly more expensive and much supply will become inconsistent. This also means that the supply
networks providing these fuels will become dramatically more unreliable (Wood, 2008).

2.7.4 Technology and Alternatives

Hybrids

A hybrid vehicle is a vehicle that uses two or more distinct power sources to move the vehicle. The term most commonly refers to hybrid electric vehicles (HEVs), which combine an internal combustion engine and one or more electric motors (Wikipedia, Hybrids, 2009).

The prices high of crude oil in 2008, forced the demand for hybrid cars to extremely high levels. Used hybrids were selling for as much as a new hybrid's sticker price and new hybrids had waiting lists and sold for. Consumers have become much more price-sensitive and if they can't justify the extra cost upfront of a hybrid, they won't buy one. Many new hybrid cars cost about $3,000 more than their non-hybrid equivalent. In the current world economical crisis this raises a question of how much choice and control users really have and if the supplier market really decides when it will be time for a change (Carty, 2008).

Bio-fuel

Bio-fuel can be defined as liquid, solid of gas fuel obtained from recent lifeless or living biological material. Bio fuel differs from fossil fuels, which are derived from long dead biological material (Wikipedia, 2009).

Globally, biofuels are most commonly used to power vehicles, heat homes, and for cooking. Biofuel industries have expanded over the last decade in Europe, Asia and the Americas. Agrofuels are biofuels which are produced from specific crops, rather than from waste processes such as landfill off-gassing or recycled vegetable oil (Wikipedia, 2009).
Biofuels can be produced in two ways. One is to grow crops high in sugar like sugar cane, corn, and maize. The second is to grow plants that contain high amounts of vegetable oil, such as oil palm and soybean. When these oils are heated, their viscosity is reduced, and they can be burned directly in a diesel engine, or they can be chemically processed to produce fuels such as biodiesel (Wikipedia, 2009).

2.8 Conclusion

For almost two hundred years, crude oil has been produced and has been the cornerstone of many other industries (US history encyclopedia, 2009). The profitability of the industry has been a big factor in its complex development. Since the initial discovering of crude oil, the refining distribution and the offset market for the final products, this industry has integrated and adapted to probably one of the most powerful industries in the world (Answers, Petroleum industry, April 2009).

This industry can probably be rewarded for their contribution to the building of economies but, global warming and CO2 emissions are demanding a change in fuel and fuel types together with the threat of supplies estimated to last till the year 2050 (Wood, 2008).

Recognising petroleum as a necessity for all other products and businesses, the need to provide it at an optimal level and at the best price had causes international markets to completely implement a free market system through deregulation of the industry.

The image that has been created of the industry does not compliment the needs and demands of environmental concerns. This questions the core focus of business throughout the industry and why research and development not had become the key driver of these super profits firms.

Chapter three will continue the investigation into the South African petroleum industry. It will focus on the industry bodies involvement and how the
wholesale and retail margins are determined. It will also investigate the current changes of the pricing structures and how these changes will influence the industry.
Chapter Three

PETROLEUM INDUSTRY OF SOUTH AFRICA

3.1 Introduction

A closer look will be taken in this chapter at the South African Petroleum Industry, how it functions and how current margins are determined and set. An industry analysis will discuss the need to transform the industry and an investigation will follow on how S. A. want to do that. The transformation will entail some challenges and problems which will guide the researcher to the outcome of the first sub problem, which is an investigation into the evolution of the petroleum industry of SA.

The South African Liquid Fuel Industry is internationally competitive. The petrol price in South Africa is linked to the price of crude oil in international markets and is quoted in US dollars (US$) per barrel. International petrol prices are essentially driven by forces of supply and demand. Crude oil prices combined with the Rand/Dollar exchange rate have a major impact on petrol prices.

In South Africa, approximately 36 percent of the demand for fuel is met by synthetic fuels (synfuel) produced locally, largely from coal and natural gas. The rest is met by products refined locally from imported crude oil. South Africa imports about 60 percent of its crude oil which is the biggest item on South Africa import bill. Further more, crude imports negatively affect the current account deficit and have inflationary implications to the local economy (Petroleum in South Africa, 2003).


Due to South Africa's abundant supplies of cheap coal, liquid fuels only provide 21 percent of the energy requirements of the country. (As shown in Figure 3.1) For the same reason South African refineries have extensive upgrading capability in order to maximise the production of gasoline and diesel at the expense of fuel oil which is primarily used for bunkering. A large part of South Africa’s production is obtained from oil from coal synfuels plants.

The major liquid fuel markets are in the Gauteng area of South Africa, so companies with easy access to this region from their manufacturing plants are at a strategic advantage.

The South African oil industry is in the throws of transformation from the industry that served the apartheid era of secrecy and boycotts to a model more in line with the democratic and economic needs of South Africa (Bendi, 2008).

### 3.2 SA History

The biggest refinery in South Africa, the SAPREF, is located on the Durban coast and began its operations in the 1960’s. This refinery is capable of processing more than 185,000 barrels of crude oil per day and employs a total of 1150 staff and contract workers. The refinery is directly connected with the
Durban Harbour as well as its own internal network of pipelines (Petroleum in South Africa, 2003). The PETRONAS refinery in Durban is the second largest followed by Caltex Cape Town refinery and Natref Sasolburg refinery as indicated by figure 3. (Wikipedia, Oil refineries in South Africa, 2008).

<table>
<thead>
<tr>
<th>Refinery</th>
<th>Company</th>
<th>Capacity (bbl/d)</th>
<th>Capacity (m³/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sapref Durban</td>
<td>Shell/BP</td>
<td>185,000</td>
<td>(28,300)</td>
</tr>
<tr>
<td>Petronas Durban</td>
<td>Petronas</td>
<td>125,000</td>
<td>(19,900)</td>
</tr>
<tr>
<td>Caltex Capetown</td>
<td>Caltex (Chevron)</td>
<td>110,000</td>
<td>(17,000)</td>
</tr>
<tr>
<td>Natref Sasolburg</td>
<td>Sasol/Total</td>
<td>87,500</td>
<td>(13,910)</td>
</tr>
</tbody>
</table>

Table 3.1: South African Refineries

Source: Oil refineries in South Africa, 2008

The history of South Africa's oil industry goes back to 1884 when the first oil company was established in Cape Town to import refined products. Since then the industry has grown and matured. Today the country processes approximately 20 million tons per annum of crude and consumes 23 million tons of liquid fuel products of which 45 percent is gasoline and 26 percent diesel.

Until the 1990s, no upstream activities exist in the South African oil industry. There are currently small producing oilfields off the South East coast of South Africa. A nearby gas field provides the raw materials for a synfuels plant at Mossel Bay. A gas field has been discovered off the West coast of South Africa and exploration continues in a number of offshore areas (Bendi, 2008).

According to the 2008 BP Statistical Energy Survey, South Africa consumed an average of 549.23 thousand barrels a day of oil in 2007, 0.65 percent of the world total consumption (British Petroleum, 2008).
Currently, the South African petroleum industry is still exercising the so called managed liberalisation, where the government intervenes in order to increase efficiency and protect consumers from exhorbitant fuel prices. This minimal intervention also helps to promote and protect employment within this industry and to facilitate the entry of historically disadvantaged communities in the sector (Petroleum in South Africa, 2003).

Regulation of the South African petroleum industry is only a decade old. Before April 1998 opening a filling station was limited to a willing oil company, appropriate zoning and a sufficient budget (Erasmus, 2009).

Environmental impact assessments (EIA) regulations in April 1998 brought to the table the need for prior environmental authorisation and socio-economic impact assessment for the upgrade of stations of prospective investments (Erasmus, 2009). In 2006 compulsory licensing in the industry were introduced as a measure to control the legislation of authorisation regarding environmental assessments, socio-economic assessments, empowerment and new retail sites (Erasmus, 2009).

As reported by Business Day in 2008, the petroleum industry is oversaturated with retail outlets by approximately 20 percent. The reason for this can possibly be traced to the current pricing model called the Marketing-of-Petroleum- Activities Return. This method guaranteed the Oil companies of a 15 percent return on retail asset investment (SAPRA, 2008).

The demands for the commodity have put the current infrastructure under great pressure to guarantee effective distribution in the South African inland areas. The current pipeline from Durban to Johannesburg, which was completed in 1965 to provide fuel to the inland areas, is operating at full potential. It provides only 28 Percent of the 130 Million litres at current demand. The new pipeline, also from Durban to Gauteng will only be ready in 2011. The current growth of inland demand has caused that the inland suppliers, Sasol and Total, no longer can provide for the total demand. Coastal refineries, BP, Shell, Caltex and Engen have to use current infrastructure and more expensive road transport to provide for the growing
market. Fuel shortages could cost the South African economy up to a R100 Million per day (Williams, 2009).

Industry Structure

The structure of the retail industry consists of two forms on retail level. Firstly, company owned and dealer operated (CODO) and secondly dealer owned and dealer operated (DODO) (SAPRA, 2008).

Currently 60 Percent of retail sites are producing 70 percent of sales in the industry. These sites are all Company owned and Dealer operated (CODO) (Noke, 2009)

Figure 3.2 New Retail Sites to the Industry

![New Retail Sites to the Industry](image1)

Source: SAPRA 2008

Figure 3.3 Closing of Retail outlets CODO vs. DODO

![Closing of Retail outlets CODO vs. DODO](image2)

Source: SAPRA 2008
The data from figures 3.2 and 3.3 indicated that the industry was dominated on retail level by the oil companies. This has indicated inconsistent treatment between dealer CODO and DODO sites within the current pricing framework of the industry (Noke, 2009).

3.3 Industry Bodies

3.3.1 Department of Minerals and Energy (DME)

The purpose of the department is to ensure the optimal utilisation and safe exploitation of mineral and energy resources and the rehabilitation of the surface. DME uses the Central Energy Fund and National Energy Regulator of South Africa to help control the industry (DME, 2009).

3.3.2 Central Energy Fund (CEF)

CEF’s main focus is the search for appropriate energy solutions to meet the future energy needs of South Africa, SADC and the sub-Saharan African region, including oil, gas, electrical power, solar energy, low-smoke fuels, biomass, wind and renewable energy sources. CEF also manages the operation and development of the oil and gas assets and operations of the South African government (CEF, 2009).

The Central Energy Fund is responsible for administering the system that regulates the price of petrol in South Africa on behalf of the DME (CEF, 2009).

3.3.3 NERSA

The National energy regulator (NERSA) is a regulatory authority established as a juristic person in terms of section 3 of the national energy regulator act, 2004. Nersa’s mandate is to regulate the electricity, pipe-gas and petroleum pipeline industries (Nersa, 2009). In November 2005, regulation was implemented to control the price of pipeline gas and petroleum for the first time in South Africa. This was aimed to reduce the monopoly in the energy sector and to improve competition and promote
economical growth (Doing Business, 2005).

3.3.4 SAPRA

South African Petroleum Retailers Association, falls under the (RMI), Retail Motor Industry Organisation as one of their portfolios. SAPRA currently have about 1000 members and a total of 8000 members throughout the retail motor industry (RMI) (SAPRA, 2009).

SAPRA/RMI main objectives are to:

1. Facilitate the growth and profitability of Petroleum Retailers and make fuel retailing a business of choice;
2. Ensure ongoing liaison with stakeholders to improve trading conditions;
3. Promote, support or oppose any proposal or action affecting members’ interests;
4. Actively promote a single voice for Petroleum Retailers through the Petroleum Retail Alignment Forum (PRAF).

The biggest challenge faced at this moment in the petroleum retailing industry is to prevent changes in the legal framework for the governance of filling stations that might threaten the sector and to facilitate changes that make the system more efficient, more equitable and more effective (Erasmus, 2009).

3.3.5 FRA (Fuel Retailer’s Organisation)

Also a retailer’s organisation focuses on a sustainable environment that provides reasonable return on capital through protecting the best interest of fuel retailers. FRA have approximately 1200 members from 4500 total filling stations in South Africa. FRA monitors and becomes involve in all aspects of retail governance, distribution and fuel sales in South Africa (FRA, 2009).
3.3.6 PRAF (Petroleum Retailers Alignment Forum)

PRAF is a joint initiative between SAPRA, FRA, SAPIA and other stakeholders in the fuel retail sector possibly affected and interested in the development and wellbeing of the industry. PRAF’s main focus is to assure rewards with changes to the legislation of the industry that supports the best interest of existing and new filling station owners (Erasmus, 2009).

3.3.7 SAPIA (South African Petroleum Industry Association)

The South Africa petroleum Industry Association is an association of seven Petroleum companies in South Africa. SAPIA promotes the interest of its members on matters of policy, legislation, environmental conservation, and other common matters. Their current members are BP, Caltex, Engen, PetroSA, Sasol, Shell and Total (SAPIA, 2009).

3.4 The calculation of the fuel prices in South Africa

The petrol price of South Africa is regulated by the government and changes every month on the first Wednesday. The calculation of new petrol price gets done on behalf of the DME by the Central Energy Fund (CEF). The pump price consists of a number of elements which can be divided into international and domestic influences.

The Basic Fuel Price (BFP) is the international component and reflects what it costs the importers to import petrol from an international refinery and transports it to South Africa.

BFP is based on the spot prices quoted daily in international markets. The BFP of petrol is based on 50 percent of the price quoted in the Mediterranean area and 50 percent of the price in Singapore (News24, 2008).

The petrol price in South Africa is therefore directly linked to the price of petrol quoted in US dollars at refined petroleum export orientated refining centres in
the Mediterranean area, the Arab Gulf and Singapore. This means that the
domestic prices of fuels are influenced by;

- International crude oil prices;
- International supply and demand balances for petroleum
  products;
- The Rand/US Dollar exchange rate
  (Chris, 2008)

3.4.1 International Influences

a. Free-on Board (FOB) values - These are petroleum product prices
   quoted on a daily basis by export orientated refining centres situated in
   the Mediterranean area, the Arab Gulf and Singapore;

b. Freight - This is the cost to transport refined petroleum products from
   these export refining centres to South African ports. The freight rates
   used in the BFP calculation are based on freight rates published by
   London Tanker Brokers Panel on 1 January each year. These freight
   rates are adjusted on a monthly basis in line with the so-called Average
   Freight Rate Assessment (AFRA) which is a function of risks and
   supply and demand of ships transporting refined petroleum products
   internationally;

c. Demurrage - Petroleum products are loaded into ships at ports in the
   Mediterranean area, Arab Gulf and Singapore and these products are
   discharged at South African ports. Demurrage rates are published by
   the World Scale Association Limited. In calculating the demurrage cost,
   the total demurrage time is limited to 3 days;

d. Insurance - An element of 0.15 percent of the FOB-value and freight to
   cover insurance as well as other costs such as letters of credit,
   surveyors’ and agents’ fees and laboratory costs;

e. Ocean loss - A loss allowance factor of 0.3 percent to be calculated on
   the sum of the FOB, Freight and Insurance values for products is
   applicable to provide for typical uninsurable losses during
   transportation of fuels;
f. Cargo dues (Wharfage) - The South African harbour facilities are utilised to off-load petroleum products from ships into on-shore storage facilities. The cost to utilise these harbour facilities is based on the tariff set by the National Ports Authority of South Africa;

g. Coastal Storage - This is to recover the cost of providing storage and handling facilities at coastal terminals. In 2002, the typical international storage rate was assessed as $3 per ton or R2.5 per litre per month. The BFP only makes provision for 25 days and the initial value when BFP was implemented amounted to 2.083 cents per litre. This element is adjusted on an annual basis by the increase in the Producer Price Index (PPI);

h. Stock Financing - Stock financing cost is based on (i) the landed cost values of refined petroleum products, (ii) 25 days of stockholding and (iii) the ruling prime interest rate less 2 percent (DME, 2009).

3.4.2 Domestic Influence

Figure 3.4

Composition of the Petrol Pump Price 93 Octane Unleaded (Gauteng) in SA cent per litre 561 c/l - 07 February 2007

Source: How fuel prices are calculated in South Africa, Sasol, 2007
a. Inland transport costs - Refined petroleum products are transported by road, rail, pipeline and by a combination thereof from coastal refineries to inland depots;

b. Delivery costs - This element compensates marketers for actual storage and handling costs of refined petroleum products at depots and for the distribution costs thereof from the depot to the end user;

c. Wholesale margin - The margin is a fixed maximum monetary margin. The formula used to determine the wholesale margin is based on a set of Guidelines, namely the Marketing-of-Petroleum- Activities Return. The level of the margin is calculated on an industry average basis and is aimed at granting these marketers a benchmark return of 15 percent on depreciated book values of assets, with allowance for additional depreciation, but before tax and payment of interest. Should the industry aggregated margin be between 10 and 20 percent, no adjustment is made to the margin, if it is below 10 percent or above 20 percent, the margin is adjusted to a level of 15 percent;

d. Retail Profit-Margin - The retail profit margin is fixed by the DME and is determined on the basis of the actual costs incurred by the service station operator in selling petrol. In this cost structure, account is taken of all proportionate driveway related costs such as rental, interest, labor, overheads and entrepreneurial compensation;

e. Equalisation Fund levy - The Equalisation fund levy is normally a fixed monetary levy, determined by the Minister of Minerals and Energy in concurrence with the Minister of Finance. The levy income is mainly utilised to equalise fuel prices. The levy is currently zero;

f. Fuel tax - A fuel tax levied on petrol and diesel. The magnitude of this levy is determined by the Minister of Finance;

g. Customs and Excise levy - A levy collected in terms of an agreement by the Southern African Customs Union;

h. Road Accidents Fund levy - A Road Accidents Fund levy is applicable on petrol and diesel. The magnitude of this levy is determined by the Minister of Finance. The income generated from this levy is utilised to compensate third party victims of motor vehicle accidents;
i. Slate levy - The Basic Fuels Price (BFP) of petrol, diesel and illuminating paraffin is calculated on a daily basis. This daily calculated BFP is either higher or lower than the BFP reflected in the fuel price structures at that time. If the daily BFP is higher than the BFP in the fuel prices, a unit under recovery is realised on that day. When the BFP is lower than the BFP in the price structures, an over recovery is realised on that day. An under recovery means that fuel consumers are paying too little for product on that day, whilst in an over recovery situation, consumer are paying too much for product on that day. Every day these calculations are done for the fuel price review period and an average for the fuel price review period is calculated. This monthly unit over/under recovery is multiplied by the volumes sold locally in that month and the cumulative over/under recovery is recorded on a Cumulative over/under recovery account (referred to as the “Slate Account”). A Slate levy is applicable on fuels to finance the balance in the Slate account when the Slate is in a negative balance (DME, 2009).

3.5 Determining of Retail margins

The retail profit margin is fixed by the DME and is determined by CEF on the basis of the actual costs incurred by the service station operator in selling petrol. In this cost structure, account is taken of all proportionate driveway related costs such as rental, interest, labour, overheads and entrepreneurial compensation (Chris, 2008).

3.5.1 White Paper

Over the last couple of years government have used a system called The white paper to determine retail margins for the industry. The white paper indicated benchmark service station statistics which had been uses as a general average to the industry. Benchmark service stations consist of nine interrelated components (White Paper, 2008)
• Minimum (efficient) volume throughput of an ideal site has been determined to be plus minus 239 000 Litres per month (This entails an annual turn over on the current price per litre of over R 21 000 000-00);

• Conceptualisation (and agreement by stakeholders) of the physical design of a benchmark service station including layout of facilities, traffic flows, detailed plans of improvements such as buildings and canopy, and equipment lists and placements;

• The capital investment (for land, immovable assets, and equipment) required to develop and run such a service station;

• Income to be generated from fuel sales;

• Operating Costs that would be incurred in the day to day operations of such a business;

• Development of a set of rules (as an output of the work done in developing the model's components) that would govern the components of the model (how they were developed or derived, how they interrelate to each other, sources used in quantitative inputs) that could be applied to future inputs to the model;

• Utilising a Capital Asset Pricing Model (CAPM) to determine an equitable return on business capital investments;

• Determining how the Retail Margin would be calculated utilising the model;

• Developing a computer model that reflects the interrelationship of the factors used to develop a BSS and that could be used by the DME to determine changes to the Retail Margin as and when changes to the input factors occur (SAPIA, 2008; Noke, 2009).

3.6 Determining of Wholesale margins

3.6.1 Marketing of Petroleum Activities Return (MPAR)

The formula used to determine the wholesale margin is based on a set of Guidelines, namely the Marketing-of-Petroleum- Activities Return. The level of
the margin is calculated on an industry average basis and is aimed at granting these marketers a benchmark return of 15 percent on depreciated book values of assets, with allowance for additional depreciation, but before tax and payment of interest. Should the industry aggregated margin be between 10 and 20 percent, no adjustment is made to the margin, if it is below 10 percent or above 20 percent, the margin is adjusted to a level of 15 percent (Chris, 2008).

As per Noke (2009) part of the reason for having an over saturated retail market is the application and use of the MPAR formula and the reward which the Oil companies receive from it.

MPAR is going to be replaced by regulatory accounting model. The marketing of petroleum activities (MP) are petroleum related activities beyond refinery gates and included in the acquisition of the Basic fuel price, handling, storage, transport, distribution, marketing and administration of the products but excluding bunker and export sales and related imports. The cost and income relating to investment in service stations from part of MP activities (SAPIA, 2009).

3.7 Weaknesses of the current pricing system

According to Bates and White (2006) the current regulatory processes have several weaknesses.

1. There is a lack of direct link between the cost and the price of the petrol and diesel where revenues for all products are aggregated in the MPAR process and that assets associated with one fuel type affect the pricing of others;

2. Potential investment on cross-subsidies on fuels where the cost or revenue of one product can affect the pricing of others. This arises from combining controlled and non-controlled products with the MPAR pricing method;
3. The inconsistent treatment of retail assets had allow the oil companies to earn return on assets through aggregated ways as to the retail margin that are calculated as a gross margin on operating cost but without any return on assets.

3.8 The new Pricing system - Task 141

Task 141 focuses on the determination of a Benchmark Service Station and the Application of a Regulatory Accounting Model to Determine Margins relating to Wholesaling, Coastal Storage & Handling & Secondary Storage/Handling & Secondary Distribution of the South African Oil Industry, as well as a Return on the Assets of the Benchmark Service Station (IPSR, 2009)

The starting point of Task 141 is aimed to establish how regulated downstream petroleum products in RSA may be priced. IPSR (2009) report to task Task 141 a recommend revenue requirement be met = Asset Base*Rate of Return + expenses + taxes + depreciation.

- Task 141 focuses on level the playing field between all investors into retail service stations, based upon on a return component for fuel-related assets for an “efficient” benchmark service station through the use of a Capital Asset Pricing Model (CAPM),
- Each service station investment justified on its merit and
- To achieve target size for service stations of 400KL per month.

PRAF has been placed as the steering committee by DME to lead the investigation of Task 141 in determining the new wholesale and retail margins (Noke, 2009).

The main purpose of Task 141 is to justify the method used in the three categories below in providing the product at the best possible price.

- Basic fuels price - Use closest available proxy to import parity;
• Wholesale margin - Remove retail assets and move towards incentive regulation;
• Retail margin - Each retail business to carry its own total cost and move towards incentive regulation (DME, 2009).

The main reason for the new pricing model was driven by the following market related problems

1. Too many retail service stations are currently in the market. It is estimated to be around 20 percent over saturated.
2. Upward pressure on retail margin to have the margin increased as to the continues rising of cost as well as the nature of the product being a high turnover low profit commodity.
3. The solution to the problem have been recognized to cut down on the number of filling stations
4. By minimizing the number of filling stations throughput volume will increase which will optimize profitability of these businesses
5. To deregulate the petroleum market (DME, 2009).

3.9 Industry Laws

Currently, the South African petroleum industry is still exercising the so called managed liberalisation, where the government intervenes in order to increase efficiency and protect consumers from exorbitant fuel prices. This minimal intervention also helps to promote and protect employment within this industry and to facilitate the entry of historically disadvantaged communities in the sector (Petroleum in South Africa, 2003).

Regulation of the South African petroleum industry is only a decade old. Before April 1998 opening a filling station was limited to a willing oil company, appropriate zoning and a sufficient budget (Erasmus, 2009).
3.9.1 Regulation of petrol price

Mohr and Fourie (2004:306) explain that deregulation involves the elimination of laws, rules and regulations that govern particular industries and which limits competition or otherwise hamper the functioning of market forces.

The 1998 white paper indicates that the liquid fuel industry should be characterised by minimum government intervention and regulation, with the hope that such a move would promote healthy competition and investment in the industry (Business Day, 2008).

According to the Petroleum Product Act, 1977 (Act 120 of 1977), the government fixes the petrol price by zones to recognise the differences in costs associated with the transportation of petrol between various geographic areas. South Africa is currently divided into more than 50 zones (News24, 2008).

Currently in South Africa, some pricing of petroleum products is partially controlled, others controlled and others completely competitive. The partially controlled products include jet fuel, diesel and liquefied petroleum gas. The refinery gate price the basic fuel price – maximum price is set by government but the retail price is competitive. Products such as lubricants are completely competitive. Petrol and illuminating paraffin are controlled and the prices are calculated and fixed by government on a monthly basis (Petroleum in South Africa, 2003).

SAPIA supports a liberalised market, reached by an orderly, fair and inclusive process, an economic climate that fosters competitive efficiency and continuation of world-class standards in our petroleum industry. Deregulation of the petrol price would not decrease petrol price but will encourage competition in the market (News24, 2008).

Government believes that the desired attributes for the liquid fuels industry can only best be met in an environment of minimum governmental intervention and regulation. The South African government will therefore aim
to provide an environment within which the liquid fuels industry can conduct its business effectively and on a competitive basis. The government has since 1993 been engaged in a consultation process with a wide range of participants and stakeholders regarding the restructuring of the industry. From these processes, Government has concluded that there is some consensus that current circumstances necessitate changes to the existing regulatory model within an appropriate timeframe to better reflect current realities (DME, 2007).

It is strategically important to ensure that liberalisation occurs in an environment where there is a balanced and or even oversupply and excess supply capacity. Deregulation will support the development and healthy competition in such industries. The current situation in the South African liquid fuels sector is characterised by supply constraints. Complete deregulations under the current industry constraints will only lead to an increase in prices, loss of jobs and induce inflation in the economy. As a strategic sector of the economy the current framework and supply constraints realities, fluctuating oil prices do not provide an optimum environment to completely deregulate the liquid fuel industry (DME, 2007).

Comparing the current fuel price of South Africa with Europe, India, Brazil and Africa, South Africans are offered a much lower competitive price in relation. The base price of petroleum is the same throughout the world, the only difference is mainly found in the taxation which differs between countries (News24, 2008).

The need to transform the South African Petroleum industry is currently under pressure to help and support the countries strategy of job creation and to assure method of price control that harvest effective circumstances and in which people will not be discriminated against (Styan, 2009).

As per South Africa’s former Finance Minister, Trevor Manuel (2009) deregulation in global markets has come to an end. Markets have taught us that the world needs regulations and good regulators. No longer should there
be relied on self-interest to regulate global markets. This however does not mean a shift towards the other extreme where company operations will suffer under regulations.

3.9.2 Empowerment

The industry is characterised by the strong trend towards empowerment. DME and all the different oil companies are committed to promote empowerment throughout the industry (Die Burger, 2009).

The impact on the retail outlets is clearly visible through the push for black economical empowerment where the average benchmark site throughput are in the region of 239 000 litres per month. At the current fuel prices, this amounts to an annual turnover of over R21 000 000.00 without convenience sales (Noke, 2009).

According to the BBBEE scorecards smaller companies with an annual turnover of between R5 million and R35 million are recognized as QSE (Qualifying Small Enterprise). They will need to prepare a BBBEE Scorecard, but can choose the four best elements out of the seven which are;

- Ownership;
- Management;
- Preferential procurement;
- Employment equity;
- Skills development;
- Social development;
- Enterprise development.

The larger generic companies with an annual turnover above R35 million will need to comply with all seven elements of broad based black economic empowerment (Econobee, 2009).
According to the minister of energy, Dipuo Peters, transformation in the industry has not yet delivered expected results. Specifically ownership of service stations and refinery sectors still require empowerment (Styan, 2009).

3.9.3 Licensing

Environmental impact assessments (EIA) regulations in April 1998 brought to the table the need for prior environmental authorisation and socio-economic impact assessment for the upgrade of stations of prospective investments (Erasmus, 2009).

In 2006 compulsory licensing in the industry was introduced as a measure to control the legislation of authorisation regarding environmental assessments, socio-economic assessments, empowerment and new retail sites (Erasmus, 2009).

All exciting owners had a two fold responsibility to obtain a retail licence for site operations and a site licence which recognises the premises as a forecourt. Together with the sale of such business the new investor needs to obtain a new retail licence from DME before he/she will be able to take over operations (Erasmus, 2009).

3.10 IN THE MARKET

3.10.1 Franchise Agreements

In general franchise agreements, oil companies will act as the landlord having built the premises and provided all equipment related to fuel sales. The retailer on site is responsible to pay monthly retail to the franchisor in relation to fuel volume sales and current fuel margins given by Department of Minerals and Energy. All fuel has to be purchased from the appropriate oil company.

On the convenience side of such businesses, the oil companies design the layout and interior and use income group scales and location to determine 85 percent convenience items kept in each store. The retailer is allowed to
decide what he/she would like to display and sell on the remaining 15 percent of the shelf space. All turnovers in convenience store have to be declared daily and a franchise levy of between 7.5 and 8.5 percent is billed on these amounts payable to the franchisor (Engen Dealer Extranet, 2009).

The retail dealer agreements with oil companies have also started to adopt a supply system of consignment stock. Equipment has been installed at most retail outlets that monitor stock levels which focus on consistency of supply (Engineering News, 2005).

3.10.2 BP

In December 2008 an agreement was signed between BP and PnP where all BP convenience stores will be taken over by PnP Express. The first two pilot sites opened in the Western Cape and subject to performance the model will be extended throughout the country. In terms of the agreement BP will act as landlord and fuel supplier and PnP will act as the tenant with their own franchise appointed to operate both the forecourt and the on site PnP express convenience store. This decision had been implemented to allow BP to focus on its core business which is the refining, supply and the wholesale of fuel products (Cape business News, 2008).

An indication of BP’s change in strategy is also visible through the deal with Coryton, who bought over their United Kingdom refineries (British Petroleum, 2006).

Over the last couple of years, BP has also established investments in the petrochemicals refinery, Innovene, in Saudi Arabia with Delta International, a leading Saudi-owned independent development (Goliath, 2005).

BP had also invested in BP Solar Arabia Ltd. (BPSA) a manufacturing joint venture between BP Solar Limited UK, one of the largest solar companies in the world (Olayan Group, 2008)
3.10.3 Shell

Shell’s response as to the coming changes of the wholesale margin seems to be a clustering strategy for shell to cluster indicated the possible of selling of some of their retail properties to the current dealers (Noke, 2009).

Clustering as defined by Carnegie Melon (2009) refers to a collection of firms in related industries that is located in close proximity to each other. Clustering provide many competitive advantages such as:

- Sharing a common labor pool;
- Enhancing close relationships between firms;
- Reducing transaction and traveling cost between firms and suppliers;
- Promoting the spread of technology thought businesses in the region;
- Developing of synergies between businesses a area;
- Support in growth and innovation.

3.10.4 Caltex

Caltex’s response to date indicates a strategic direction of minimising their retail assets with an attempt to sell off the lower performing 90 percent of their retail sites. This decision is driven by the terminating of the MPAR formula from the Wholesale margin (Noke, 2009).

3.10.5 Engen

Engen, recognised as the largest retailer of petroleum products in South Africa, have gone from strength to strength through the continuous improvement of their retail outlets (Engen Dealer Extranet, 2009).

In 2005 Engen and Woolworths engaged in a new partnership with the launch of Woolworth’s food stores on Engen forecourts at two pilot sites in Cape. In 2008 the partnership was confirmed proving the success of the initiative and
implementing it throughout the country, targeting the Western Cape, Kwa Zulu Natal and Gauteng (Bizcommunity, 2008)

Engen’s response to the new pricing framework is not yet clear although they have been closing down smaller sites over the last 12 months with plans to continue with an extensive program in terminating all sites producing under 85 thousand litres per month in sales.

3.11 Conclusion

Over the past ten years the industry has become quite complex with added regulations. Good controls within the industry had deliver some of the lowest prices for this commodity throughout the world (News24, 2008)

The need to transform the industry is driven by a free market approach, which will entail deregulation that will see to good competition and a equilibrium market price (DME, 2007).

Current supply constraints together with the need to restructure to pricing models of the wholesale and retail margins is some of the biggest challenges in the transformation process (DME, 2008).

The question however remains as to what the outcome of the new pricing structures will be in relation to the responsibilities of the different parties involved and how this will influence the profitability of private investment in the retail petroleum industry.

The findings from this chapter indicate that the industries from a retail perspective are constrained with barriers to entry and exit (Noke, 2009).

This chapter has further provided proof in solving the first secondary problem which required an investigation into the evolution of the petroleum industry of SA.
Chapter four, the empirical study will discuss the approach as to data collection and interpretation thereof in attempt to solve the remaining sub problems.
Chapter Four
Research Methodology

4.1 Introduction

In chapter two international overviews were given of the Petroleum Industry and how it had grown thought the last couple of decades. In this chapter it was found that the models used had adapted and transformed to satisfy the growing needs of the industry through forward integration and in many scenarios the deregulation of these markets.

In chapter three the national industry was discussed and closer investigations were conducted on the local markets in South Africa. This included industry bodies, determining of prices, and new pricing models that will compliment deregulation of the South African petroleum industry. Some reactions from Oil companies in response to the current changes in the industry have also been discussed.

This chapter focuses on the research approaches applied to resolve the main problem as identified in chapter one. It includes an outline of the research design, the questionnaire construction and the data measuring method.

4.2 Research Design

4.2.1 Defined

According to Leedy and Ormrod (2001), research is the systematic process of collecting and analysing information or data in order to increase one’s understanding of the phenomenon about which one is concerned or interested. Figure 4.1 shows an overview of the research design process.
Overview of research design

- Identify research problem;
- Determine purpose of research;
- Develop theoretical framework;
- Define research questions/hypotheses;
- Define terms;
- Identify limitations of study;
- Decide methodology;
- Determine expected outcome.

(Collis and Hussey, 2003)

Research design is defined by Collis and Hussy (2003) as the science of planning procedures for conducting studies so as to get the most valid findings. Leedy and Ormrod (2001) suggest that research design provides the overall structure for the procedures that the researcher follows, the data that the researcher collects and the data analyses that the researcher conducts.
4.2.2 Problem statement

The main problem in this study had been identified as: Strategic recommendations to the retail petroleum industry triggered by deregulation.

4.2.3 Problem statement resolution

To be able to provide solutions to the main and the sub problems, the following processes were implemented.

Firstly, chapter two and three reflected a comprehensive literature study which includes an outline of the petroleum industry, firstly internationally and secondly from a national view. This included the evolution of the industry in a high demand environment as to up, middle and downstream activities.

4.3 Choosing the appropriate research approach

Primary data are originated by the researcher for specific purpose of addressing the problem at hand. Primary data may be qualitative (phenomenological) or quantitative (positivistic) in nature (Malhotra, 1993)

4.3.1 Difference between Qualitative and Quantitative research

A phenomenological methodology is bases on the assumption that the social world in which the research is conducted by the researcher constantly changes. The main aim of his method is that the researcher enters into a situation and attempt to bring about changes and then monitor the results.

On the other hand, Positivistic methodology has been designed to obtain information on variables in different contexts, but at the same time. Data are collected only once over a specific time period before it is analysed and reported. This method is commonly used to investigate economical characteristics of large number of people or organisations (Collis & Hussey, 2003).
The differences between these two methodologies is included in table 4.1

Table 4.1 Differences between qualitative and quantitative methods

<table>
<thead>
<tr>
<th>Factors/ Characteristics</th>
<th>Qualitative method</th>
<th>Quantitative method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Goals and Objectives</td>
<td>Discovery and identification of new thoughts and feelings</td>
<td>Validation of facts, estimations. Relationships, predictions</td>
</tr>
<tr>
<td>Type of Research</td>
<td>Normally exploratory designs</td>
<td>Descriptive and causal designs</td>
</tr>
<tr>
<td>Type of Questions</td>
<td>Open-end, semi-structured, unstructured, deep probing</td>
<td>Mostly structured</td>
</tr>
<tr>
<td>Type of Execution</td>
<td>Relatively short time frames</td>
<td>Usually significantly longer time frames</td>
</tr>
<tr>
<td>Representativeness</td>
<td>Small samples, limited to the sample respondents</td>
<td>Large samples, normally good representation of target population</td>
</tr>
<tr>
<td>Type of analysis</td>
<td>Debriefing, subjective, content, interpretive, semiotic analyses</td>
<td>Statistical, descriptive, causal predictions and relationships</td>
</tr>
<tr>
<td>Researcher Skills</td>
<td>Interpersonal communications, observations, interpretive skills</td>
<td>Scientific, statistical procedure and translation skills; and some subjective interpretive skills</td>
</tr>
<tr>
<td>Generalisability of results</td>
<td>Very Limited only preliminary insight and understanding</td>
<td>Usually very good inferences about facts estimates of relationships</td>
</tr>
</tbody>
</table>

Source: Hair, Bush, Ortinau, 2006
4.3.2 Decision of a research method

In assisting researchers in deciding on a qualitative or quantitative research method, Leedy and Ormrod (2001) designed a guide, referring to table 4.2. Although many studies combine qualitative and quantitative research techniques, this guide indicated certain strengths and weaknesses under specific circumstances.

Table 4.2 Guide in choosing an appropriate research method

<table>
<thead>
<tr>
<th>Use this approach if:</th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You believe that:</td>
<td>There is an objective reality that can be measured</td>
<td>There are multiple possible realities constructed by different individuals</td>
</tr>
<tr>
<td>2. Your audience is:</td>
<td>Familiar with/supportive of quantitative studies</td>
<td>Familiar with/supportive of qualitative studies</td>
</tr>
<tr>
<td>3. Your research question is:</td>
<td>Confirmatory, predictable</td>
<td>Exploratory, interpretive</td>
</tr>
<tr>
<td>4. The available literature is:</td>
<td>Relatively large</td>
<td>Limited</td>
</tr>
<tr>
<td>5. Your research focus:</td>
<td>Covers a lot of breadth</td>
<td>Involves in-depth study</td>
</tr>
<tr>
<td>6. Your time available is:</td>
<td>Relatively short</td>
<td>Relatively long</td>
</tr>
<tr>
<td>7. Your ability/desire to work with people is:</td>
<td>Medium to low</td>
<td>High</td>
</tr>
<tr>
<td>8. Your desire for structure is:</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>9. Your skills in the area/s is:</td>
<td>Deductive reasoning and statistical</td>
<td>Inductive reasoning and attention to detail</td>
</tr>
<tr>
<td>10. Your writing skills are strong in the area of:</td>
<td>Technical, scientific writing</td>
<td>Literary, narrative writing</td>
</tr>
</tbody>
</table>
The researcher opted to use both qualitative and quantitative methods in applying to collect and analyse data from the sample population.

4.4 Sampling and Data Collection Technique

A sample is a subset of a population and should represent the main interest of the study. A population is a definite defined set/group of people which is under consideration (Collis & Hussey, 2003).

A positivistic paradigm requires the use of large samples because of the statistical needs where the aim of a phenomenological paradigm is to gain depth on a specific topic which can be obtained through the research of one sample (Collis & Hussey, 2003).

4.4.1 Sampling Size

Particularly with questionnaires surveys, it is important to draw upon a large sample group as possible. This approach is not necessary if you are willing to accept a degree of uncertainty in the conclusions that will be draw from the research (Collis and Hussey, 2003)

Leedy and Ormrod (2001) suggested the following guidelines to select a sample size:

- Small Populations (<100), There is little point in sampling. Survey the whole population;
- Population size around 500. Sample 50 percent of the population;
- Population size around 1500. Sample 20 Percent of the population;
- Beyond a approximate population of 5000 a sample size of 8 percent (+-400) will be adequate.
The sample for this research study will consist of all the Engen petroleum retailers in Port Elizabeth as well as the CEO of SAPRA, Peter Noke.

4.5 Research Surveys

For the purpose of this research document, a survey in the form of a questionnaire was conducted to collect the relevant quantitative data necessary to solve the main problem. The second form of data collection was done through the use of a personal interview and aimed in obtaining all the qualitative information.

Defining a Questionnaire

A questionnaire can be defined as a list of carefully constructed questions, chosen after considerable testing, with the view to delivered reliable response from a chosen sample group (Collis and Hussey, 2003). Questionnaires are normally associated with positivistic studies and phenomenological studies (Collis and Hussey, 2003).

Questionnaires are popular ways of collecting data because of advantages such as they are generally cheaper, less time consuming than conducting interviews, large samples can be used and they can be designed to address the issues associated with confidentiality (Collis and Hussey, 2003). The disadvantages experienced with the use of questionnaires are low return rates because of the lack of interest from respondents in taking time to complete the questionnaire and the possibility of flawed results in misinterpretation of the questionnaire (Leedy and Ormrod. 2005)

Two different surveys have been drawn up. One for the retail dealers to obtain information on operational level and the second to SAPRA, the dealer body, to gather information regarding environmental events and happenings. The aim of the two fold survey was to obtain a Pestel analyses of the industry.
4.5.1 Open and Closed Type Questions

With the use of questionnaires, the researcher can use both open and closed ended questions. Open ended questions are those questions that allow the respondent to provide the researcher with his own opinion in his/her own words. Closed ended question on the other hand require from the respondent to present his/her opinion or feelings on a pre prepared scale of predetermined alternatives (Collis and Hussey, 2003).

As per chapter one, the Likert scale method had been used in this questionnaire in presenting the respondents with predetermined answers.

According to Collis and Hussey (2003) open ended questions are generally performed in the use of phenomenological studies, where they offer the advantage of the participants response and opinion in his/her own words. The negative side associated with the use of open ended questions is that they are generally more difficult to analyse.

Closed ended questions are often used for positivistic studies or where factual date needs to be collected. Close end questions are generally easier to complete and analyse because to range of options to the question are limited (Collis and Hussey, 2003).

The questionnaire will be used to focus on collecting quantitative data from the sample population. The closed ended questions will be presented as a Likert scale where by respondents only have to choose the most appropriate answer.

4.5.2 Questionnaire Guidelines

The following guidelines were suggested by Leedy and Ormrod (2005: 190) in easing the difficult task of designing the questionnaire.

- Questions should be specific and should only seek out the information that is essential in conducting the research;
• Questions should be constructed in simplistic language to assure that they communicate exactly what the researcher wants to know;
• Questions must be carefully worded to avoid unfounded implicit assumptions;
• Questions should be worded in a way that they do not indicate a preferred desire in response;
• Socially acceptable answers, rather than true answers should be checked for consistency through the inclusion of a counter question.
• It is important to decide in advance how the data that was collected will be organised, analysed and interpreted;
• Make sure that the questionnaire is easy to read and to answer;
• Provide clear instructions for completing the questionnaire;
• Explain the purpose of the questions to the respondents;
• The questionnaire should be designed and constructed in an attractive and professional manner;
• A pilot test should be conducted before using the questionnaire;
• Scrutinised the final questionnaire for quality, precision and expression to assure that it meets the requirements of the research conducted.

This framework has been provided as a guideline and to improve the quality of questionnaires although the actual purpose of the questionnaires is to collect the required data that will address the research problem.

4.5.3 Steps in constructing a questionnaire

The following steps were suggested to assist in constructing the questionnaire (Malhotra, 1993). They are:

1. Determine what you need to know;
2. Choose a response format for your questionnaire;
3. Identify the frame of reference for your respondents;
4. Writing the questions;
5. Prepare the summary sheet;
6. Pilot test your questionnaire and revise where necessary;
7. Put the questionnaire together;
8. Administer the questionnaire.

4.5.4 Purpose and objective of the questionnaire

Questionnaires have three specific objectives or purposes (Malhotra 1993).

1. It must translate the information needed into a set of specific questions that the respondents can and will answer. Posing a question in two similar ways might yield different responses.

2. A questionnaire must motivate and encourage the respondent to become involved in the questionnaire to assure co-operation and completion.

3. A questionnaire should minimise response error. This happens when respondents give inaccurate answers or the answers given are missed recorded or missed analysed.

In this research study the purpose and structure of the questionnaire was developed to obtain information relevant in providing information to the potential solution of the main problem.

4.6 Pilot Study

A pilot study is an excellent way to determine the feasibility of one’s study (Leedy & Ormrod, 2001) The advantage of using a pilot study is that it can help saving the researcher time by pointing out which approaches will and will not be effective in solving the research problem. It will also indicate whether the response of the respondents is of sufficient quality.
A Pilot study was conducted to test the questionnaire for understanding of the questions and to measure to results as to the effectively contributing towards the research problem. This was done through a single visit to one of the retailers in the sample area. The study will point out necessary adjustments to be made to the questionnaire.

4.7 Administration of the questionnaire

The final questionnaire was printed and personally delivered to twenty eight petroleum dealers. A brief explanation together with a covering letter informing the respondents about the purpose and importance of completing the questionnaire were delivered.

The questionnaire was designed to be anonymous to allow respondents to freely participate in the questionnaire without any fear that confidential information being exposed. A collection time was scheduled with the respondents to collect the questionnaire.

4.8 Administration of the Interview

The interview question was designed to obtain information on the governing of the industry and how this will effect downstream operations of the industry.

The questionnaire was conducted in Pretoria. An appointment was set for a private interview with the CEO of SAPRA.

4.9 Validity and reliability

Leedy and Ormrod (2001:31) suggested that validity and reliability of the researcher’s measurement instruments influence the extent of the quality information arrived from the phenomenon and positivistic being studied. It will also effect the probability that statistical significance will be obtained in the
data analysis and the extent to which the researcher can draw meaningful conclusions from the collected data.

4.9.1 Validity

Validity as defined by Collis and Hussey (2003) is concerned with the extent to which the research findings accurately represent what is happening in a situation. Maher and Kur (1983) define validity as the degree to which an instrument (questionnaire) actually measures what it is intended to measure. They had further identified several types of validity:

- **Face validity**
  
  Face validity is the extent on the surface to which an instrument looks like it’s measuring a particular characteristic and is often useful for ensuring the co-operation of people who are participating in a research study.

- **Content validity**
  
  Refers to the extent to which a measurement instrument is a representative sample of the content area being measured.

- **Criterion validity**
  
  Is the extent to which the result of an assessment instrument correlates to one another.

- **Construct validity**
  
  Refers to the extent to which an instrument measures a characteristic that cannot be directly observed but must instead be inferred from patterns in people’s behaviour.

4.9.2 Reliability

Reliability can be defined as the degree to which an instrument consistently measures what it measures (Maher and Kur, 1993).
Collis and Hussey (2003:186) describe reliability as being able to obtain the same results if the research were to be repeated by another researcher.

Leedy and Ormrod (2001:100) suggest three ways to enhance the reliability of a measurement instrument:

1. The instrument should always be administered in a consistent fashion, assuring that it is standardised;
2. To the extent that subjective judgements are required, specific criteria should be established that dictates the kind of judgement the researcher makes;
3. Research assistants should be well trained so that they obtain similar results.

As stated in 4.6, a pilot study was used to determine whether the questions in the questionnaire were clearly laid out, relevant and understood by respondents.

4.10 Research Response

The questionnaires was personally delivered between the 16th and 19th of September 2009 to the Engen Petroleum Dealers. A collection time were scheduled with all these individuals and was collected between the 1st and 5th of October 2009.

The interview was conducted in Pretoria on the 23rd of September 2009.

The reason for the non-respondents was mainly people that had been on leave over the period from delivery until collection.
Table 4.3 Summary of data collection

<table>
<thead>
<tr>
<th>Deadline date</th>
<th>Number of Questionnaires delivered</th>
<th>Number of Questionnaires collected</th>
<th>Percentage Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th October 2009</td>
<td>27</td>
<td>18</td>
<td>66.67%</td>
</tr>
</tbody>
</table>

According to Leedy and Ormrod (2001:222) the return rate of the quantitative collection is sufficient although the sample had been reasonably small.

### 4.11 Conclusion

This chapter focused on the research approaches applied to resolve the main problem as identified in chapter one. It includes an outline of the research design, the questionnaire construction and the data measuring method.

In solving the main problem, five secondary problems were identified which will help in solving the main problem. This chapter had discussed means of how the researcher will continue in collecting the necessary data in solving these problems.

Part of this chapter involves the physical contraction of the questionnaires and interviews that was conducted and the data analysis from the findings.

Chapter five will follow with the discussion on the data (Qualitative and Quantitative) collected as discussed in this chapter. It will use the analysed data to form conclusions and to draw correlations between variables in attempt to solve all the secondary problems which will together address the primary problem.
CHAPTER FIVE

ANALYSIS AND INTERPRETATION OF DATA

5.1 INTRODUCTION

In chapter four the methodology utilised to execute the empirical study was discussed. The Interview was conducted with the aim of collecting Qualitative information regarding the industry governing policies and operational characteristics of the industry.

The first secondary objectives was solved in chapter three which looked at the evolution of the petroleum industry of SA. The remaining secondary problems will be addressed in this chapter.

The response rate of the Quantitative study was 66.67 percent. The questionnaire using the Likert scale approach mainly focused on the retailers (Dealers) view points. The outlay of this chapter starts with a summary of the qualitative findings followed by quantitative findings and lastly focusing on solving the remaining secondary problems.

Conclusions will be drawn from all data collected in an attempt to observe the transformation of the industry and to follow guidelines as to providing information that can support the industry as to effective business models and key focus areas.

5.2 QUALITATIVE DATA ANALYSIS

5.2.1 What are the current weaknesses in retail operations within the regulated market?

- The current agreement between the Oil companies and the petroleum dealers indicates clearly that the Oil companies share in the retail margin with regard to rentals. Forecourt rentals increase
every time that the retail margin is adjusted by DME. As per the PPA, participants are seen only as wholesalers or retailers which cause this action from the Oil companies as vertical integration that contradicts the PPA agreement.

- One sided contracts with dealers where specifically site rentals increases with each marginal increase the dealer receive from the DME.

- Traditional positioning in the industry commonly occur where many of these businesses had flow in families and been inherited. Before 1993 many sites were owed and operated by mechanics. After 1993 with the arrival of convenience stores the operational focus had shift towards more professional operations. This had created a business setup where wives and children commonly were included in operations. Today most of these businesses can not afford to loose share holding as per the charter or BBBEE government initiatives.

- The lack of specialist knowledge of the retailer in the scene of Financial operations (budgeting), general business knowledge (Marketing and HR) and system knowledge.

- Crime Statistics shows are still showing a increase in robberies and threats to related services used throughout the industry.

- In 2000 an agreement called the charter was included in the PPA. The focus was to involve the HDSA (Historically Disadvantaged) in all these businesses up to a level of 25 percent. The Charter together with BBBEE are applying high levels of pressure to the industry which contradicts affectivity.

5.2.2. What are the qualities that effective retail operations require?

- Retail disciplines are priority to assure efficiency. Staff discipline through protocol management and HR skills.
Financial knowledge and capital availability are crucial as to the size margins that the dealers work with. Effective budget managing to assure optimal cash flow positions are highly important.

5.2.3. Do you think it is a good time to invest in the industry? Explain?

No, it is not a good time to invest in the industry mainly because of the political and economical factors that are currently changing the structure of the industry.

The industry had been going thought a period of change which are sure to continue till the industry had deregulated. Task 141 is yet another step closer to deregulation. Prior to deregulation the security of supply still have to be dealt with. The current under production forces the country to import crude which apply pressure on the trade account.

Crime is a big factor in the industry and it is currently seen as a high risk industry.

The industry has high capital requirements and all the above factors are not complimenting investment into the industry. Returns on investment at a lower capital outlay and less risk are effectively what attract investors.

5.2.4. Does the current changes in the industry causes any entry or exit barriers?

Some of the Oil companies insist that BBBEE takeovers take place when sites are sold. Some of the even makes it specific that they want only black dealers to take over sites. The seven codes of BBBEE together with the Charter that state that twenty five percent of all sites have to be owned by previously disadvantage will have a negative effect on profitability for black and white dealers.

Other factors that are seen as barriers are the current economical climate and the credit act. The fuel industry is characterised as a cash intensive business. A total cash flow (including all sureties and guarantees) of +-R1 000 000 are required for effective operations.
This becomes a big barrier for people willing to invest into the industry.

5.2.5 *Is the purpose of Task 141 to prepare the market for deregulation?*

Originally it was planned to be until the industry became involved, but it can definitely be seen as part of the evolution of the industry towards deregulation.

5.2.6 *If Task 141 are implemented and the Oil companies margins will no longer be based on the return of retail assets, who will be responsible for the market research and upgrading of services and sites?*

The retail margin will be adapted to allow for the return on retail assets, that will obviously only be applicable when the site is owed by the dealer in which case the dealer will be responsible for all these expenses. Alternatively the investor will remain responsible for these expenses.

5.2.7 *With the coming pricing model (Task 141), what do you feel will be the changes in;*

a. Site Ownership
b. Control and responsibility of dispensing assets
c. Retain Margin

a. Task 141 had been designed to reward Dealer owned Dealer operated (DODO) sites. We project a strong trend towards DODO site. Company owned Dealer operated (CODO) will loose on retail margin which entails that the oil company will also loose the margin as they will no longer be rewarded for investment in retail assets. The losses will most likely be gained through retail royalties.
Smaller sites (Third Party) will most likely be bought out and new brands will form. This will cause a growth in the third party networks.

b. Vertical integration contradicts the PPA agreements in the current scenario. With the implementation of Task 141 the PPA agreements will terminate. The responsibility of dispensing assets will be the responsibility of whoever owns the site. If the site and the dispensing assets are owned by the Oil company they will be remunerated for the maintenance as to return on capital assets. If it belongs to the dealer he/she will receive additional margins for ROI and maintenance.

c. Pressure will be applied on the retail margins which will most likely result in a decrease in the retail margin.

5.2.8. Would you encourage dealers to invest into buying their premises if possible?

Yes, definitely!

5.2.9. How do you think will deregulation of the petroleum industry effect the Oil companies business model?

They will benefit from deregulation through better economies of scale. They will close all small and rural sites which will cut distribution cost on commonly smaller delivery loads. This will allow them more control which will increase their profitability.

5.2.10 How will the adaption of the oil companies business model to deregulation effect retail operations?
Smaller retailers will close down as they will most likely not be able to sell their businesses. Oil companies might keep some of these sites open and place operating managers on site.

5.2.11 *Do you think that after deregulation, Oil companies will implement similar sales tactics on petrol as they currently have with discount diesel cards?*

Yes, they will definitely use all opportunities to generate additional profits. With deregulation the PPA will be terminated which will make this a legitimate action.

Task 141 had been designed to reward Dealer owned Dealer operated (DODO) sites. We project a strong trend towards DODO site. Company owned Dealer operated (CODO) will loose on retail margin which entails that the oil company will also loose the margin as they will no longer be rewarded for investment in retail assets. The losses will most likely be gained through retail royalties. Smaller sites (Third Party) will most likely be bought out and new brands will form. This will cause a growth in the third party networks.

5.2.12 *What should dealers do to prepare themselves for deregulation?*

- The possibility of agreements with big retailers like Pick n Pay, SPAR who believe in healthy retail agreements and will support effective operations.
- Clustering can also be a responsive reaction, where retailers obtain more than one site or as many as possible.
- Retailers should focus on income streams which will strive to diversify through added values and services for optimum convenience.
• Try to buy the premises, Oil companies are charging excessive rentals. Once the property has been paid returns will be at an optimal level.

5.2.13 Will deregulation have an impact on the market value of retail outlets?

The value will still be determined by throughput. The higher the site volume the higher the value will be. Initially smaller sites value will be effected as the will loose volume.

5.2.14 What do you think the industry will look like in ten years time?

The industry will most likely be will be deregulated. By bringing the final product to the consumer at the lowest price, all the bells and whistles will be removed to save further cost. In retail, focus on profit orientation through the governing of return on investment models.

Power of the Oil companies will drop as foreign direct investment will be limited to refining which expect a complete move to core business for the oil companies.

The retail structure could possibly be controlled by a maximum price with the idea of keeping the pump attendants.

5.2.15 Any advice for the retailers?

High priority and focus must be placed on effective operations. Daily analysis and proper budgeting is essential. Dealers should spend more time on site to have better control.

5.2.16 What is happening within the different oil companies at the moment?
BP – Have disinvested in refining and have started to invest into alternative power sourced (Solar power). In South Africa they have concluded a deal with PnP to take over their retail operations but will stick to their core business and still supply the fuel under the BP brand.

Caltex – Are moving towards a Dealer owned Dealer operated site scenario where they tend to follow their American model where they owe less than two percent of the retail assets.

Shell – Still seem to make a decision on either keeping their retail angle or to disinvest and move back to their core business, refining.

Total – Wants to grow into Africa, It is not clear what they want to do as to the retail/refining focus.

Engen – Strategy are to grow and invest in Africa. They also want to maintain their position in retailing.

PetroSA – Might emerge as new competition. They had been investing in to new refineries and will surely be looking for an offset point/market.

D. RESULTS OF THE BIOGRAPHICAL DATA FROM SECTION A OF THE QUESTIONNAIRE.

The survey requested the respondent’s feedback on certain biographical information. This formed part of section A of the questionnaire and includes the respondent’s gender, age and population group.

Twenty eight questionnaires was distributed in the Port Elizabeth, Uitenhage, Desptch, Humansdorp and Jefferysbay area. Eighteen respondents completed the questionnaires which provide the researcher with a response rate of sixty seven percent (As per figure 1).
Figure 5.1 Response rate as to total sample audience

Response rate as to the total target audience

Source: Quantitative data collected

5.3.1 Gender and Population group

Table 5.1 Respondents by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>15</td>
<td>83.33%</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>16.67%</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 5.2 Respondents by Population group

<table>
<thead>
<tr>
<th>Population Group</th>
<th>Number of respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>2</td>
<td>11.11%</td>
</tr>
</tbody>
</table>
Table 5.1, 5.2 and Figure 5.2 illustrates the results from the primary data analysed by the respondent’s gender and population group. The results indicate that majority of the respondents, being 83.33 percent, are male and only 16.67 percent female. The response rate regarding the population group indicates that 72.22 percent of respondents are White followed by Asians at 11.11 percent and 5.55 percent equally to Blacks, Coloureds and Others.

Figure 5.2  Respondents by Population group and gender

Source: Quantitative data collection
5.3.2 Age Profile

Figure 5.3 indicated the response rate as per age groups. 37 percent for the respondents falls in the age group of fifty to fifty five. 21 percent of the respondents are over the age of fifty six which make these two groups the majority of the dealer network under evaluation. The third biggest response group at 21 percent were people in the age group of 40 to 49 years of age and an equal 7 percent to age groups 36-39, 30-35 and 25-29 years of age. No respondents were found to be in the age group of 46-49 years of age.

Figure 5.3 Respondents Age Groups

Source: Quantitative data collection

5.3.3 Level of education

The fourth question under section A of the questionnaire was asked to determine the level of education among respondents. The highest, 38.88 percent of respondents, had a matric certificate, followed by 27.77 percent for both National diplomas and Degrees. Only one candidate from the sample
group has an Honours degree. Figure 5.4 illustrate the findings of educational levels. The mean on educational levels for the whole of the response group was 2.05, indicating that the average respondents educational level are a National diploma as per figure 5.4.

Figure 5.4 Educational Level

Source: Quantitative data collection
5.4 Section B of the questionnaire aimed to gather information regarding the Industry and Operations from the respondents.

5.4.1 Number of directors

Figure 5.5 Number of Directors

Source: Quantitative data collection

As per figure 5.5, majority of the respondents, 50 percent, are the only director in his/her company. This is followed by 33.33 percent in choice number two where six of the respondents have two directors in their firms. Only a total 16.67 percent have three or more directors. 77.78 percent of the situations where there are more than one director indicate additional family members as co directors. A mean of 1.67 was found, which indicates that almost all the businesses had one or two directors with a standard deviation of 0.91. In most
of the scenarios with more that one director, the predominant findings indicate a family member as a business partner.

5.4.2 Entity Choice

As per figure 5.6 the largest proportion, 67 percent, of the tested sample uses a closed corporation as choice of entity. 22 percent of the respondents are trading as sole proprietors and 11 percent as PTY (Ltd). None of the respondents uses trusts as choice of entity. In current terms the less expensive choice in entity from a tax opinion are closed corporations.

Figure 5.6 Entity Types

Source: Quantitative data collection

5.4.3 Site Volumes

From figure 5.7 only two, 11.11 percent, sites from the total respondents are over 400 000 Litres per month in sales. Another 11 percent indicate sales between 350 and 400 kilolitres. 16.67 percent indicate sale figures between
250 000 and 300 000 per month. The majority, 55.55 percent of the respondents indicate monthly sale volumes of less than 300 000 Litres with the highest records captured between 250 and 200 kilolitres at 33.33 percent. A mean of 2.94 had been calculated with a standard deviation of 1.73.

Figure 5.7 Site Volume

![Site Volume Graph](image)

Source: Qualitative data collection

5.4.4 Added Services

The findings from figure 5.8 indicate that almost all the respondents had convenience stores with the exception on two dealers. ATM was the second highest find as to added services at these businesses. Car washes, Fast Foods and Movie Stops were found to be at the bottom of available added services. The indication shows that the latter were only found at sites exceeding 350KL/M in volume.
Source: Quantitative data collection

5.4.5 Success Attributes

The strongest component as to business success factors was found to be location followed by financial expertise. These two components combined provided 66 percent of what is required to succeed. Retail skills contributed 17 percent, Human Resource skills 11 percent and financial backing only 6 percent.
5.4.6 Dealers opinion as to Oil companies decision to upgrades and revamps

Figure 5.10 illustrates the dealers opinion as to the Oil companies decision to upgrade and revamping of their businesses. Thirty three percent of dealers do not agree with the decisions that the Oil companies make. Fifty six percent of dealers say that they agree form time to time with only eleven percent of dealers that are completely satisfied with these decisions. As per the quantitative findings the average contribution that dealers have to make varies between seventeen and twenty percent on company owned dealer operated sites up to hundred percent on dealer owned dealer operated sites. This indicates clearly an imbalance in the contractual obligations between the dealers and the oil companies.

Source: Quantitative data collection
Figure 5.10  Retailers opinion to Oil Co’s decisions

Dealers' opinion as to Oil co decision to upgrade or revamp

Source: Quantitative data collection
5.4.7 Ease of approachability

The ease of approachability was measured to indicate the Oil companies’ response when initiatives as to requests from the dealer were raised. This specifically focuses on site specific needs and dealer owned dealer operated and third party sites. Figure 11 shows that fifty percent of dealers feel that it is difficult to approach the franchisor with suggestions followed by thirty three percent as averagely. This further indicates that there is a lack of responsiveness to site specific demands which is confirmed in figure 5.12.

Figure 5.11 Ease of approaching Oil Company

Source: Quantitative data collection
5.4.8 Oil companies strategic response to area demand and infrastructure development.

Figure 5.12 indicates that six respondents rated the strategic response of the oil company as poor followed by a further eight respondents who feel that they are occasionally responsive to opportunity. None of the respondents rated the Oil Company to have a reasonable or a strong response to strategic opportunity. This indicates that the Oil Company have a strong generic model through which they want to synchronise offerings. The synchronisation of the overall network is clearly more important that opportunistic response to the welfare of individual businesses.

Figure 5.12 Oil Companies strategic response

![Chart showing strategic response levels]

Source: Quantitative data collection

5.4.9 Oil companies choice of merchandising lines to market demand.
The sample population’s response to the Oil Company’s choice of merchandising lines as to market response shows a mean of 1.83 with a standard deviation of two. Figure 5.13 indicates that eighty three percent of dealers perceive the selected range of compulsory merchandising lines not to be inline with site specific demand. This also indicates that the Oil companies have a very strong hold on the retail component of these businesses. The weakness however is clear in the sense that all businesses have different market with different needs which at this moment in time is not satisfied to full potential.

Figure 5.13 Site specific merchandising

![Graph showing the Oil company's choice of merchandising items site specific](graph.png)

Source: Quantitative Data Collection

5.5 **SOLVING THE SECONDARY PROBLEMS**

5.5.1 *In solving the second secondary problem as to determine any lack of skills among retailers in the industry the following findings were obtained from the quantitative analysis.*
1. Variable ten (previous business experience) indicates a significant negative correlation with variable six (Educational level) where $r=-0.76$, $p<0.05$. Therefore the higher the business experience the lower the educational level of the directors.

2. Variable ten (previous business experience) indicates a positive correlation with variable thirty five (Human resource management as a required skill in operations) where $r=0.63$, $p<0.05$. This indicates that only with higher educational levels the importance of HR was seen as a critical factor for effective operations.

3. Variable eighteen (Number of employees) shows a strong positive correlation with variable twenty two (The use of an active business plan) where $r=0.90$, $p<0.05$. The findings can be interpreted to indicate that affectivity are squeezed as the size of the operations increased and that most of the smaller sites refrain from using an active business plan.

4. Variable twenty four (Agree with Oil companies decisions with upgrades) shows a negative correlation with variable thirty six (Importance of retail skills in operations) where $r=-0.63$, $p<0.05$. The conclusion from this findings indicated that the dealers ten to have a relaxed perception over the retail aspects of their firms as they agree with the oil companies interference/opinions as to upgrades to their businesses.

5. Variable Twenty six (Oil companies strategic response to environmental factors) shows a strong positive correlation with both variable twenty four (Does the dealer agree with the Oil companies decision as to upgrades) and variable twenty five (How approachable is the Oil companies regarding upgrades and changes) The findings indicate a mean of two as to the strategic response of the Oil companies to environmental factors and area
specific demands and that dealers feel not to agree as to upgrades ordered by the Oil company and also that the Oil company are not as approachable regarding dealer needs and site specific demands.

Referring to table 5.4 the majority of respondents operate within a company owned dealer operated scenario. This specific category had been finding to be liable for an 18% contribution to site upgrades and revamps.

Table 5.3 Type of Sites

<table>
<thead>
<tr>
<th>Type of Sites</th>
<th>Number of respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third Party</td>
<td>3</td>
<td>16.67</td>
</tr>
<tr>
<td>Company owned Dealer Operated</td>
<td>12</td>
<td>66.67</td>
</tr>
<tr>
<td>Dealer owned Dealer Operated</td>
<td>3</td>
<td>16.67</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Quantitative data collection

5.5.2 In solving the third secondary problem, data were derived from the quantitative information collected that focuses on ways and actions to improve the affectivity of operations on retail level.

1. Variable four (Number of directors) correlated with variable thirteen (Option to purchase the premises) where $r=0.75$, $p<0.05$. The option for dealers to purchase the premises indicates a mean of 1.18 with a standard deviation of 0.403. Overall the dealers are all optimistic that obtaining the premises will support more effective and profitable operations. It is clear that the more directors the bigger the need for such investment, firstly because it should obtain finance with more directors (better backing and surety) and secondly as it will justify better returns for all directors.
2. Variable four (Number of directors) indicates a significant negative correlation with variable nineteen (perception as to profitable choice of investment) where $r=-0.75$, $p<0.05$. Sixteen percent of the respondents indicate that they are three or more directors. The perception of these sites is that the industry is not a profitable choice of investment. On the opposite side of the scale sites with only one director agrees that the industry is a profitable choice of investment.

3. Variable five (Type of entity) shows a correlation with variable twenty two (Do you use a active business plan) where $r=0.63$, $p<0.05$. This indicates that twenty two percent of the sample group operates their companies as a sole proprietor. The tendency shows that this respondent does not rely on the use of a business plan in their operations.

4. Variable sixteen (Number of employees) shows a strong correlation with variable eighteen (Site volume) where $r=0.78$, $p<0.05$. The conclusion derived from this finding indicate that human resource management become a crucial factor with regard to affective operations as the level of staff management becomes more difficult with bigger operations.

5. Variable eighteen (Number of staff) shows a strong positive correlation with variable twenty two (The use of a active business plan) where $r=0.90$, $p<0.05$. This indicates that the bigger responsibility with a larger work force necessitates the use of a active business plan. The conclusion can be drawn again that the larger the business the more important the dealers perceive the use of a active business plan.

6. Variable eighteen (Number of employees) shows a positive correlation with variable thirty six (Importance of Marketing skills) where $r=0.64$, $p<0.05$. Variable thirty six indicates a mean of 8.27 which shows that the dealers overall perceive Marketing to be the third most important
skill as to effective operations. As the number of employees increases, so does the need for effective marketing skills.

7. Variable eighteen (Number of employees) shows a strong correlation with variable thirty seven (Importance of retail skills) where $r=0.75, p<0.05$. Both retail and marketing skills shows an increase in importance as to effective operations as the size of the firm increases as to number of employees. Human Resource management as an important component to effective operations only correlates with the number of employees at $r=0.45$ which indicates that the retailers does not perceive HR as a key factor to successful operations.

8. Variable twenty four (Agree with the Oil co decisions as to upgrades and revamps) indicates a negative correlation with variable thirty six (Importance of retail skills ) where $r=-0.63, p<0.05$. The conclusion derived from this correlation indicated that dealers follow what the Oil companies order and that retail management is dominated by the involvement of the Oil companies which leave little room for the dealer to respond to site specific demands and own creativity.

Qualitative findings indicated the following weaknesses in retail operations which could be improved.

- Although the importance of financial management, retail management, HR and marketing have been recognised by the dealers as important, the qualitative findings show a shortage of these disciplines. The need to improve the financial management as to proper budgeting and capital management together as well as HR has been highlighted as a general weakness.
5.5.3 The fourth secondary problem was designed to measure the impact of BBBEE and the Charter on the future of the retail industry?

The industry from a retail perspective has been found to be predominantly owned by a single person. On many occasions family members are involved. They sometimes fill the role of a co director. Information gathered from the quantitative findings showed the following correlations.

1. Variable one (gender) indicates a correlation with variable thirty nine (BBBEE as a exit problem) where $r=0.70$, $p<0.05$. The correlation is driven by the fact that majority of the target population was found to be white males as per figure 5.2. The concern BBBEE as a exit problem might impact the future of the industry as to the market value of these businesses and intervene with the true value of these businesses.

2. Variable three (population group) shows a significant negative correlation with variable thirty nine (BBBEE as a exit problem where $r=-1$, $p<0.05$. These findings confirm the findings of the previous variable tested. The information gathered as to exit problems indicates further that the Oil companies plays an significant roll when sites are up for sale as to the promotion of Historically disadvantaged (HSDA). The Oil companies show high commitment to raise the level of HSDA dealers.

Qualitative findings indicated that some of the Oil companies insist that BBBEE takeovers take place when sites are sold. Some of them even make it specific that they want only black dealers to take over sites. The seven codes of BBBEE together with the Charter that state that twenty five percent of all sites have to be owned by previously disadvantage will have a negative effect on profitability for black and white dealers.

Very few sites will be able to afford multiple partners unless vertical integration can be applied in the form of obtaining the building as part of the business.
The current market value will be affected as to the demand of the Oil companies to sell to HDSA individuals.

5.5.4 Solving the fifth secondary problem, results was gathered to obtain dealers response on deregulation.

1. Variable eighteen (Number of staff) shows a strong correlation with variable forty three (Dealers opinion regarding deregulation) where $r=0.72$, $p<0.05$.

   The correlation indicated that the more employees, which obviously indicates the size of the business and added values, the more relaxed approach the dealer have about deregulation and the better he feels about his/her long-term viability in a deregulated scenario.

2. Variable twenty two (The use of an active business plan) shows a strong positive correlation with variable forty three (Opinion regarding deregulation) where $r=0.73$, $p<0.05$. This correlation indicated that dealers who write their own business plans have got a more positive approach to deregulation as the ones who decide not to make use of business plans.

   The average mean for variable forty three was 2.05 which indicates that the respondents feel the industry is not yet prepared for deregulation.

5.5.4.1 From the qualitative findings the following was extracted in solving this secondary problem.

The design of task141 focuses on rewarding Dealer owned Dealer operated site. Company owned dealer operated sites will lose margin as they will no longer be rewarded for investment in retail assets. The loss to the Oil Company will most likely be gained through retail royalties. Such situations will apply lots of pressure on ROI for the dealer.
Other findings as to recommended actions motivates the need for business partnerships with grocery retailers. This will however only be possible if the dealer can obtain ownership of the premises.

Clustering was suggested as a counter response to deregulation as well as focus on income streams that diversify through added services and convenience.

5.5.4.2 Two open-ended questions were given to the fuel dealers in obtaining information as to their response on deregulation and how they think the industry must change prior to deregulation.

1. The response from dealers to their business models as to deregulation.

Table 5.4 Response from dealers to deregulation

<table>
<thead>
<tr>
<th>Respondent 1</th>
<th>Move to self-service on the forecourt and charged for value added services. Source fuel from the cheapest supplier (if possible). Reduce labour cost to minimum and cut trading hours to suit site demand.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent 3</td>
<td>Lower profit margins with no guarantee on dispensing more litres. Retrenching of staff to a self-service model</td>
</tr>
<tr>
<td>Respondent 4</td>
<td>Will close my business.</td>
</tr>
<tr>
<td>Respondent 5</td>
<td>Try to grow an maintain volumes.</td>
</tr>
<tr>
<td>Respondent 6</td>
<td>Self-service forecourts and cutting cost as to more effective operations.</td>
</tr>
<tr>
<td>Respondent 8</td>
<td>Add to convenience</td>
</tr>
<tr>
<td>Respondent 9</td>
<td>Cross-marketing opportunities will have to be evaluated to ensure competitive advantages are maintained.</td>
</tr>
<tr>
<td>Respondent</td>
<td>More added value components will have to be</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>10</td>
<td>introduced.</td>
</tr>
<tr>
<td>Respondent 11</td>
<td>Increase Volumes</td>
</tr>
<tr>
<td>Respondent 13</td>
<td>Deregulations will suite my business model well.</td>
</tr>
<tr>
<td>Respondent 14</td>
<td>The current agreement and system will never allow deregulation to work. We will have to stand together and voice out concerns to create a model suitable for all.</td>
</tr>
<tr>
<td>Respondent 15</td>
<td>Deregulations will suite my business plan.</td>
</tr>
<tr>
<td>Respondent 16</td>
<td>To little is known on what will be the response and legislation to specifically the Oil Companies. This will effect and impact the dealer model.</td>
</tr>
<tr>
<td>Respondent 17</td>
<td>Improve offerings on sites to offer more and better services.</td>
</tr>
<tr>
<td>Respondent 18</td>
<td>Not sure, but perceive it to be a big threat to my business.</td>
</tr>
</tbody>
</table>

Source: Research Collection

The conclusion of this question indicates that a general negative opinion exists in the market regarding deregulation. The dealers can only do as much as the Oil companies allow them to do, which at this moment in time is unclear. Vertical integration from the Oil companies are claiming dealer profit margins together with a high level of control as to added services. Many skills and strengths are not used and develop because of this. Overall the dealers are quit aware that affectivity of operations is the only component which they can control.

2. **What do you think should happen in the industry prior to deregulation?**
### Table 5.5 Prior to deregulation

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Suggestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The entire supply chain must be deregulated. Sales/Purchase/ BEE restrictions on investment must be removed. A total free, totally deregulated market from a trade and investment point of view is important for the industry to work.</td>
</tr>
<tr>
<td>3</td>
<td>Retail dealer agreements will have to be changed to compromise on the impact on the dealers business.</td>
</tr>
<tr>
<td>4</td>
<td>The negotiation of the viability of the system.</td>
</tr>
<tr>
<td>5</td>
<td>Smaller sites should be protected</td>
</tr>
<tr>
<td>6</td>
<td>Close all sites under 100KL/M and control the number of sites which the current system (MPAR formula) had failed to do.</td>
</tr>
<tr>
<td>8</td>
<td>Smaller site must be upgraded so that they are not just depending on fuel sales.</td>
</tr>
<tr>
<td>9</td>
<td>Going over systematically to a self-service setup and simultaneously reduce labour numbers.</td>
</tr>
<tr>
<td>10</td>
<td>The industry will have to be protected as to who will have the right to invest in to retail forecourt sites to keep investors like PnP, Shoprite out.</td>
</tr>
<tr>
<td>11</td>
<td>Allow the dealer more freedom as to convenience decisions.</td>
</tr>
<tr>
<td>13</td>
<td>The industry will have to be converted to self-service.</td>
</tr>
<tr>
<td>14</td>
<td>Market research will have to be done to determine the impact of deregulation on the South African market. New sites must be limited and older sites must be looked after better.</td>
</tr>
<tr>
<td>15</td>
<td>Self-service will have to be implemented.</td>
</tr>
<tr>
<td>No Idea!</td>
<td>No Idea!</td>
</tr>
<tr>
<td>Respondent</td>
<td>Oil company should provide added support to smaller sites to get them up to the level of bigger sites. They are after all the reason why we had all invested in this industry which is now over saturated because of the MPAR formula.</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Respondent</td>
<td>Oil companies must be kept responsible and provide compensation to sites that will be closed.</td>
</tr>
</tbody>
</table>

Source: Research Collection

Through the findings of this question, dealer generally feels that the industry should show more systems and legislation. The industry should be better controlled as to new sites and National/Multi National companies involved and a total deregulation policy should be implemented on the whole supply chain and industry legislation. The responsibility of the Oil companies should focus on the protection of smaller sites or support them in event of closing as to some form of compensation.

5.6 Conclusion

This chapter analysed all the findings from the empirical study. Firstly the qualitative interview with Peter Noke was discussed followed by data analysis form the quantitative data collected.

The data were grouped in addressing the second, third, fourth and fifth secondary problems through means of combining all findings relating to each secondary problems.

The skills of retailers were firstly analysed followed by ways to improve the affectivity of retail operations.
The impact of BBBEE and the Charter was investigated as a cost factor effecting affectivity of retail operations and lastly a comprehensive overview was conducted regarding retailers perspective to deregulation of the industry.

Chapter six will use the analysed data in relation to the secondary problems to provide the researcher with information as to the results from the study. The chapter will follow the researcher’s recommendations from the findings and will also look into the areas of the study that will be suitable for further future research.
Chapter 6

Recommendations and scope for future studies

6.1 Introduction

In chapter three an environmental study was done as to the current evolution of the petroleum industry. The current systems and environmental legislation were discussed.

In chapter four and five the scope of the study together with the results were collected and analysed to obtain relevant information pro retailing in the industry. In this chapter a comprehensive report will be provided in solving the primary problem as to strategic recommendations to improve the retail petroleum industry.

6.2 Summary of the study

The summary of the study will firstly include an outline and resolution of the main and sub-problems of the research and secondly a summary of the main findings identified from the previous chapter.

6.2.1 Main and sub-problem

The main problem of the study was identified in chapter one as:

**Strategic recommendations to the retail petroleum industry triggered by deregulation.**

Five sub-problems were identified as solutions to the main problem of the study, which were:

- What does the current evolution of the industry entail?
- Is there a lack of skills in the industry among retailers?
- In what ways can the affectivity of retail operations be improved?
- What impact do BBBEE and the Charter have on the industry?
• What can retailers do in response to deregulation of the industry?

The main and sub-problems were identified and investigated to obtain information relevant to the adaptation of retail business models within the industry.

• Sub-problem one was resolved through a comprehensive literature study review in chapter three.

In chapter three, a national overview of the petroleum industry, legislation and the current climate together with the need for change were discussed. The current changes together with the future scope of retailing in the petroleum industry had indicated that the retailer will require adapting his/her approach to business.

• Sub-problems two, three, four and five were resolved through the analysis and interpretation of the imperial study discussed in chapter five.

In chapter five it was found that added skills will enhance the affectivity of retail operations, although most of the retailers hold the necessary skills they refrain from using all the knowledge.

To improve effectiveness of operations, vertical integration was found to be the most powerful manner through which long term viability could be justified. Fewer directors will improve profitability of these businesses but will require more sophisticated skills and disciplines to maintain. A higher demand for more effective Human Resource Management was found where the size of operations increases.
The impact of BBBEE on the industry had been found to be problematic as to exit strategies of the firms involved in the study. Oil Companies dictate the sale of these businesses which directly influence the market value of these businesses. The charter which indicated that twenty five percent of shares have to be owned by HSDA people does not compliment the return on investment for these investors. Most of these firms are owned by one individual or alternatively indicate a strong tendency to have family members involved. Findings had proof that these legislations will have a negative impact on effectiveness of operations for both black and white retailers.

Lastly the retailers’ response to deregulation indicated that larger sites show less concern for deregulation than smaller sites. This finding compliments the purpose of task 141 which highlights an oversaturated market and the need to align retail sites with an demand that will provide sales that will justify return on investment as per the capital pricing model which will be used to determine the retail margin. Retailers who indicates better control and planning as to the use of an active business plan also indicates a more optimistic feel towards deregulation of the industry. The general trend indicates that retailers are concern regarding deregulation specifically as to the response of the Oil Companies which in the current regulated situation are contradicting legislation by applying vertical integration on to a regulated retail margin. The question arises is, how Task 141 will level the playing field in assuring the long term viability of the retailer?

6.3 Problems and Limitations

The researcher experienced some problems during the study which may have influenced the outcome of the research. These problems were identified as follows:
• The sample population on which the quantitative collection of data was based only consist of eighteen people. The sample indicated a reasonable small group.

• A response rate of sixty seven percent was obtained. The main reason for not collecting the remaining thirty three percent was that some of these business owners were on leave or did not manage to prepare the questionnaire on time.

6.4 Recommendations

The aim of this study was to look into strategic recommendations to the improve the retail petroleum industry.

To resolve this issue, various literature was referred to in establishing the theory in obtaining an environmental study of the petroleum industry in South Africa. Secondly, an empirical study was conducted to demonstrate findings as to how the current evolution of the industry will effect retail operations and how retailers perceive the industry.

The empirical study further looked into possible ways to improve the situation and to optimise the return on investment for the retailer by taking all environmental factors in consideration.

The following recommendations can be concluded from the study:

• The importance for dealers to have a clear understanding of the PPA and the retail dealer agreement is vitally important. The retail constraints coming from the agreement should be included in the dealers’ business model together with the risks of operations such as the vertical integration and impacts the Oil Companies will have on the retail margin. The PPA will adjust post Task 141 and dealers will have to become actively involve where ever possible to voice their opinion and have a impact on the changes to come.
• It is at this moment in time not clear what impact Task 141’s transformation will have on the industry and the whole supply chain. The only clear information gathered regarding task 141 indicates that the industries are yet another step closer to deregulation and that the margins will be bases on a capital asses pricing model which will negatively impact dealer margins.

As gathered from chapter 3, the purpose of deregulation is based on a free market system and focusing on providing the product to the end used at the best possible price. Some of the large Oil Companies already indicated that the return on investment does not justify business for them and had started to disinvest from retailing. Due to the concern of resource reserves some Oil Companies had started to invest into other renewable energy business opportunities. Some are showing signs of returning to core business (refining, distribution and wholesale) and other Oil companies had indicated that they would like to maintain their position in the retail component of their business.

• The option for dealers to vertically integrate can however only be met if the Oil Company involved decided to withdraw from retailing and creates the option for retailers to secure their businesses in such ways. From the findings this action compliments the goal the new pricing model as Task 141 had been designed to reward retail assets.

Contractual agreements will have to be adapted and retailers will have to stand together in assuring that these agreements do not become more hindering to their businesses, but instead as an equal valued component to business. The best business man and woman will be attracted by the best business opportunities. Thy franchisor allowing the most freedom in the retail component of filling stations will ultimately provide for the best opportunity to be locally responsive and opportunistic to site specific changes.
• The involvement in the industry is recommended as to the support of dealer bodies in the industry. SAPRA and FRA are involved in assuring an optimal environment that will compliment dealer operations. By supporting these bodies, the involvement of the industry indicates the seriousness to which the DME and all government related departments will work and comply to the retail petroleum industry. Finally they will have more clout to address issues with the Oil Companies as to matters concerning the retailers.

• Affectivity of operations points to many components of the retail environment. Skills and knowledge will positively influence the affectivity of operations.

The results indicate that retailers should focus on affectivity of operations in attempt to optimise net profits. As with all other businesses, the better the operational skill the better the quality of output and the more cost are save on overheads as to outsourcing of necessary skills and knowledge. As with many privately owned companies the directors are stuck with their daily tasks in managing their firm. They are aware of the advantage in training employees in optimising output levels although findings indicate that they are not motivated in growing their own skill and knowledge. As with the current evolution of the industry, retailers have to question their own skills as an added value component.

• The use of an active business plan had indicated in the results of the empirical study that not many of the respondents choose to make use thereof.

The use of a business plan can be seen as an effective planning tool to obtain a strategic focus on all business related components to deliver expected results which will indicate optimal management in the scene of maximisation of opportunity and minimization of risk.
• Proper financial budgeting/planning and human resource management are recommended components to effective retail operation. Dealer involvement in time spent at businesses is a critical factor that will improve effective operations and enhance service levels.

• The fear of deregulation and the impact it will have on the individual businesses will have to be addressed through the effectiveness of all likes of operations. Specifically for smaller sites, the involvement of the Oil Companies and Landlords are crucial to assure long term viability. The replacement of the MPAR formula with Task 141 will hopefully apply pressure to Oil Companies and Landlords to reinvest and upgrade as to previous response to built more sites. Investment will only be motivated if performance compliments the return on investment.

• Retailers will have to set high standards of operations. Once high standards had been set, measurement instruments have to be designed to measure these Key performance areas (KPA’s). If retailers can continue to keep the standard and measure the results the KPA’s will improve and will compliment successful retail operations.

• Market research will indicate the demand for added services. Suggestions indicate that retailers should conduct more research in their business areas. This will act as a two way benefit as site specific demands will be gathered and the awareness and support of their businesses will become more noticeable in their direct areas.
6.5 Opportunity for further research

- Many components remain unclear because of so much contradicting legislation. Vertical integration, what point of deregulation and how will deregulation effect the rest of the supply chain. Will legislation keep the Oil Companies out of the retail market and force them to return to their core Business.

How much impact will the charter and BBBEE have in a completely deregulated market? If government wants to improve the effectiveness of operations, where will BBBEE as a regulated model fit in with the view of deregulation as discussed previously in chapter five that BBBEE is seen as a cost factor in business operations? And what is the final view of a complete deregulated scenario in the petroleum industry?

- Oil companies business model. No sure indication could be found as to all the Oil Companies views on the changes of task 141. Surely the system has to be synchronised? If legislation is designed to reward the retailer for controlling retail (dispensing) assets than will this be the norm? Without knowing what the oil co business model will take on, it will remain very difficult for retailers to prepare strategic actions.

- The full effect of Task 141 on the value of investment remains unclear. All these businesses had been purchased on the principle of goodwill. How will Task 141 changes that and how will the value of filling stations be determined to justify the initial investment made?
• In the process of determining new margins to if will be important to investigate the whole supply chain including the basic fuel price to assure that the commodity reaches the end user not only at the cost of profit margins of the retailers and wholesales but also to investigate all other related components influencing the final pump price. The focus point of a study in this field will have to investigate the responsibility and cost of operations in determining the reward (margin) that must be set as parts adding to the final price of the commodity.

6.6 Conclusion

In conclusion, retailers operate their businesses at the very end of the supply chain. Margins are continually under pressure and cost of operation is continually increasing. The demand for the commodities is growing all the time and the best way for any retailer to capitalise on the growing market share is to stay at the top of his/her game.

It remains highly important for retailers to stay informed to the industry and the ware outs of competition and related legislation. As the findings had indicate, the industry is busy going through big changing process and the outcome of the change is not yet clear to anyone. Being responsive to changes at all times, had been finding to be a competitive advantage.

In many scenarios added services come at a cost to the retailer and might not add to the bottom line initially but will enhance the shopping experience from a customer perspective. Retailers have to stay sensitive to the change in demand and constantly be on the look out for added value components that will enrich the sopping experience of their market. Continues market research had become a very important factor in maintaining market share. Lastly, operational standards had probably been found to be one of the biggest factors that differentiate between successful and unsuccessful
retailers regardless of the size of their operations. Findings also indicate that in a deregulated scenario affectivity of operation will be better rewarded that large operations.

Retailers have to set high standards, measure them and manage them. The only way to maintain such levels of operations is to be personally present and involved.
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Dear Engen Dealer

I am currently conducting research at the Nelson Mandela Metropolitan University (NMMU). The data collected will be used in partial fulfilment towards a Masters Degree in Business Administration. My research topic is: Strategic recommendations to improve retail operations in the petroleum industry triggered by deregulation.

Please assist in supplying me with the information required on the attached questionnaire.

Please note that the information gathered from you will be used solely for academic purposes and will be treated as confidential.

Thank you for your co-operation.

Best Regards

Hennie Tait
083 301 7450 (c)
(Perl Service Station)
### RESEARCH QUESTIONNAIRE

#### QUANTITATIVE

**Section A: Bio Graphical Information**

1. Gender
   - Male  
   - Female

2. Age
   - 25-29  
   - 30-35  
   - 36-39  
   - 39-45  
   - 46-49  
   - 50-55  
   - 56+

3. Directors Population Group (Please write the number in each block)
   - Black  
   - Coloured  
   - Indian  
   - White  
   - Other

**Section B: Industry/Operations**

1. Number of Directors
   - One  
   - Two  
   - Three  
   - More than Three

2. Type of entity
   - Sole proprietor  
   - Closed Corporation  
   - Pty (LTD)  
   - Trust

3. Highest level of Education
   - Matric  
   - National Diploma  
   - Degree  
   - Honours Degree  
   - Masters Degree  
   - PHD

4. Specify your type of educational qualification?
5. Number of people on your management team including yourself?

<table>
<thead>
<tr>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four</th>
<th>Five</th>
<th>More than five</th>
</tr>
</thead>
</table>

6. How do you manage managers that are not share holders?

<table>
<thead>
<tr>
<th>Completely Discreet about decision making processes</th>
<th>Share Limited Information with them</th>
<th>Discuss and Inform them on most issues</th>
<th>Have them completely involve in problem solving and decision making</th>
<th>Decentralised management style. Allow them to take responsibility for decisions</th>
</tr>
</thead>
</table>

7. Have you been in business prior to this?

Yes | No

If yes, what type of industry? .................................................................

8. Time in current ownership

<table>
<thead>
<tr>
<th>Less than 1 Year</th>
<th>Less than 3 Years</th>
<th>Less than 5 Years</th>
<th>Less than 10 Years</th>
<th>More than 10 Years</th>
</tr>
</thead>
</table>

9. Type of site

<table>
<thead>
<tr>
<th>Dealer owned Dealer Operated</th>
<th>Company owned Dealer Operated</th>
<th>Third Party Site</th>
</tr>
</thead>
</table>

10. Should you have the option, would you buy the building that you are currently trading from at market price?

Yes | No
11. Business Location

<table>
<thead>
<tr>
<th>Urban</th>
<th>Industrial</th>
<th>Commercial</th>
<th>Light Commercial</th>
<th>Neighbourhood</th>
</tr>
</thead>
</table>

12. Which of the following added services do you provide on site?

<table>
<thead>
<tr>
<th>Convenience store</th>
<th>Bakery</th>
<th>ATM</th>
<th>Car Wash</th>
<th>Fast Foods</th>
<th>Movie Stop</th>
</tr>
</thead>
</table>

13. Site Volume per Month

<table>
<thead>
<tr>
<th>&lt;200KL/M</th>
<th>&lt;250KL/M</th>
<th>&lt;300KL/M</th>
<th>&lt;350KL/M</th>
<th>&lt;400KL/M</th>
<th>&gt;400KL/M</th>
</tr>
</thead>
</table>

14. EDC Volume as percentage on total diesel sales

<table>
<thead>
<tr>
<th>0%</th>
<th>5-10%</th>
<th>11-20%</th>
<th>21-30%</th>
<th>&gt;30%</th>
</tr>
</thead>
</table>

15. Number of Employees

<table>
<thead>
<tr>
<th>1-20</th>
<th>21-30</th>
<th>31-40</th>
<th>41-50</th>
<th>More than 50</th>
</tr>
</thead>
</table>

16. Do you perceive that the petroleum industry is a profitable choice of investment?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

17. What was your main reason for investing in this industry?

<table>
<thead>
<tr>
<th>New To Business</th>
<th>Retail Knowledge and Background</th>
<th>Good Investment Opportunity</th>
<th>Knowledge of the Industry</th>
<th>Stability of the Industry</th>
</tr>
</thead>
</table>

18. What is your firm’s most valuable attributes that generates success?

Please choose two!

<table>
<thead>
<tr>
<th>Location</th>
<th>Financial expertise</th>
<th>Hr Expertise</th>
<th>Retail Expertise</th>
<th>Financial backing</th>
</tr>
</thead>
</table>
19. Do you manage your business with an active business plan? (Updated every 6 months)
   Yes  No

20. Does the oil company consult with you regarding new investments and upgrades?
   Yes  No  Sometimes

21. Do you agree with decisions regarding upgrades to your business?
   Yes  No  Sometimes

22. How approachable would you rate the oil company as to your input into new investments and upgrades?
   Easy  Average  Difficult

23. How would you rate the oil company strategic response in relation to infrastructure developments and market movement in your area?

<table>
<thead>
<tr>
<th>Poor, they are not aware of opportunities in my area</th>
<th>Occasionally they will respond to site specific demand</th>
<th>Average Reasonable, Respond to changes and dealer requirements most of the time</th>
<th>Good, they are sensitive to environmental and market changes within my area</th>
</tr>
</thead>
</table>

24. What percentage contribution do you have to contribute on revamps/upgrades?
   ............%  

25. Do you feel the contribution percentage in the previous question justify your return on investment?
   Yes  No

26. Are you allowed to merchandise site specific items?
   Yes  No

27. If yes, what percentage of shelf space?
   ..............%  

28. Do you feel that the Oil Companies choice of merchandising and lines are site specific?
29. Do you feel that you should be given more freedom in choice as to site specific products to be offered?

Yes  No

30. What competitive advantage do you have over your closest competitors?

<table>
<thead>
<tr>
<th>Location</th>
<th>More added values/Services</th>
<th>Management Skills</th>
<th>Opportunistic backing from oil company</th>
</tr>
</thead>
</table>

31. On a scale of 1 to 10 (10 being the highest) How important are the following components in managing your business.

Importance of good financial skills? ............

Important of good HR skills? ............

Importance of good marketing skills? ............

Importance of good retail skills? ............

32. Are you aware of any entry or exit problems to the industry? If any please explain.

Yes  No

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Section C: BBBEE/BEE

1. What are your firms current BBBEE/BEE Status (If rated)

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Level 6</th>
<th>Level 7</th>
<th>Level 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-40%</td>
<td>40-45%</td>
<td>45-55%</td>
<td>55-65%</td>
<td>66-75%</td>
<td>75-85%</td>
<td>85-100%</td>
<td>&gt;100</td>
</tr>
</tbody>
</table>

2. Does your business require from you to improve it's BEE status?
   Yes  No

3. Have the oil company apply any pressure on you business regarding BEE?
   Yes  No

Section D: Deregulation

1. What is your opinion regarding deregulation?

<table>
<thead>
<tr>
<th>Deregulation will threaten the long term viability of my business</th>
<th>The Industry is not yet prepared for deregulation</th>
<th>Deregulation is a positive move although I do not know what impact it will have on my business</th>
<th>My business model is sustainable an it is a good time to deregulate the market</th>
</tr>
</thead>
</table>
2. What will be your response on deregulation as to your business model?

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3. What do you think should happen in the industry prior to deregulation?

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Qualitative Questionnaire:

1. What are the current weaknesses in retail operations within the regulated market?

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2. Name briefly the qualities that successful retailers should have.

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3. Do you think it is a good time to invest in the industry? Explain?

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4. Does the current change in the Industry causes any entry or exit barriers, explain?

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5. Is the purpose of Task 141 to prepare the market for deregulation?

Yes  No

6. If task 141 are implemented and the Oil companies margin will not be based on the return of retail assets, who will be responsible for the market research and upgrading of services and sites and how will this effect dealer operations?

7. With the coming pricing model, what do you feel will be the changed in

7.1 Site Ownership (DODO, CODO, 3rd Party Owed Dealer)

7.2 Control and responsibility of dispensing assets

7.3 Retail margin
8. Would you encourage dealers to invest into buying their premises if possible?

Yes  No

9. How do you think will deregulation of the petroleum industry change the Oil companies' Business model?

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10. How will this impact on dealer operations?

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11. Do you think that after deregulation, Oil companies will implement similar sales tactics on petrol as they currently have with discount diesel cards?

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12. What should dealers do to prepare them for deregulation?

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13. Will deregulation have an impact on the market value of retail outlets?
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14. What do you think the Industry will look like in ten years time?
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15. Any advice for the petroleum retailers?
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