

**An exploratory study on the impact of three critical incidents on
SMEs within the Petroleum retail sector in South Africa**

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DECLARATION

I Humbulani Portia Makhaya, confirm that the work of the Research Project titled “An exploratory study on the impact of three critical incidents on SMEs within the Petroleum retail sector in South Africa” is my original work and that none of its parts in entirety or part has been published before. Sections, where works of others and documents reviewed were used, have been recognized and referenced accordingly.

Humbulani Portia Makhaya

22 November 2021

ABSTRACT

The purpose of this study was to investigate the impact of three critical incidents with a direct effect on Small and Medium Enterprises (SMEs) within the Petroleum retail sector in South Africa. This study assessed three specific areas: (1) the impact of fuel levy increase on Petroleum retailers, (2) explore how fuel stock-outs are experienced by the SMEs, and (3) the effects of fuel distributors' strike on SMEs in the petroleum sector in South Africa.

To address the research objectives, the study employed a qualitative research approach, based on a narrative research design. Primary data was collected through semi-structured interviews conducted with six SMEs in the fuel retail business in Johannesburg. An interview guide was used.

Findings highlighted that the location of fuel retail SMEs is an important determinant of how the fuel retailers are affected by these three critical incidents of fuel levy increases, stock-outs and strikes. The study found that while the fuel levy increases are felt through reduced sales volumes, the impact is not the same across fuel retailers. The study revealed that the elasticity of demand varies depending on the location for which it is elastic for those retailers in high Living Standards Measure (LSM) locations and inelastic for those located in lower LSM locations. It was found that the impact is much less for those fuel retailers located in affluent suburbs with a high LSM. In locations such as Beyers Naude and Radiokop in Northern Johannesburg with a high LSM, the demand for fuel remains constant irrespective of price increases. The locations are also less likely to be adversely affected by protest actions. Concerning SMEs' experiences of fuel stock-outs, the study found that stock-outs impact fuel retail business operations through overhead costs that are incurred while the fuel stations are out of stock. The small margins make it impossible for fuel retailers to quickly recover, as their profitability is dependent on sales volumes, which are compromised when there are stock-outs. Fuel retailers also suffer from reduced future sales volumes due to waning customer loyalty. Finally, the study found that the occurrence of wage-related strikes is minimal due to the nature of collective agreements that are signed within the sector. However, protest actions were found to have deleterious effects on the fuel retailer situated in lower LSM locations.

Key words: strike, stock-out, fuel levy

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ACRONYMS

ACRONYM	DESCRIPTION
BFP	Basic Fuel Price
BVO	Bulk Vehicle Operators
CBV	Composition Based View
CEF	Central Energy Fund
CEPPWAWU	Chemical, Energy, Paper, Printing, Wood and Allied Workers Union
CLRO	Oil Company Leased Retailer Operated
COFO	Company Owned Franchise Operated
CORO	Oil Company Owned Retailer Operated
DMRE	Department of Mineral Resources and Energy
DOE	Department of Energy
DOL	Department of Labour
GDP	Gross Domestic Product
IBLC	In Bound Landed Cost
KPMG	Klynveld Peat Marwick Goerdeler
LPG	Liquefied Petroleum Gas
MDZ	Magisterial District Zones
MSA	Main Supply Agreement
NDP	National Development Plan 2030
NERSA	National Energy Regulator of South Africa
NERSA	National Energy Regulator of South Africa
PMG	Parliamentary Monitoring Group
RAF	Road Accident Fund
RAS	Regulatory Accounts System
RBV	Resource-Based View
RLRO	Retailer Leased Retailer Operated
RORO	Retailer Owned Retailer Operated
SAPIA	South African Petroleum Industry Association
SMEs	Small and Medium Enterprises

CHAPTER 1

OVERVIEW OF THE SOUTH AFRICAN LIQUID FUEL INDUSTRY

1.1.INTRODUCTION

The fuel retail sector in South Africa is made up of 4 600 retailers nationwide and accounts for the most petrol used in the country (Department of Energy, 2017). The sector sustains about 80 000 jobs (Majola, 2020), which is a decline from the 90 000 jobs reported in 2017 (Businessstech, 2019). A study by Sartorius, Eitzen and Hart (2007) found that fuel retailers have to sell more than 370 000 litres of fuel per month for it to be profitable. This is also confirmed in a study by Bailey, (2011) who found that all the fuel stations that sold 370 000 litres of fuel per month were profitable. However, the majority of fuel retail outlets sell 300 000 litres of fuel on average per month (Thulo, 2018). This suggests that the majority of the fuel retailers are not profitable.

During the period 2005-2021, the South African Petroleum industry was hit by three incidents that impacted Small and Medium Enterprises (SMEs). These critical incidents are the introduction of the new levy, stock-out and industry strike. The fuel levy is a tax that is charged on petroleum products such as petrol, diesel and biodiesel and they can be grouped into three categories: the general fuel, customs and excise levy, and the Road Accident Fund (RAF) levies. Stock-out is a condition where a regular item from a retailer's shelves is missing and is not available to meet customer requirements. An industry strike is when workers have engaged in any form of industrial action over a wage dispute or a protest that will result in the disruption of the distribution of fuel to retailers. The occurrence of these three critical incidents and their relative effect on fuel retailers in South Africa is discussed in detail below.

1.2.BACKGROUND OF THE STUDY

South Africa adopted the Basic Fuel Price (BFP) or international element in 2003 (Nkomo, 2006). The BFP is a pricing formula that relies on spot prices as compared to posted prices. It is based on what it could cost an importer in South Africa to buy fuel from an international refinery and transport the product to the South African shores (Department of Energy, 2017; SAPIA, 2021). According to SAPIA (2021), the retail price of diesel is not regulated as the retail price is estimated

to be similar to the regulated margin of petrol. The spot prices used for petrol in South Africa are 50% Mediterranean/50% Singapore, and 50% Mediterranean/50% Arabian Gulf for diesel and paraffin. The prices of controlled petroleum products are affected by two basic factors, which are considered internal and external factors (Department of Energy, 2017).

The internal factors are associated with the rand-based retail factors, oil company marketing margins, transport costs, and taxes and levies. On the other hand, external factors are the dollar price on the international price and the exchange rate. The external factors are outside the control of the industry and while they move constantly, they account for the most monthly price fluctuations in South Africa (Department of Energy, 2017). The Monthly Pricing System takes into account changes in these factors. The BFP accounts for 43% of the retail fuel price in South Africa while the remaining 57% is made up of the domestic elements that are controlled by the government (Motiang & Nembahle, 2017). Internal factors are normally adjusted on an annual basis and are subject to government control. It is argued that the need for controlled prices in the petroleum industry is to ensure that all the stakeholders earn a fair return in such a way that there is a sufficient investment for the industry (SAPIA, 2021).

The international price element fluctuates daily and that is the reason the South African government regulates the pricing (News24, 2012). Government regulation of fuel pricing is a way of cushioning South African consumers and businesses from the shocks of price fluctuations. South Africa has small amounts of crude oil reserves and as such, it depends on imports to meet its liquid fuel needs (Department of Energy, 2017).

Despite the decline in the number of jobs and dwindling profitability, the sector remains relevant to the South African economy as its sustained growth contributes to job creation, infrastructure development, community development and transformation. Therefore, it is important to constantly monitor the influence of those factors that pose threats to the success of the sector and introduce strategies that address them (Petljak & Naletina, 2017). This is in the context of past research that suggests that the success of the fuel retail sector is under threat due to several factors. These include the imbalance of power along the value chain, constantly low margins and lack of transformation.

From a research perspective, SMEs are considered the backbone of the economy in terms of growth and job creation (Ardito, Carrillo-Hermosilla, del Río & Pontrandolfo, 2018), and studies that have focused on these businesses from a resilient point of view (Cowling, Liu, Ledger & Zhang, 2015;

Pizzurno, 2018). Within the South African context, there is less empirical evidence on businesses, particularly on how SMEs may achieve a degree of resilience (Fatoki, 2018). This study targets SMEs by focusing on the fuel retail sector in South Africa.

1.3. AN OVERVIEW OF THE SOUTH AFRICAN LIQUID FUEL INDUSTRY

The South African petroleum industry is regulated mainly under the mandate of the Department of Mineral Resources and Energy (DMRE), with the administration either directly or under the auspices of the National Energy Regulator of South Africa (NERSA). The DMRE 's existence was a result of the amalgamation between the Department of Mineral Resources and the Department of Energy in 2019 (DMRE, 2021). The DMRE is largely responsible for driving South Africa's transformation and growth agenda through sustainable development and implementation of policy. Its strategic imperatives are to promote energy security, promote universal access to energy sources, the transformation of the energy sector and strengthen its operations and management (DMRE, 2020).

On the main, the DMRE is responsible for the regulation of the petroleum, mining and minerals industry, formulation, maintenance and implementation of the integrated minerals and energy policies that are aimed at promoting and encouraging investment in the mining and energy industry, ensuring the health and safety of employees (DMRE, 2020). The Department is also responsible for the management, coordination and monitoring of programmes that are aimed at increasing access to minerals and energy resources, and management of the nuclear industry, among others.

Soon after democracy in 1994, the new South African government reviewed and developed policies in the energy sector to align them with international norms (Department of Energy, 1998, 2019a). In 1998, the white paper was developed and was used as a policy document to guide the development of subsequent policies within the energy sector. Thus, the White Paper aimed to increase access to affordable energy services, stimulate economic growth, enhance energy governance, protect the environment and health effects from energy-related activities and secure the supply of energy through diversity.

South Africa adopted the National Development Plan 2030 (NDP) in 2013, a blueprint for future economic growth and economic growth for the whole country, which further emphasizes the need

to grow the energy sector. The NDP highlights the need to further develop adequate energy infrastructure. The plan reiterates that by 2030, South Africa will have adequate liquid fuels to support economic activities in the country.

1.3.1. Legislative framework of the South African petroleum industry

Notably, to achieve the objectives of sustained economic growth through growth and investment in the energy sector, new policies and strategies were developed and the existing ones were amended accordingly. These legislative regulations for the petroleum sector were developed following the promulgation of the White Paper. The regulations were aimed at promoting, growth empowerment, poverty reduction, investment, sustainable development, transformation, and efficiency, among others. These regulations are briefly discussed below.

1.3.1.1. *The National Energy Act, 2008 Act 34 of 2008*

The Act aims to empower the Minister to ensure that the diverse energy resources are available in sustainable quantities and at affordable prices to promote economic growth and reduce poverty in the South African economy (DMRE, 2020). Furthermore, the Act seeks to promote energy planning, which includes holding strategic energy feedstock and carriers, promoting investment in energy infrastructure, gathering data and information on energy demand, supply and generation, and supporting the establishment of an institution responsible for the efficient generation and consumption of energy, and the encouragement of energy research.

1.3.1.2. *Mineral and Petroleum Resources Development Act 28 of 2002*

The Act was promulgated to promote equitable access to and sustainable development of mineral and petroleum resources in South Africa. The main objectives of the Act were to align the mineral and petroleum industry to the internationally accepted standards in terms of exercising sovereignty over the resources. The Act also aimed at giving effect to the State as a custodian of the nation's mineral and petroleum resources, promoting equitable access for all South Africans, ensuring sustainability and expanding meaningful opportunities for the historically disadvantaged persons to enter into the mineral and petroleum industry and to benefit from the exploration of the nation's mineral and petroleum resources. The Act also seeks to promote economic growth, and

employment, and advance social and welfare for all South Africans. It also aims to provide security of tenure in the prospecting exploration, mining and production.

The act was later amended with the Mineral and Petroleum Resources Development Amendment Act 49 of 2008, to address several technical issues that arose from the Act. These technicalities were related to definitions of terms that were considered ambiguous, adding functions to the Regional Mining Development and Environmental Committee, and amending the transitional arrangements to further provide statutory protection to certain existing old order rights.

1.3.1.3. *Petroleum Products Amendment Act 58 of 2003*

The Petroleum Products Amendment Act was promulgated in 1977 and has since undergone several amendments, with the last two being in 2003 and 2008. The main objectives of the Act are to govern the issuing of licences. The Act prohibits manufacturers and wholesalers from holding retail licences unless it is for training purposes. The Act further aims to promote transformation in the petroleum and liquid fuels industry in South Africa. According to the Act, this will be achieved through the licence allocation system, prescribing offences and penalties, provision of the appeal and arbitration processes and the development of a liquid fuels Charter.

Following this Act, the “Minister of Energy prescribes a licensing system to transform the retail sector into one that has the optimum number of efficient sites to achieve equilibrium among all participants in the petroleum products industry. This is done by linking the total number of sites and corresponding retail licences in any period to the total mass or volume of prescribed petroleum products sold by licensed retailers” (SAPIA, 2014). Accordingly, the industry is licensed for the first time in terms of the Petroleum Products Amendment Act of 2003.

The Act highlights the licensing of all petroleum activities to partially prohibit vertical integration, creating a balance of power between retailers and wholesalers through arbitration, provision of empowerment, protection of jobs and SME development (Fuel Retailers Association, 2013).

1.3.1.4. *The Petroleum Pipelines Act 60 of 2003*

The Act aims to promote competition in the construction and operation of petroleum pipelines, loading facilities and storage facilities. The Act aims to promote the efficient, effective and sustainable, orderly development, operation and use of petroleum pipelines, loading and storage

facilities. It also aims to promote investment in the petroleum pipe industry and provide security about the pipeline and related infrastructure. The Act also aims to support companies in the petroleum pipeline industry that are owned and controlled by historically South Africans. On the whole, the Act provides for the establishment of a national regulatory framework for petroleum pipelines, a Petroleum Pipeline Regulatory Authority, to act as a custodian and enforcer of the national regulatory framework and the associated matters (DMRE, 2020).

1.3.1.5. *The Petroleum Pipelines Levies Act No. 28 of 2004*

The Act provides for the imposition of levies by the Petroleum Pipelines Regulatory Authority. According to the Act, the Regulatory Authority impose levies to meet the general administrative and other costs incurred to ensure its functioning. In this regard, the Regulatory Authority may specify the time intervals in respect of the payment of such levies and also determine the interest and vary the levies (The Presidency, 2004). The Act also stipulated the management of the levies by the Regulatory Authority and how they can ensure accountability to the Minister and its performance management procedures.

1.3.1.6. *The Central Energy Fund Act No. 38 of 1977 (as amended)*

The Act provides for the payment of certain amounts of money into the Central Energy Fund (CEF) and the utilisation and investment of such money. CEF is a Schedule 2 entity that derives its mandate from the CEF Act 38 of 1977 and the ministerial directives issues and it reports directly to the DMRE. It is mandated to contribute to ensuring the security of the energy supply in South Africa to promote economic growth and reduction of poverty. The Act further provides for the imposition of a levy on fuel and the utilisation of the investment from such levies, the control of the affairs of the CEF, keeping of records of transactions entered into the account and submissions to Parliament of certain investigations, examination and auditing of the books (DMRE, 2020).

1.3.2. The structure of the South African petroleum industry

The petroleum industry in South Africa is divided into upstream and downstream activities (SAPIA, 2014). While the upstream activities are related to the exploration and production of crude oil, the downstream activities are related to the refining, transportation and marketing of the final end-user products. The main liquid fuels used in South Africa are petrol and diesel. Other related

products sold in the country are jet fuel, illuminating paraffin, fuel oil, bitumen and liquefied petroleum gas (LPG).

1.3.2.1. *Manufacturing*

There are four crude oil refineries in South Africa and these are Sapref, Enref, Chevref (Chevron South Africa) and Sapref (Shell South Africa/BP Southern Africa) and Enref (Engen Petroleum) in Durban, Chevron in Cape Town, and Natref (Sasol/Total South Africa) at Sasolburg. There are two refineries for synthetic fuel production that produce liquid fuels and these are Sasol and the Petroleum Oil and Gas Corporation of South Africa (PetroSA). South Africa does not have crude oil reserves and imports approximately 90% from Saudi Arabia, Nigeria and Angola (Department of Energy, 2019a). According to the Department of Energy (2019), the majority of petroleum products are manufactured locally and serve a few that are imported to supplement the local production shortfall. It is reported that South Africa is the second-largest oil refinery, following Egypt, with a production capacity of 718 000 barrels per day (ibid.).

1.3.2.2. *Wholesaling*

Seven major players are participating in the fuel South Africa wholesaling business. The major players are BP Southern Africa, Chevron South Africa, Engen Petroleum, PetroSA, Sasol Oil, Shell South Africa and Total South Africa. Their main activities involve operating storage terminals and management of distribution facilities throughout the country. The Liquid Fuels Wholesalers Association makes a distinction between three types of wholesalers in the petroleum industry and these are integrated wholesalers, non-integrated wholesalers and trading wholesalers (PMG, 2013). Integrated wholesalers are oil majors that are engaged in refining. Their activities involve refining, trading, primary and secondary transport, primary and secondary storage, selling and marketing, retail customers, commercial customers and brokers. Non-integrated wholesalers are independent wholesalers who engage in wholesaling with infrastructure. Their main trading activities are selling and marketing, secondary transport, secondary storage, retail customers, commercial customers and brokers. On the other hand, trading wholesalers are independent and without infrastructure. These are also called distributors and they normally do trading, commercial customers and brokers. They are usually supplied in remote and rural areas (PMG, 2013).

	Activities								
	Refining / Manuf	Trading	Primary Transport	Primary Storage	Selling & Marketing	Secondary Transport	Secondary Storage	Retail Customers	Commercial Customers, Brokers & IW's
Integrated Wholesaler									
Integrated Wholesaler									
Integrated Wholesaler									
Integrated Wholesaler									
Integrated Wholesaler									
Trading Wholesaler / Broker									
Trading Wholesaler / Broker									
Independent Wholesaler									
Independent Wholesaler									
Independent Wholesaler									
Independent Wholesaler									
Independent Wholesaler									
Independent Wholesaler									

Figure 1: Types of wholesalers in the petroleum industry in South Africa

Source: Liquid Fuels Wholesalers Associations (2013)

The integrated wholesalers are in full control of the margins as they control the product supply and supply chain. They partially remunerate independent wholesalers through rebates. However, they do this at their discretion as they keep what is required to maintain the shareholder expectations and what they can afford (Liquid Fuels Wholesalers Associations, 2013). It is reported that these discounts or rebates have no bearing on the actual costs of independent wholesalers. Furthermore, since the discounts and rebates are given at the integrated wholesaler's discretion, there is no mechanism to ensure that the cost elements of the margin are transferred to where the costs take place, where the independent wholesaler incurs the cost of collecting their product (Liquid Fuels Wholesalers Associations, 2013).

The Liquid Fuels Wholesalers Association argues that the existing cost recovery and pricing modes do not promote efficiency. Lack of storage, especially at the Durban Harbour was cited as one of the challenges the sector is facing. On the whole, Liquid Fuels Wholesalers Association argues that the petroleum industry is highly unattractive due to the existing cost recovery and pricing models that do not promote the development of small businesses in the sector (PMG, 2013).

1.3.2.3. *Retailing*

The first retail licence was issued for the first time in 2005 in terms of the Petroleum Products Amendment Act, 2003 (SAPIA, 2014). There is approximately 4 600 service station in South Africa that are either company-owned or dealer owned (SME South Africa, 2017). The operating sites are typical categories as Oil Company owned Retailer operated (CORO), Oil Company leased Retailer operated with variations (CLRO), Retailer owned Retailer operated (RORO), and Retailer leased Retailer operated with variations (RLRO) (SAPRA, 2017). Some stations are independently operated and unbranded. The initial set-up capital requirements range between R10 million for an average site to R100 million for a double-sided highway site (Businesstech, 2019; Thulo, 2018). Depending on the profitability, buying an existing site would cost between R2.5 million and R35 million. The working capital requirements for a new site range between R1.2m and R1.5 million (Thulo, 2018). Other alternative profit opportunities provide additional revenue to the fuel retailers and these include car washes, a convenience stores, and a restaurant (Thulo, 2018). Thus, these large capital start-up requirements could act as a barrier to entry into the industry. For those who would borrow from the banks, their initial years of operations will be characterised by huge amounts that go to loan repayments.

Retailers cannot negotiate and manage contracts, for example, the structure of royalties and rental payments (Department of Energy, 2013). The existence of regulated and unregulated price points within the same value chain puts retailer margins under pressure. Furthermore, the retailers are left without much flexibility and control over the outcome because the value chain supply is controlled by the oil companies (Fuel Retailer's Association, 2017). Fuel retailers tend to only benefit from incentives provided by the oil companies. Oil companies also dictate the percentage of the commission, which put the retailer at disadvantage. According to the Fuel Retailer's Association (2017), the pricing model is not aligned with the other legislative objectives that are transformative. For instance, while the legislation wholesalers from operating the business, it allows them through the pricing system to earn a profit that is related to operating the business.

	<i>Retail</i>	<i>Wholesale</i>
<i>Petrol</i>	Regulated Pump Price	Unregulated
<i>Diesel</i>	Unregulated	Unregulated
<i>LPGAS</i>	Regulated Maximum Price	Unregulated

Figure 2: regulated and unregulated price points

Source: Fuel Retailers Association (2013)

The retail margin is the most contested portion of the value chain between retailers and oil companies. Fuel Retailers Association (2013) argues that the value that accrues to the retailer is not as high as it may seem and at the end of the day, the retail margin is the lowest share of the pump build-up price. The association explains that the problem arose due to the issue of unregulated costs versus regulated margin. The unregulated costs are related to bank charges, credit card costs, and oil company rental/franchisee fees, among others. According to the Fuel Retailers Association (2013), all of these costs are driven by pump price increases since they are based on a percentage of turnover whilst costs allocated are based on fixed cents per litre. In addition to the margins being flat, they are further split between the operator and the investor (SAPRA, 2017).

Despite the low margins, fuel sales account for a larger proportion of the retailers' turnover between 80% to 90% of the total annual turnover (SME South Africa, 2017). The remainder of the turnover is made up of revenues from other operations such as a convenience store, carwash, bakery and quick-service restaurant. The situation is further exacerbated by the volumes that remain constant. Fuel retailers lack an understanding of Regulatory Accounts System (RAS)

implementation methodologies and as a result, they are under-compensated in terms of the stipulated margins relative to their costs of doing business (SAPRA, 2017). The margin is also affected by other factors such as crude oil prices, exchange rate, labour costs, and regulations, among others (SME South Africa, 2017). According to SME South Africa (2017), the margin also remains constant despite the fuel price fluctuations. However, as turnover increases, turnover-related expenses such as cash handing fees also increase further negatively impacting the profitability of a retailer.

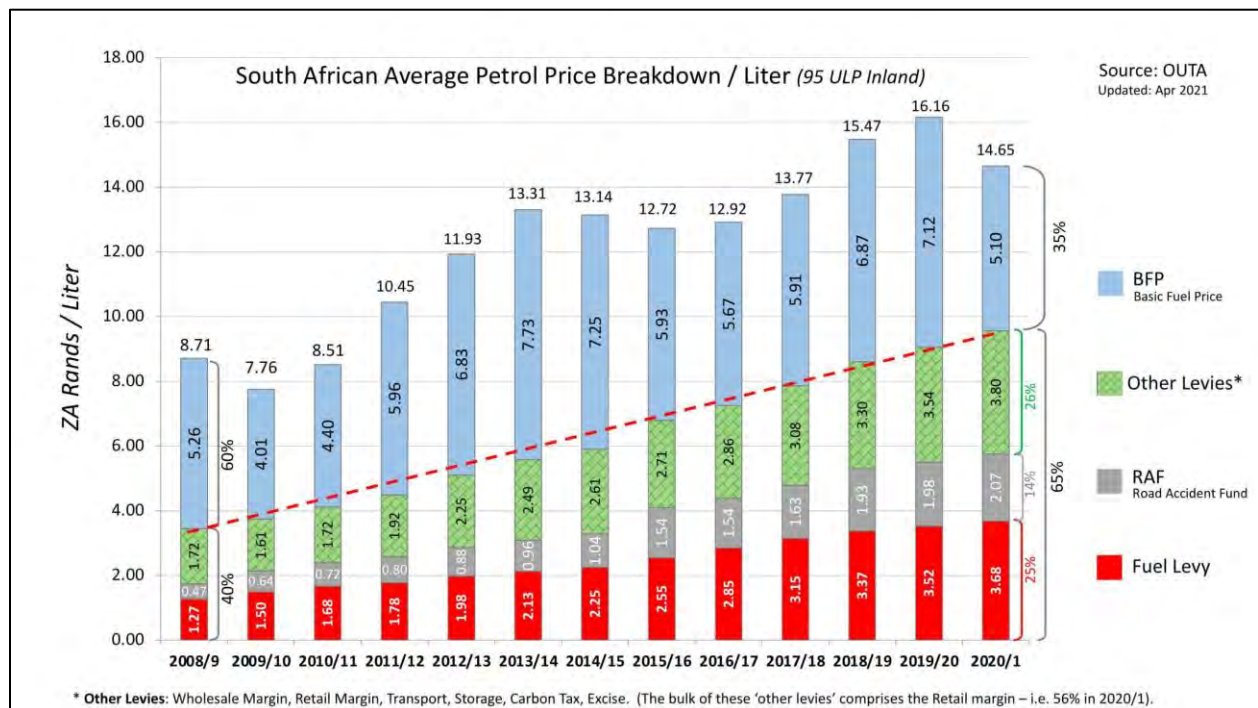


Figure 3: Average Petrol Price Breakdown per Litre (95 ULP inland)

Source Businesstech (2021b)

Research suggests that despite the various legislation and policies that seem to promote transformation in the petroleum industry in South Africa, there is still a long way to go even after more than 20 years of democracy (Department of Energy, 2013; Kapdi, 2017). Rules to on-sell are very stringent and restrict black retailers from selling in the event of financial challenges. Some of the main attributing factors to the slow transformation agenda in the retail sector relate to the fact that Black Africans and Coloured are overlooked for the more lucrative opportunities like high volumes sites, the process of applying for funding has serious hurdles for Blacks and Coloureds and the transferability of site licences (Department of Energy, 2013). Lack of transformation in

the retail sector is also attributed to none-attendance by owners for the Skills Development, Enterprise Development and Supplier Development, lack of a standard Retailer Career Development and Leadership Development Program in place and Service Station Ownership Development Program

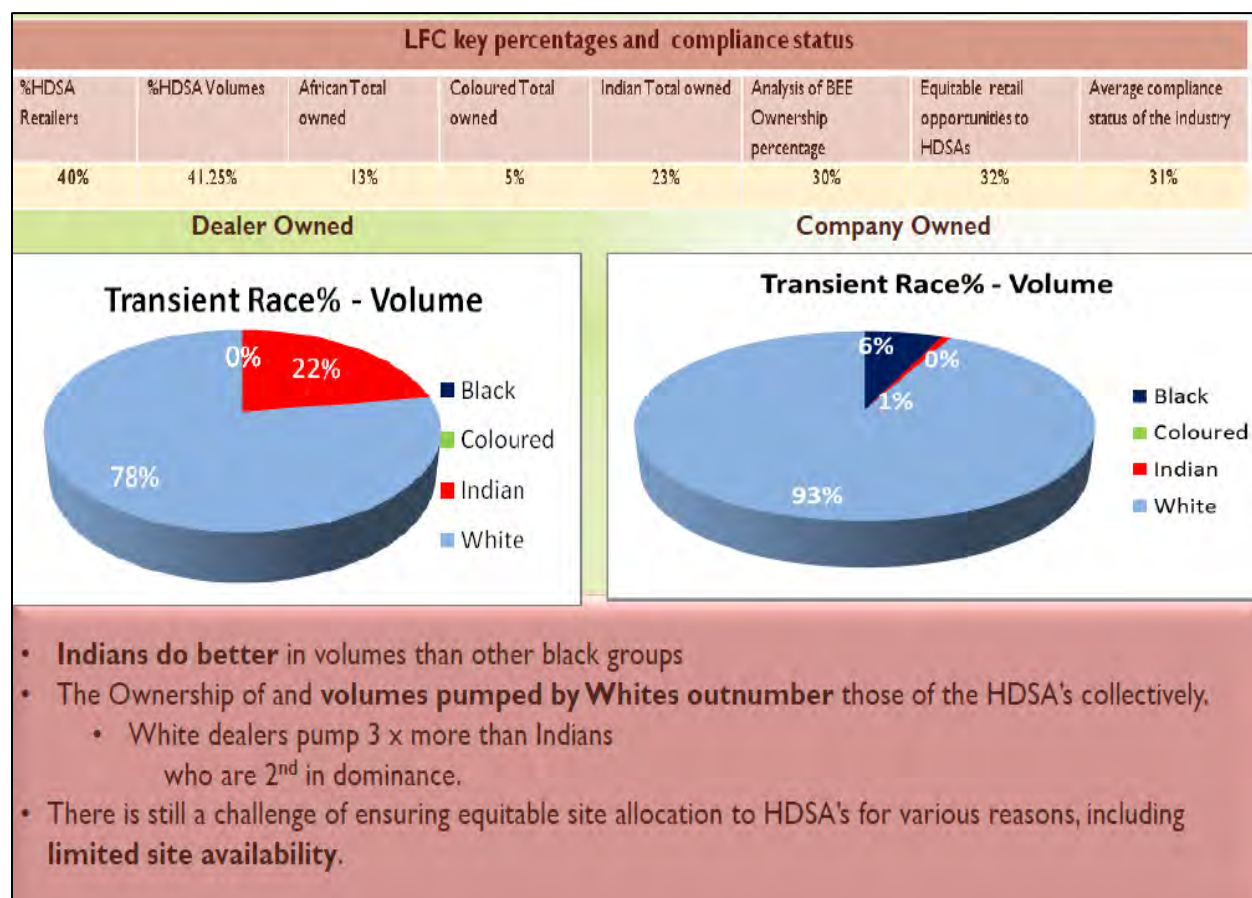


Figure 4: Transformation in the Petroleum Downstream – Retailing (Exc. Shell and Sasol oil)

Source: Department of Energy (2013)

The South African Petroleum Retailers' Association (2021) identified further challenges within the retailers that are related to local government, oil price changes or a general service decline. The fuel prices in South Africa fluctuate every month driven by inflation and taxes. Another challenge relates to poor service delivery, which results in customers not returning (South African Petroleum Retailers' Association, 2021). According to Thulo (2018), for every R1 increase in the price of fuel, a retailer would require approximately R100 000 additional working capital.

1.3.3. The pricing system for petroleum products in South Africa

Within the South African context, the price of petrol, diesel and illuminating paraffin is made up of the BFP, Magisterial District Zones (MDZ), Regulatory RAS) (for petrol only) and government taxes and levies (SAPIA, 2019). This section discusses these elements in detail.

1.3.3.1. *Regulatory Accounting System (RAS)*

RAS was initially introduced in 2011 from the M-Par system and fully implemented in 2013. The RAS system provides a methodology to calculate the industry margins and guidelines for computation are provided by the DMRE. A RAS manual was finalised by the DMRE, which serves as working rules for the computation of RAS margins. The RAS margins apply to the secondary storage, secondary distribution, wholesale and retail margin of petrol, and the wholesale margin of diesel and illuminating paraffin. According to the Liquid Fuels Wholesalers Association, the primary focus of RAS guidelines is to ensure expense recovery and return on investment (PMG, 2013). The Association further argued that the independent wholesalers are not protected by the RAS guidelines as compared to the fuel retailers for the following reasons:

- The wholesale margin and service differential do not include all the costs or the actual costs of servicing the market such as independent wholesalers' depots and small delivery customers.
- The independent wholesalers purchase the product at a non-activity-based price but sell to retailers at activity-based prices, which suggests that there are problems with the current wholesale margin methodology.

1.3.3.2. *Government taxes and levies*

Fuel levy in South Africa is a tax that is charged on petroleum products such as petrol, diesel and biodiesel (Ncanywa & Mgwangqa, 2018). There are three main types of fuel levies in South Africa and these are the general fuel, customs and excise levy and the RAF levies (National Treasury, 2020, 2021). However, there are two levies, the general levies and the RAF that constitute about 40% per litre of petrol and diesel (Droppa, 2021). The carbon tax became effective in 2019. According to Droppa (2021), following the Finance Minister's 2021 budget speech, the general fuel levies have been increased to R3.77 per litre of petrol and R3.63 per litre of diesel and the

RAF was increased to R2.07 per litre for both petrol and diesel. The total effect of the levy increased in absolute terms is R5.84 per litre of petrol (which is more than 37% of the total cost) and R5.70 per litre of diesel (which is more than 42% cost based in the recommended resale price).

Table 1: Total combined fuel taxes on petrol and diesel

Rands/litre	2018/19		2019/20		2020/21	
	93 octane petrol	Diesel	93 octane petrol	Diesel	93 octane petrol	Diesel
General fuel levy	3.37	3.22	3.54	3.39	3.70	3.55
Road Accident Fund levy	1.93	1.93	1.98	1.98	2.07	2.07
Customs and excise levy	0.04	0.04	0.04	0.04	0.04	0.04
Carbon tax ¹	–	–	0.07	0.08	0.07	0.08
Total	5.34	5.19	5.63	5.49	5.88	5.74
Pump price ²	15.30	14.20	13.86	13.14	15.71	14.57
<i>Taxes as percentage of pump price</i>	<i>34.9%</i>	<i>36.5%</i>	<i>40.6%</i>	<i>41.8%</i>	<i>37.4%</i>	<i>39.4%</i>

Source: National Treasury (2021)

1.3.3.3. Magisterial district pricing zones (MDZ)

MDZ, also known as primary transport costs, relates to the cost of moving fuels from the point of supply, which is usually located on the coast to the inland distribution centres through pipeline and road. The tariffs related to the MDZ are adjusted annually and are subject to approval by the Minister of Mineral Resources and Energy. The MDZ system is calculated based on the standard costs for road transport as provided by the Road Freight Association (RFA) and the actual pipeline rates as set by the National Energy Regulator, NERSA, for Transnet Pipelines (SAPIA, 2019). The MDZ for road and pipeline transport tariffs are applicable for the calculation and adjustment of petrol, diesel and illuminating paraffin prices.

1.3.3.4. Basic Fuel Price (BFP)

The BFP concept is based on import parity, a mechanism that has been chosen to provide a realistic, market-related cost of importing a substantial amount of fuel as per the requirements of South Africa. The assumption is that the supplies from overseas refineries are aligned to South Africa's requirements in terms of product quality and sustained supply requirements (SAPIA, 2019). This formula allows the monthly adjustments for all grades of petrol, diesel and illuminating paraffin every month starting on the first Wednesday of each month.

1.3.4. Supply and demand for diesel and petrol in South Africa

There are six refineries in the country, four of the refineries on the coast (Chevron, Cape town; Enref, Durban; PetroSA, Mossel bay; and Sapref (BPSA owns 50% and Shell 50%, Durban) and two inland Natref (Sasol oil owns 64% and Total SA 36%), Sasolburg and Sasol Synfuels, Secunda) (Department of Energy, 2019a). Table 2 shows the local refining capacity in South Africa between 2010 and 2019, measured in terms of barrels per day (bbl/day). Based on the 2019 output, the table shows that Sapref and Sasol account for 46% of the local production. Local production remained constant between 2010 and 2015 and rose by 2% in 2016 and remained constant through 2019.

Table 2: Capacity of South African refineries

Capacity (bbl/day)

Refineries	2010	2013	2014	2015	2016	2017	2018	2019
Sapref	180 000	180 000	180 000	180 000	180 000	180 000	180 000	180 000
Enref	120 000	120 000	120 000	120 000	135 000	135 000	135 000	135 000
Chevref	100 000	100 000	100 000	100 000	100 000	100 000	100 000	100 000
Natref	108 000	108 000	108 000	108 000	108 000	108 000	108 000	108 000
Sasol*	150 000	150 000	150 000	150 000	150 000	150 000	150 000	150 001
PetroSA*	45 000	45 000	45 000	45 000	45 000	45 000	45 000	45 001
Total	703 000	703 000	703 000	703 000	718 000	718 000	718 000	718 002

*Crude equivalent

Source: SAPIA (2019)

The consumption of petrol in South Africa increased by 7% between 2009 and 2012, which was followed by a decline of 11% between 2012 and 2019. Overall, there was a decline in petrol consumption over the ten years between 2010 and 2019 of 6%. This translates to a decrease in the consumption of petrol in South Africa by 0.6% per annum on average. The observed decline in consumption could be due to a decline in the market share of petrol-fuelled vehicle sales (Department of Energy, 2017), the increase in petrol prices and unfavourable economic conditions (Department of Energy, 2015). On the other hand, the consumption of diesel increased by 50% between 2009 and 2015 and then picked a downward trend between 2015 and 2019, which is an overall decline of 9%. This represents an annual decrease in diesel consumption of 1.8% per annum

on average, which could be due to unfavourable economic conditions (Department of Energy, 2017; StatsSA, 2022).

Table 3: Consumption of petroleum products in South Africa

Year	Millions of litres					
	Petrol	Diesel	Paraffin	Jet fuel	Fuel oil	LPG
2009*	11 321	9 437	551	2 349	724	554
2010*	11 455	10 170	545	2 308	468	612
2011*	11 963	11 225	581	2 434	477	717
2012*	11 714	11 262	470	2 367	568	656
2013*	11 153	11 890	530	2 223	523	485
2014*	11 344	13 169	558	2 197	487	398
2015*	12 072	14 178	573	2 441	591	588
2016*	10 160	10 846	558	2 121	562	557
2017**	11 174	12 147	648	2 713	523	551
2018**	11 142	12 539	702	2 346	552	504
2019**	10 773	12 909	620	2 439	410	495

* Paraffin includes power paraffin and illuminating paraffin

**2019 data sourced on 25 March 2020

Source: SAPIA (2019)

Figure 5 illustrates the supply, demand, and imports of petrol in South Africa between 2009 – 2018. The figure shows that following a year-on-year increase of 16% between 2009 and 2010, the production of petrol in the country was steady from 2010 until 2017 when the output dropped by 10% but later recovered slightly in 2018. The consumption of petrol exceeded the local production over the ten years. This suggests that the excess demand had to be met by imports. In this regard, petrol imports peaked to 2.4 billion litres in 2011 but exhibit a decline of 1.4 billion litres in 2016 and only recovered between 2017 and 2018. South Africa highly depends on imports for its crude oil requirements (Department of Energy, 2019a). Furthermore, Figure 5 shows that the consumption requirements for petrol in South Africa exceed the local production and as such the balance is supplemented by imports.

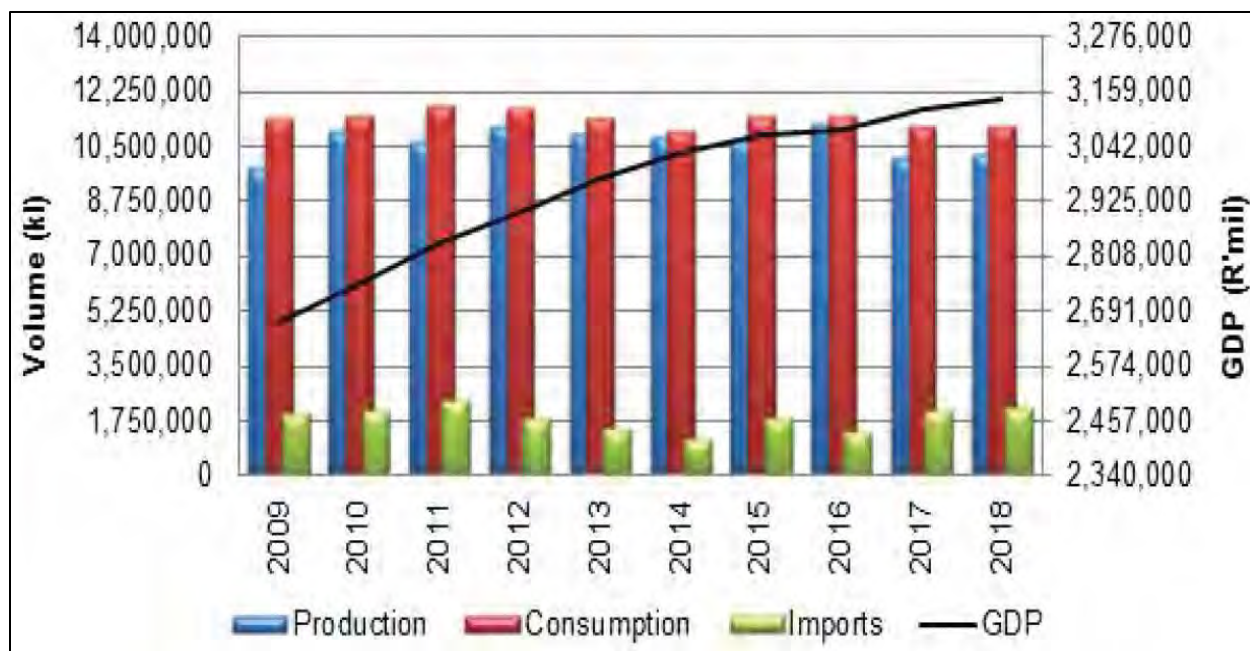


Figure 5: Supply and demand of petrol: 2009 - 2018

Source: Department of Energy (2019b)

Figure 6 shows the supply, demand and imports of diesel in South Africa. The figure shows that diesel production in South Africa averaged 8.7 billion litres per annum between 2009 and 2018. The figure further illustrates that diesel consumption grew at an annual rate of 3% on average. However, there was a drop in the consumption of diesel between 2016 and 2018. The figure further illustrates that the demand for diesel exceeded the local supply, a shortage which was completed by imports. Diesel imports grew by 10.3% per annum between 2009 and 2019.

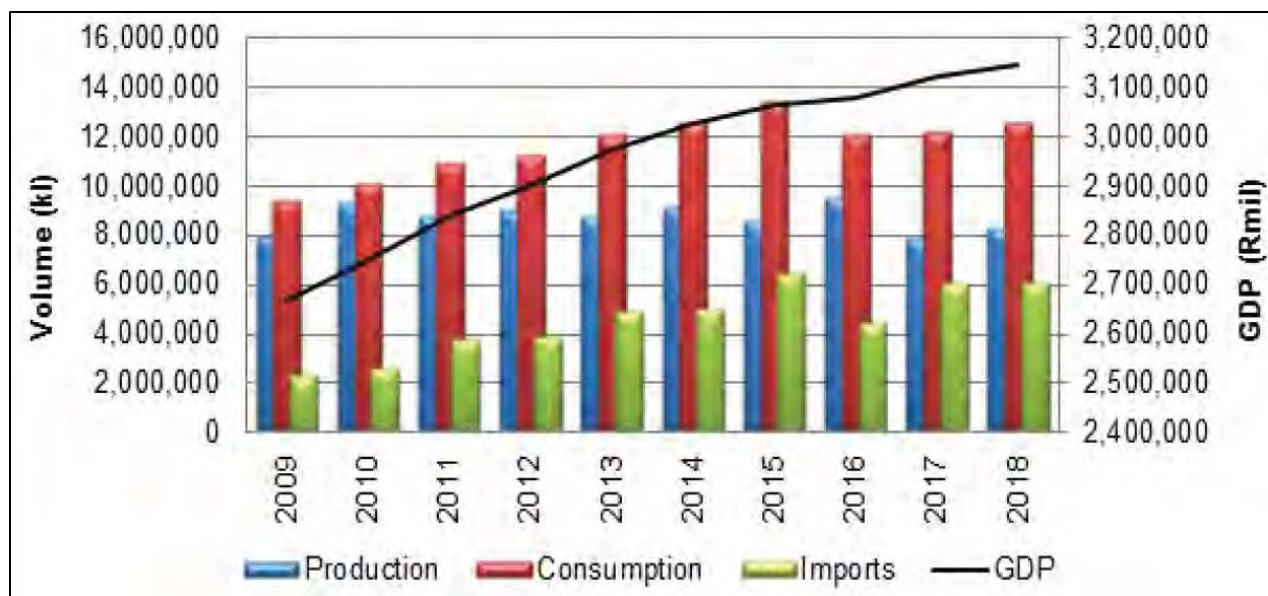


Figure 6: Supply and demand of diesel: 2009-2018

Source: Source: Department of Energy (2019b)

1.4.THE CONTEXT OF THE RESEARCH PROBLEM

It is non-arguable that the retail segment of the petroleum industry is vital, for the SA liquid fuel industry, with more than 50% of the country's petroleum products being distributed to consumers through a retail service station, its contribution to job creation impacts society lively hood positively and to its contribution to the broader economic growth and development. However, the profitability of these retail stations is affected by the three critical incidents. One of such incidents is the introduction and continuous increase of fuel levy by the government. These are a tax levied on petroleum products such as petrol and diesel in compliance with the 1964 South African Customs and Excise Act No 91 (Gordhan, 2012). Ncube *et al.* (2012) observe that the introduction and continuous adjustment of fuel levy may deter users of vehicles from using their vehicles and may lead to the use of alternative means of mobility such as communal transport depending on the elasticity of the levy resulting in the already declining revenues of these SMEs.

The constantly low margin for the fuel retailers is another issue that threatens their future sustainability. The retail margin remains the most contested portion of the value chain between retailers and oil companies. This is mainly due to the issue of unregulated costs versus regulated margins. The unregulated costs are related to bank charges, credit card costs, and oil company

rental/franchisee fees, among others. According to the Fuel Retailers Association (2013, all of these costs are driven by pump price increases since they are based on the percentage of turnover whilst costs allocated are based on fixed cents per litre. While being small and flat, the margin is further split between the operator and the investor (SAPRA, 2017). Despite the low margins, fuel sales account for a larger proportion of the retailers' turnover between 80% to 90% of the total annual turnover (SME South Africa, 2017). Fuel retailers lack an understanding of RAS implementation methodologies and as a result, they are under-compensated in terms of the stipulated margins relative to their costs of doing business (SAPRA, 2017). The margin is also affected by other factors such as crude oil prices, exchange rate, labour costs, and regulations, among others (SME South Africa, 2017).

1.4.1. Critical incidents in the Petroleum SMEs

There are three main types of fuel levies in South Africa and these are the general fuel, customs and excise levy and the Road Accident Fund (RAF) levies (National Treasury, 2020, 2021). However, two levies make the largest proportion of the price of petroleum products and these are the general levies and the RAF which constitute about 40% per litre of petrol and diesel (Businesstech, 2021b; Droppa, 2021). The fuel levy is an excise tax that is charged on petroleum products such as petrol, diesel and biodiesel in line with the South African Customs and Excise Act No 91 of 1964 (Gordhan, 2012; Ncanywa, 2018). The RAF Fuel Levy income is a charge levied on fuel throughout the country and the quantum of the RAF Fuel Levy per litre is determined by the National Treasury on an annual basis (RAF, 2018). In 2008, the fuel levy attributed 15% (or R1.27) of the average price of petrol in that year (R8.71 a litre) compared to 10 years later, when in 2021 it attributed 25% (3.68) to the average price of petrol (R14.65) (Businesstech, 2021a). Thus, there was a 190% increase in fuel levy over the twelve years between 2008 and 2021.

Research suggests that the increments of fuel levy may discourage motorists from using their vehicles in preference for public transport (Ncanywa, 2018). Fuel levy increases have been cited in the literature to have a substitution effect where consumers resort to more fuel-efficient technologies, which are cost-saving and with less carbon footprint (Ncube, 2012). Notably, the fuel levy increases between 2010 and 2019 have seen a decline in the consumption of petrol in South Africa by 6% (SAPIA, 2019). Specifically, in 2013, a fuel levy increase of 8% resulted in a

notable decrease in petrol consumption by 4.8% (Ncanywa, 2018). The decline in fuel consumption negatively affects the profitability of fuel retailers. For a fuel retailer to be profitable, it has to sell more than 370 000 litres of fuel per month yet the majority of fuel retail outlets sell 300 000 litres of fuel on average per month (Sartorius, 2007; Thulo, 2018). Past studies have also highlighted that for every R1 increase in the price of fuel, a retailer would require approximately R100 000 additional working capital (Thulo, 2018). Therefore, the increase in fuel levy in South Africa may have a negative effect on the fuel retailers' profitability and growth potential.

Reviewed literature highlighted the regulation of the petroleum industry as they focused on economic growth and transportation costs (Crompton, Sing & Filter, 2020; Mondliwa & Roberts, 2014). Crompton, Sing and Filter (2020) focused on the examination of the effect of petrol price regulations on transport costs in South Africa. Mondliwa and Roberts (2014) examined the effect of regulation of liquid fuels on the security of supply, investment, market power and consumers in South Africa. These seem to suggest that there are no studies have focused on these critical incidents and their effect on fuel levies on fuel retailers in South Africa.

The second critical incident occurred in 2005 when South Africa's petroleum industry was faced with the challenge of stock-outs (Trollip, Butler, Burton, Caetano & Godinho, 2014). Stock-out is a condition where a regular item from a retailer's shelves is missing and is not available to meet customer requirements (Vasconcellos & Sampaio, 2009). Stock-outs in the context of the current study are the shortage of fuel supplies in the country, which have negative implications on other sectors that heavily rely on fuel such as agriculture and transport. According to BP (2007), stock-outs in South Africa are caused by a lack of investment in infrastructure such as road, rail, pipeline and storage tanks, among others. This suggests that the existing infrastructure in the country is unable to support the fuel imports. Since 2005, the petroleum industry has been characterised by shortages and disruptions in the supply of liquid petroleum products (Wakeford, 2013).

The constrained transport capacity has increased the cost of fuel supply in South Africa (Matthews & Sexsmith, 2010). These supply disruptions position oil companies in stronger bargaining power with fuel retailers (Paelo, Robb & Vilakaz, 2014). Fuel retailers are held accountable for the breach of contract when they run short of fuel but they have no recourse against the oil companies due to the one-sided agreements that are in place (Fuel Retailers Association, 2020). The imbalance of power along the value chain suggests that fuel retailers are constantly faced with challenges of low

margins and high operating costs, which adversely affect their profitability. In 2020, fuel retailers were threatening to strike because of petrol and diesel shortages caused by problems with the petroleum supply chain as outlined above (Fuel Retailers Association, 2020).

A third critical incident is the fuel refinery and distributor strike and its effect on a supply chain risk factor classified as a transportation risk factor (Ho *et al*, 2015). There has been a series of strikes in South Africa's oil refineries and their distribution networks for the past ten years. In 2011, the Chemical, Energy, Paper, Printing, Wood and Allied Workers Union (CEPPWAWU) members engaged in strike action over a wage dispute, affecting the distribution of fuel to Gauteng retailers in Alrode, Alberton, Waltloo, Langlaagte, Germiston and Mamelodi (SAPIA, 2011). The following year in 2012, a Road Freight Sector strike was reported for road freight drivers over a wage dispute in the road freight and logistics industry (SAPIA, 2012). Another massive strike action, which lasted for more than two weeks was reported in 2016, covering South Africa's oil refineries and their distribution networks sparked by a wage dispute with CEPPWAWU (Businessstech, 2016; Dano & Mngoma, 2016).

The impact of these strike actions has been usually assessed based on their effect on the overall economy and the transport section and less so on the fuel retailers (Taylor, 2010). From a research perspective, a literature search by the researcher suggests insufficient studies done in South Africa focusing on how strikes impact fuel retailers.

The fuel retail sector in South Africa is of particular interest for this study because it is characterised by SMEs whose success remains threatened in the absence of adequate support. Research suggests that the majority of the fuel retailers in South Africa are not profitable (Bailey, 2011; Boston Consulting Group, 2019; Nair, Law & Seedat, 2020; Sartorius, 2007; Thulo, 2018). The threat to the success of the fuel retail sector in South Africa is demonstrated by the profit levels that have been reportedly declining over the past recent years (Sartorius, 2007). In this regard, it is predicted that the majority of the fuel retail small businesses will not be profitable at all by 2035 (Boston Consulting Group, 2019). Furthermore, the fuel retail sector is heavily regulated so it is difficult for business people to offer discounts on fuel sales (Nair, 2020).

Overall, the attributing factors to low-profit levels in the sector have been identified by research as both internal and external to the businesses. The internal factors are associated with the rand-based retail factors, oil company marketing margins, transport costs, and taxes and levies. On the

other hand, external factors are related to the dollar price on the international price, the exchange rate, regulations and price fluctuations. The external factors are outside the control of the industry and while they move constantly, they account for the most monthly price fluctuations in South Africa (Department of Energy, 2017). Combined, these factors threaten the success of fuel retailers in South Africa. The success of the fuel retail sector is critical due to the economic significance it holds in terms of national output and employment (Ardito, 2018; Fatoki, 2018; Thomas, 2005).

The guiding research problem for this study is:

How have the three critical incidents of fuel levy increases, stock-outs and industrial strikes affected the profitability of fuel retailers in the South African petroleum industry?

1.5. RESEARCH PURPOSE AND OBJECTIVES

The main purpose of the study is to investigate the impact of three critical incidents of fuel levy increases, stock-outs and strikes on SMEs within the Petroleum retail sector in South Africa. To achieve this goal, the following were research objects:

- a) To assess the impact of the fuel levy increase on the SMEs in the petroleum sector, particularly petroleum retailers in South Africa.
- b) To explore how Petroleum SMEs experienced fuel stock-outs in South Africa.
- c) To examine the effects of fuel distributor strikes on SMEs in the petroleum sector in South Africa.

1.6.JUSTIFICATION OF THE STUDY

Other studies were done on the fuel/petroleum industry and the impact of both external (i.e. world oil prices and foreign exchange fluctuations) and internal factors (i.e. supply value chain and regulatory framework) and my research will add to the existing empirical theory. The different aspect of the study from the existing literature is that it focuses on the impact on SMEs. The studies observed have primarily investigated the South African retail petroleum industry from the lenses of fuel price fluctuations, price elasticity of petrol and diesel, regulations issues variables and their impact on the profitability of retail station business. Equally so there are many studies on the development/and challenges of SMEs in a broader context. It is with this view, therefore, that an exploratory study on the impact of three critical incidents on SMEs within the Petroleum retail sector in South Africa contributes to other existing empirical studies. This study has a central focus

on the importance/role of SMEs within the retail petroleum industry and ultimately the South African economy.

Sartorius *et al.* (2007) opine that a significant number of stations are not profitable. According to Sartorius *et al.* (2007), location has a significant influence on urban retail fuel sales volumes (Sartorius, 2007). Matsho (2010) states that increases in the fuel prices impact the profitability of the service station retailers, as the effect of price increase of petrol and diesel products are financed by the retailers until the products are purchased by the motorist. The retailers are SMEs with limited capital resources to respond to the constantly changing petroleum retail business environment. Furthermore, fuel retailers are affected by many factors like labour, logistics, regulations, international supply and rand/dollar exchange rate, among others (Matsho, 2010).

This study, therefore, focuses on the supply chain challenges faced by small businesses in the downstream sector in South Africa and how they impact their profitability. To achieve this, the study focuses on examining the response of SME retail stations to the three critical events/incidents which impact their business performance (profitability). First, changes in pricing structure (Fuel Levy) have a long-term significant impact on the cash flow for the fuel retailers and ultimately the consumers - since the retailers can pass all the costs of fuel over to the customers through the regulated price structure in SA. There is however the issue of working capital requirements, for instance, a 25cpl increase in the fuel levy for an average monthly fuel purchase/stock for retailers with quantity a 300 000 litres equals R75 000.00 additional cash requirement for the fuel retailer. Second, fuel distributors' strikes impact the supply side of the business, causing the fuel stock out at the retailer fuel station and ultimately impacting sales/revenue. Third, stock out/fuel supply shortages from the Wholesalers (oil companies), for instance, a stock out due to BP/Total/Engen etc. inability to supply could also impact sales/revenue. These supply chain-related issues, therefore, impact the retailer performance, given that—no stock-no sale, which then impacts the revenues of small businesses.

This study, therefore, explores whether the three critical factors highlighted above have affected the profitability of SMEs in the liquid fuel retail sector in South Africa. The study chose to focus on the liquid fuel industry because socio-economic significance it holds in South Africa. In this regard, it is estimated that the oil and gas sector contributes 2% of South Africa's Gross Domestic Product (GDP) and at the same time supplies approximately 18% of South Africa's primary energy

(SAPIA, 2014). The oil and gas industry, directly and indirectly, provides more than 300 000 people with jobs (SAPIA, 2013). Findings from this study will therefore inform policy formulation geared toward mitigating challenges facing SMEs' retail service stations in the downstream segment of the oil & gas industry in South Africa

1.7. DEMARCATION OF THIS STUDY

Gauteng was considered for the study because it is South Africa's economic powerhouse. This is supported by South Africa's economic output for the year 2016, where the provincial gross domestic product (GDP) figures, the province contributed over a third to the total country's GDP (StatsSA, 2021). Furthermore, Gauteng is the industrial powerhouse of the country, consequently, the fuel consumption is dominated by Gauteng, with an average of 36% of petrol total consumption and as well as leading the diesel consumption at an average of 23.3% of the total demand (DOE, 2021). Additionally, Gauteng can be regarded as a very high social diverse province in the context that the province has a high number of immigrants from other South African provinces who are seeking employment and enterprise opportunities. In taking those considerations are the problem statement the results will be representative of the fuel retail industry.

The researcher went further to consider the constraints of the resources available to her capacity in terms of time and costs to travel to conduct face-to-face interviews. Planning the long distances whilst fulfilling the full-time role would have posed time constraints and negatively impact the timelines to complete the research. Furthermore, during the period of research, we were confronted with the global pandemic which presented other challenges concerning the lockdown and restrictions on travel and health exposure to COVID-19.

1.8.ORGANISATION OF THE STUDY

Chapter 1: Overview of the South African liquid fuel industry.

This chapter provides an overview of the South African liquid fuel industry. The chapter provides a contextual outline of petroleum. This contextual outline discusses the industry's pertinent aspects such as the legislative and regulatory environment within the petroleum industry, the structure of the South African petroleum industry, and the pricing system used in the industry. The chapter also includes a section on the economic importance of the fuel retail sector in South Africa.

Chapter 2: Literature Review

This chapter is a review of the existing literature and the theoretical background of the study. The chapter concludes by offering a conceptual framework for the study.

Chapter 3: Research methodology

This chapter describes the methodological approaches employed by the researcher to answer the research phenomenon. Thus, the chapter presents the research methodology and the research methods used.

Chapter 4: Presentation of the study findings

This presents the research findings based on the primary data obtained from the interviews conducted.

Chapter 5: Discussion of the findings of the study

This chapter involved a discussion of the key research findings from the current empirical investigation

Chapter 6: Conclusions and recommendations

This chapter concludes the study. It presents the conclusions and recommendations based on the key findings of the study.

1.9.CONCLUSION

This introductory chapter provided an overview of the South African liquid fuel industry. The chapter discussed and roles and responsibilities of the key stakeholders in the liquid fuel industry as well as the main policies that guide their activities. The chapter also presented the legislative and regulatory environment of the petroleum industry that is aimed at sustained economic growth through growth and investment in the energy sector. Pertinent legislation and regulations that are aimed at promoting, growth empowerment, poverty reduction, investment, sustainable development, transformation, and efficiency, among others were discussed. This chapter also highlights the structure of the South African petroleum industry, which focuses on the value chain activities that are carried out by the petroleum products manufacturers, wholesalers and retailers. Another pertinent element presented is the pricing system for petroleum products in South Africa

as framed by the RAS, government taxes and levies, MDZ and the BFP. In this regard, the pricing system for petroleum products indicates the elements that make up the price of petrol, diesel and illuminating paraffin in South Africa. The chapter gave background, context, and research objectives and concluded with the organisation of the study, the next chapter presents a review of the related past studies.

CHAPTER 2

LITERATURE REVIEW

2.1.INTRODUCTION

This chapter provides an exposition of the theoretical foundation of the study. In this regard, the chapter demonstrates that the study is situated in the Resource-Based Theory, Resilient Theory, Strategic Contingency Theory and Structural Configuration Approach. The RBV is an important theory for the current study as it provides an understanding of how SMEs in the fuel sector leverage the available resources to create resistance during unfavourable business conditions. Resilience Theory further supports the RBV as it provides for the identification of key enablers for SMEs to create resilience in turbulent times. The Strategic Contingency Theory allows for the assessment of the impact of external environmental factors such as turbulent socio-economic contexts and violent political situations on the success of small businesses. The Structural Configuration Approach complements the other three theories by focusing on how structure, people, strategy and the environment interact with each other to promote resilience for SMEs. This chapter also provides a review of the related existing literature that seeks to provide context on what is already known and unknown about the research phenomenon at hand.

2.2.THEORETICAL FOUNDATION OF THE STUDY

2.2.1. Resource-Based Theory

The existing literature suggests that the RBV can be used to study any organisation irrespective of size and type (Tehseen, Mughal, Durst, Shujahat, Qureshi & Kokkalis, 2019). In this regard, the current study is also grounded in the Resource-Based View (RBV) as developed by Wernerfelt in 1984. The RBV is of the notion that if a business possesses rare, non-imitable, unique, valuable resources, the chances are high that it will outperform those businesses that do not have such resources (Tehseen, 2019). The theory provides a framework for understanding the importance of organisational resources and explains that the performance and success of an organization depend on the resources that an organisation owns and controls (Godwin-Opara, 2016; Wernerfelt, 1984). The RBV, therefore, allows an investigation of the differences in performance of firms based on resources that they possess and other internal competencies (Peteraf & Barney, 2003).

According to Wernerfelt (1984), a resource can be anything that can be viewed as a strength or a weakness within a business. These are the inputs that are used in the daily operations of a business (Amit & Schoemaker, 2012). The resources of a business can be categorised as financial sources, physical resources, human resources, technological resources, and organisational resources (Greene, Brush & Brown, 2015). In terms of the RBV, a business can gain a competitive advantage by effectively utilising the resources it owns (Barney & Hesterly, 2012). Resources are important for SMEs as they help them effectively implement strategies and increase revenue (Kozlenkova, Samaha & Palmatier, 2013). In this regard, resources are important for small businesses as it allows them to either exploit opportunities or minimise threats (Barney, 2012).

Small businesses, unfortunately, are likely to have common resources that are not distinctively different from each other. This has sparked some research interest towards an understanding of the applicability of RBV for analysing small businesses. For instance, Tehseen *et al.* (2019) argue that the Composition Based View (CBV) provides a better analytical framework compared to RBV for studying small businesses. CBV is based on the notion that a business can grow and achieve success although it lacks the critical competencies and does not have the benefits of market power and resources (Luo & Child, 2015). Thus, the RBV has faltered on the basis that it does not organisational context into consideration (Sergeeva & Andreeva, 2006).

Another strand of literature argues that the RBV does not address the issue of whether an organisation's resources are static or evolve (Tehseen, 2019). In this regard, several studies have confirmed that the firms' resources are reconfigured and adapted to the changing business environment (Klier, Schwens, Zapkau & Dikova, 2017; Nason & Wiklund, 2018). Despite these limitations of the RBV, several studies have adapted the theory for small business analysis (Godwin-Opara, 2016; Runyan, Huddleston & Swinney, 2007).

Adebisi and Bakare (2013) employed the RBV as its theoretical lens along the Strategic Choice Theory and Success Base Theory to analyse the success strategies and sustainability of small businesses in an unstable business environment in Nigeria. Based on these theories, the study found that there is a positive linkage between success strategies of cost leadership, focus and product differential and the success of small businesses in the country.

Runyan *et al.* (2007) have demonstrated the applicability of the RBV within the small business context. According to the author, the uniqueness of resources for small businesses can be viewed

within the confinement of their operating environment. For instance, a business can survive by focusing on resources such as community brand identity, local social capital and environmental hostility. Amongst these aspects, Runyan *et al.* (2007) highlight that social capital is a resource that can be used in more hostile environments.

Godwin-Opapa (2016) used the RBV as an analytical lens to gain an understanding of how obtaining financial resources could potentially contribute to business success in South Central Kansas, United States of America. The researcher employed a qualitative research approach based on multiple case studies in an endeavour to gain an in-depth understanding of what strategies are needed for a business to obtain financial resources that could help to achieve financial sustainability. In this regard, the study found that access to finance plays a critical role in business success but small businesses lack the strategies that are required to secure financial resources for the business to be financially stable.

Despite the critics levelled against the RBV, the theory still serves as a suitable analytical framework and can be modified to suit the context in which it is applied (Eisenhardt & Martin, 2000). In this regard, the study takes a dynamic capability approach, which is more dynamic wherein internal characteristics of an organisation can be reconfigured in such a way that the business can attain a sustained competitive advantage. While the RBV does not explain where the resources and capabilities come from nor whether they become obsolete, the dynamic approach explains that there is more than just resources to explain organisational performance (Priem & Butler, 2001). Thus, the dynamic capabilities hold that the resources held by organisations can be adjusted in line with changes in the operating environment (Priem, 2001). According to Priem & Butler (2001), the dynamic capabilities perspective is based on the RBV's view of organisational capabilities for superior performance and modifies it by replacing static capabilities with a version of dynamic capabilities. This is a deviation for the RBV that organisation capabilities only come as a result of the unique resources possessed by a business. Rather, a dynamic approach combines the interaction between the external environment and internal configurations in explaining organisational performance.

2.2.2. Resilience Theory

The concept of resilience first emerged in the field of ecology in 1973 by a Canadian ecologist, Crawford Stanley Holling. According to Holling (1973), resilience is the persistence of relationships within a system and the degree to which these systems can absorb changes in the state of variables, driving variables and parameters and persist. The concept of resilience has since spread to other disciplines such as organisational management (Hamel & Valikangas, 2003; Linnenluecke, 2017; Pal, Torstensson & Mattila, 2014; Pizzurno, 2018; Xiao & Cao, 2017). From an organisational management conception, resilience is viewed as the ability and power of an organisation to resume, rebound or positively adjust to unfavourable events that threaten its existence (Chrisman, Chua & Steier, 2011; Sutcliffe & Vogus, 2003).

Organisational resilience can also be defined as the ability of an organisation to effectively absorb, develop situation responses and ultimately engage in transformative processes to capitalise on the disruptive event that poses a threat to its success (Lengnick-Hall, Beck & Lengnick-Hall, 2011). An organisation can face disruptions and unexpected events in advance which is linked to the operational management of both internal and external shocks (Annarelli & Nonino, 2016). According to Ismail, Poolton and Sharifi (2011), the resilience of an organisation develops over time and it is as a result of the ability to deal effectively with stress and strains that it cannot only survive but thrives due to harsh conditions. Notably, all these definitions of resilience emphasise the success, adaptability and development following a challenge experienced.

Some researchers have suggested several enablers that could potentially support businesses to develop resilience capabilities (Bhamra, Dani & Burnard, 2011; Ismail, 2011; Pizzurno, 2018). For instance, Bhamra, Dani and Burnard (2011) highlighted that capabilities, flexibility and adaptability, available resources, optimism, motivation, perseverance, efficiency, and diversity are directly linked to organisational resilience. Sawalha (2015) identified factors such as people, network development and core business as key enablers of organisational resilience. Ismail, Poolton and Sharifi (2011) also indicated that it is of importance that an organisation is agile and proactive towards the development of new products and service offerings, and capabilities to meet dynamic consumers' needs.

Pizzurno (2018) categorised the key enablers of SMEs' resilience into strategy and resources based. In terms of strategic enablers, the author highlighted that key focus should be given to investments in the core business such as increasing the rate of product offering, product diversification, product pricing and increasing the distribution channels. In terms of resources, Pizzurno (2018) stated that small businesses should ensure that capital is available, use upmarket machinery and equipment, engage in new product development processes and ensure that they provide excellent after-sales services.

2.2.3. Strategic Contingency Theory

The strategic contingency theory is based on the notion that the external environment plays a critical role in any business's success (Lawrence & Lorsch, 1967; Tehseen, 2019). The core concept of Strategic Contingency Theory suggests that a proper alignment between internal and external factors will have a positive influence on performance (Linton, 2014). Donaldson (2001) stressed that organisational performance is brought about as the best fit between structural and environmental characteristics, which are referred to as contingency factors. Fiedler (1964) posits that a distinction needs to be made between an organisation's general environment and the task environment. A task environment in this context refers to everything that results in the immediate attainment of the organisational goals such as technology, leadership, sales networks, sources of finance, human resources and market structures. To analyse the whole environment will be time-consuming as it will be too broad and complex, as such, it is important to have an idea of which criteria to focus on (Sorge, 2002).

The Strategic Contingency Theory is mostly suitable for turbulent socio-economic contexts and violent political situations that pose threats to the success of small businesses. In this complex operating environment, conventional management theories and practices may not be applicable.

2.2.4. Structural Configuration Approach

The structural configuration approach first appeared in a study by Khandwalla (1977) and was further developed by the likes of Khandwalla (1977), Miller (2011) and Tushman and Romanelli (1995), among others. The structural configuration approach provides us with an understanding of the strategy structure, leadership and the environment interact to produce their desired results (Miller, 2011). Literature suggests that the success of SMEs is largely affected if there is a

misalignment between the strategies and structure (Chandler, 1962). Burns and Stalker (1961) suggest that a mechanistic structure can be adopted in a more stable, while an organic structure is the best structure for businesses to adopt in turbulent situations. In a stable environment, patterns can be identified among common organisational attributes such as the environment, leadership, structure and strategy and these dimensions interact to form configurations that influence organisational performance (Kraus, Kauranen & Reschke, 2011; Miller, 2011).

Fabac (2010) advocates for an organic structure, which they found to have a high level of complexity and enhance the ability of the business to easily adapt to change. Researchers such as Sibindi and Samuel (2019) found that a hybrid structure is more suitable when confronted with an unstable operating environment. The structural configuration allows simultaneous analysis of more than two domains such as structure, people, strategy and the environment, unlike the contingency approach which is restricted to an analysis of two domains (Harms, Kraus & Schwarz, 2009). In this regard, each domain is made up of variables that are contextually related to it. According to Harms, Kraus and Schwarz (2009), configurations can be seen as specific patterns that make up the domains. Since the elements within a domain are not necessarily linked linearly, the configuration approach can be viewed as an extension of contingency theory, which provides for not only dependencies but also interdependencies (Reeves, Duncan & Ginter, 2003).

A configuration approach is about the analysis of the mutual interaction between structure, people, strategy and the environment. Configurations allow an organisation to be analysed as a whole and to thematically probe into how and why their elements interrelate and complement one another to drive organisation performance (Miller, 1996).

2.2.5. Theoretical Summary

Overall, the above-stated four theories were considered important in investigating the impact of three critical incidents of fuel levy increases, stock-outs and strikes on SMEs within the Petroleum retail sector in South Africa. The RBV helps us to understand how SMEs in the fuel sector leverage the available resources to create resistance during unfavourable business conditions. In this regard, the theory is used to assess the ability of SMEs to utilise the resources at their disposal to neutralise the threat posed by the three critical incidents (Ismail, Mokhtar, Ali & Rahman, 2014). A related theory, Resilience Theory, further supports the RBV by identifying key enablers for SMEs to create

resilience in turbulent times. While the study is about investigating the impact of the three critical incidents on SMEs, Resilience Theory allows us to go beyond the assessment of the impact to also investigate how SMEs adapt to change (Fatoki, 2018; saad, Hagelaar, van der Velde & Omta, 2021). The Strategic Contingency Theory allows the assessment of the impact of external environmental factors such as turbulent socio-economic contexts and violent political situations on the success of small businesses. In this regard, the theory can be used to assess how SMEs are structured in response to a crisis emanating from three critical incidents (Ndungu, 2017). The Structural Configuration Approach complements the other three theories by focusing on how structure, people, strategy and the environment interact with each other to promote resilience for SMEs. In the context of the current study, the theory helps in capturing patterns among the environmental, strategic and organisational factors that can lead to effective management control of business threats.

2.3.A REVIEW OF EXISTING LITERATURE

2.3.1. South African studies

Several past studies have shown considerable interest in the performance of the fuel retail sector in South Africa (Matsho, 2010; Petljak, 2017; Sartorius, 2007). Sartorius *et al.* (2007) for instance employed quantitative research methods to investigate the key variables that influence the profitability of the fuel retail sector and to develop a model to predict retail fuel sales volumes in an urban setting. The study found that a fuel station location plays a significant role in the ability of a retailer to make increased sales. Other factors such as station size and the fuel price were found to have a lesser impact on the retails sales. Interestingly, the study found that these two factors, however, have a bearing on the profitability of the retailer. According to Sartorius *et al.* (2007), a fuel retailer has to sell more than 370 000 litres of fuel per month for it to be profitable. While this study provided an important insight into the key factors that matters the most when it comes to improved sales volumes and profitability, the findings cannot be generalised to the entire fuel retail sector in South Africa. Furthermore, the study failed to make a distinction between an urban set-up in the inland area and the one in the coastal area, which might have significant implications on the profitability.

In another study, Matsho (2010) employed a quantitative survey research approach to investigate the factors that threaten the success of the fuel retailers in the City of Tshwane Metropolitan Municipality area in Gauteng Province. The study found the increases in fuel prices impact the profitability of the service station retailers. This is because petrol and diesel products are financed by the retailers until the products are purchased by the motorist. The retailers are individual entrepreneurs/SMEs with limited capital resources to respond to the constantly changing petroleum retail business environment. Other factors that influence the fuel retailers' profitability were identified as high labour costs, transportation, regulations, international supply and rand/dollar exchange rate. The study however only concentrated on those fuel retailers in the City of Tshwane, which are inland sites to the exclusion of other retailers, especially in the coastal and remote areas. Still, there is a need for a study that assesses the factors that affect the performance of the fuel retailers holistically and critically looks at other pertinent issues beyond just the profit aspect.

About the transformation of the whole value chain within the petroleum industry, Paelo, Robb and Vilakazi (2014) conducted a qualitative study to explore the barriers to entry within South Africa in the wholesale of liquid fuels space. The study identified five major categories of barriers to entry and these include costs of entry, access to supply, skills and training, access to customers, and policy and regulatory challenges. While these challenges were identified at the wholesale level, their implications are also felt at other levels within the value chain such as the fuel retail level. What is not clear though is how these barriers act out when it comes to the operations of the fuel retailers.

Bailey (2011) employed quantitative research methodology to investigate the factors that contribute to the performance of the Engen Western Cape Quick Shop network in comparison to the national average. Particular factors analysed include growth rates, product offering, location, and customer service. The study in line with other previous studies found that store location, product range, price, customer services and advertising plays an important role in store choice by customers. While this study managed to identify several factors that should be considered by fuel retailers to be successful in their convenience stores, this aspect of the business is considered as an additional revenue stream and it will not survive if the core business, that is selling fuel is not thriving.

Using a quantitative research approach, Pieterse (2005) investigated the role of convenience marketing in meeting business objectives and its implementation has been successful in the petroleum industry in South Africa. Central to this study was to gain a deeper understanding of consumer buying behaviour and preferences in the sector. Using Engen as a case study, the study found that convenience marketing indeed had a positive effect on the ability of the company to achieve its objectives and its overall profitability.

Molefe (2006) employed a quantitative research approach based on a survey research design to investigate consumer motivations in forecourt convenience retailing necessary in South Africa. The study found that while the overall customer experience leads to people buying, critical aspects that as gender and race play a role in patronage.

Having reviewed the existing literature concerning the South African context, the next section will focus on international studies.

2.3.2. International studies

Petljak and Naletina (2017), based on the secondary data, investigated the importance of retail petrol stations, with a special emphasis on the success factors, customer satisfaction, education and training of employees, and technological advancement. The study focused on the introduction of retail shops at the premises of the fuel retailer as a successful strategy for the fuel retailers in Croatia. The study was premised on the backdrop of a decreasing number of petrol stations owned by small businesses. The author further states that due to the changing times, the success of small businesses in the fuel retail sector is not just an issue of the right location but it's about being consumer-oriented. In this regard, the study found that customer satisfaction is key to the success of SMEs in the fuel retail sector.

The importance of customer orientation was also echoed in a study by the Boston Consulting Group (2019). The study highlighted those fuel retailers must shift away from being vehicle-centric towards being more customer-centric to new product and service opportunities. These new opportunities include convenience store evolution, last mile and logistics, new real estate play, advanced mobility and fuelling and services. The study also highlights the fundamental issue of the need to transform the existing standard business models.

Similarly, a study conducted by KPMG (2020) highlighted that the chances are high that the business operations of the fuel retailers will be further impacted by the Covid-19 pandemic. According to the study, the sector is likely going to be affected by fluctuations in demand resulting in large unused stock, stock-outs and a narrower range of products negatively impacting loyalty, liquidity implications, and workforce challenges due to the added requirements for health and safety for both employees and customers, and drastic changes in consumer buying behaviour. In this regard, fuel retailers must put more emphasis on non-fuel offerings in future strategies. The report further stated that fuel retailers need to focus more on network rationalisation, investing in differentiating their store image, intruding on new product mix, and partnership with third-party players, especially in distribution.

In another study, Daraboš and Polić (2014) conducted a longitudinal study to assess the perspectives on the success of small petrol stations in the Republic of Croatia. The main objective of the study was to identify the key factors that influence the success of small businesses within the fuel retail sector. The study analysed key factors that are related to the market entrance of new competitors, the influence of government on competition in the market, the influence of location and the sustainability of small fuel retailers. The study found that the state takes significant measures in the petroleum industry, but these interventions appear to only benefit well-established large businesses at the expense of small businesses. Location was also found to have a significant influence on the success of small businesses in the fuel retail sector.

The positive influence of location on the success of fuel retailers was also found in a study by Onyeizugbe, Orogbu, Onyilofofor, *et al.* (2018). Onyeizugbe, Orogbu, Onyilofofor, *et al.* (2018) employed quantitative research methods based on a survey design to investigate the linkage between the location of fuel retailers with their sustainability in the Anambra State of Nigeria. The study confirmed that the fuel retailer's performance is greatly influenced by its location.

2.4.CONCLUSION

This chapter demonstrated that the study has its foundational basis in the resource-based theory, resilience theory, strategic contingency theory, and structural configuration approach. The resource-based theory infused with the dynamic capability approach was found to be a suitable theoretical basis for the study as it helps in analysing the combined interaction between the external environment and internal configurations in explaining organisational performance. Resilience

theory, on the other hand, assists the researcher in analysing how the fuel retailers were able to positively adjust to the three critical events that threatened their existence. The strategic contingency theory assists the researcher in understanding how the fuel retailers were able to align the internal and external factors to positively influence their performance. Similarly, the structural configuration approach allows SMEs to be analysed as a whole and to thematically assess how and why certain elements interrelate and complement one another to drive organisation performance. The reviewed literature provided an important insight into the key factors that have an influence on sales volumes and profitability of SMEs in the petroleum sector in South Africa. Despite, the existing related studies, there is a need for a study that assesses the factors that affect the performance of the fuel retailers holistically and critically looks at other pertinent issues such as the effect of fuel levy, stock-outs and strike actions. The next chapter discusses the research methodological approach employed for the study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1.INTRODUCTION

This chapter provides a discussion of the research methodological approach employed for the study. This gets followed by a presentation of the philosophical approach adopted by the research. The third section deals with research methodology, comprising the research design and approach. The fourth section of the chapter discusses the research methods employed for the study. This discussion includes the study population, sample sampling techniques and sample size, data collection, data collection instrument, and data analysis. The fifth section is concerned with the measures that were taken to ensure trustworthiness in the research processes followed in the study. Trustworthiness issues observed in the study include credibility, transferability, dependability and confirmability. The chapter concludes by outlining the ethical considerations that the observed during the study. These include ethical approval and access to participants, informed consent and voluntary participation, anonymity and confidentiality and data protection.

3.2.RESEARCH PARADIGM

A research paradigm can be described as the shared world view that represents the beliefs and values that guide how problems within a discipline are solved (Abdullah Kamal, 2019; Schwandt, 2001). A research paradigm is a way of describing the world view as informed by the philosophical assumptions within a discipline about the social reality (ontology), ways of knowing it (epistemology) and the value system (axiology) (Patton, 2002; Žukauskas, Vveinhardt & Andriukaitienė, 2016). Ontology is the general assumptions that are created to perceive the real nature of society to have a better understanding of it (Easterby-Smith, Thorpe & Lowe, 2008). It is concerned about the nature of existence and constitutes reality (Grey, 2014). Epistemology is concerned with what separates a reasonable assurance from opinion (Brewerton & Millward, 2001). In other words, epistemology is an attempt to clarify various possibilities of knowledge, its origins, structure, and methods and how this knowledge can be obtained, confirmed and attuned (Wiersma & Jurs, 2008). Axiology is concerned about what we believe to be true (Cropley, 2019).

For the current study, the researcher holds an ontological view that there are multiple socially constructed realities about how various factors both internal and external affect the success of SMEs in the fuel retail sector. Furthermore, the researcher has an epistemic view that knowledge about the factors that affect the success of SMEs can be obtained from the small businesses and several stakeholders within the fuel retail sector in South Africa. It is, therefore, the researcher's contention that the information obtained from these subjects is reliable because it is based on the social realities and their personal experience.

A research paradigm is important because it helps in determining the data collection and data analysis that are most appropriate for the study (Mackenzie & Knipe, 2006). Therefore, a paradigm act as a guide for the researcher to ask certain questions and adopt the appropriate methodologies to systematically provide answers to a research inquiry. In this regard, the researcher adopted an interpretivist theoretical perspective, with an ontological perspective that the researcher and reality are inseparable, epistemic views that knowledge is based on the abstract descriptions of meanings, formed from human experiences and data is gathered through interviews as research methods (Žukauskas, 2016).

3.2.1. Positivist paradigm

The positivist paradigm, which is rooted in both the natural and physical sciences is considered one of the oldest paradigms in research (Guthrie, 2010). The paradigm holds that the world is not random but follows a systematic order. Three basic techniques are entrenched in the positivist paradigm and these are reductionism, repeatability and refutation (Saunders, Lewis & Thornhill, 2012). Reductionist is concerned about the splitting off of a complex research problem into simple components that can be studied easily in explaining the complex research problem at hand (Oates, 2006). Repeatability focuses on the validity of the results, ensuring that similar results are produced if the experiment is repeated, suggesting that the findings are independent of the researcher's bias. Refutation deals with refuting the original researcher's findings if other researchers repeat the study and obtain contradicting results (Saunders, 2012). The Positivist paradigm is more applicable for theory testing (Oates, 2006) and the current study is not about that and as such, the paradigm is not considered.

3.2.2. Interpretivist paradigm

The interpretivist approach, which is situated within the constructivist epistemology, is discussed in detail in this section. According to Saunders, Lewis and Thornhill (2009), interpretivism holds that human beings are different from a physical phenomenon because they create meanings. In this regard, by taking an interpretivism stance, the researcher is expected to create new and rich interpretations of the research subject at hand. From a business perspective and for the current study, this would entail getting multiple perspectives from various SMEs and other stakeholders such as industry associations and officials from the Department of Mineral Resources. Arguably, these various stakeholders could be viewed as experiencing different realities within the sector. Furthermore, an interpretivist approach allows the researcher to explore the complex realities that are experienced by different SMEs based on their business models and other factors unique to them. The interpretivist approach has been reported to be highly used to gain a deep understanding of the complex situations within the business and management disciplines (Hatch & Cunliffe, 2006; Saunders, 2009a), and as such it is highly suitable for the current study.

3.2.3. Pragmatism

The pragmatic approach is concerned with the practical consequences and values as standards to determine the validity of the phenomenon under investigation (Saunders, Lewis & Thornhill, 2009b). Pragmatism is more popular in mixed research methods (Brierley, 2017; Johnson & Onwuegbuzie, 2004). Mixed research methods involve the use of both qualitative and quantitative methodologies in one study (Johnson, 2004; Leech & Onwuegbuzie, 2009). The pragmatic approach is usually associated with abductive reasoning, which alternates between inductive and deductive reasoning (Morgan, 2007). Thus, with the pragmatic approach, research work is viewed from more than one perspective and is inclined towards the use of the most effective and efficient ways of conducting a research study. The current study is more concerned about drawing on the experiences of fuel retailers on the impact of three critical incidents of fuel levy increases, stock-outs and strikes on SMEs within the Petroleum retail sector in South Africa. This kind of information cannot be quantified and as such, a pragmatic approach was found not to be suitable for the study.

3.2.4. Paradigm chosen in this study

The current study adopts an interpretivist approach as the study entails that a symbolic interactionist is appropriate in deriving meaning from the participants. Symbolic interactionism is a derivation from pragmatist thinking that sees meaning as an emergence of the interaction between people and focuses on the interpretation of such interactions such as meetings, discussions and teamwork (Saunders, 2009a). These realities and interactions, however, can change over time (Hatch, 2006). In essence, the tenets of symbolic interactionist hold that people interpret the meaning of objects and actions in the world and act upon those interpretations, the meanings arise as a result of social interaction processes, and these meanings can be modified through an interaction process as they try to find ways of dealing with issues they encounter (Grey, 2014). This entails that the research derived meaning from the data collected by observing it from the participants' perspectives.

3.3. RESEARCH METHODOLOGY

According to Easterby-Smith *et al.* (2008), research methodology comprises a combination of various techniques that are employed by a researcher to employ a phenomenon. It comprises key assumptions on the nature of the reality, knowledge, ethics and values and theory and practice about a given research phenomenon (Chilisa & Kawulich, 2012). It is a set of systematic procedures that are used to guide the research (Igwenagu, 2016).

3.3.1. Research approach

Research approaches are normally classified along with quantitative, qualitative and mixed-method designs (Creswell, 2009, 2013; Myers & Powers, 2017; Williams, 2007; Yin, 2009). The quantitative research approach involves numeric data collection methods and any form of data that is measurable (Walliman, 2011). In this regard, quantitative data collection procedures are formal, objective and structured (Almeida, Superior, Gaya, Queirós & Faria, 2017). This design usually resonates with a deductive approach where conclusions are reached based on data analysed through statistical procedures (Creswell, 2014; Rovai, Baker & Ponton, 2014). With a quantitative research design, the results can be easily generalised to a wider population (Myers, 2017). While the quantitative design has several advantages such as its ability to reach a wider population within a short space of time, it is limited in the sense that it does not cater for the contextual nuances

associated with the data (Myers, 2017). In this regard, quantitative research is more concerned about establishing patterns and relationships as opposed to a full and detailed description of the research phenomenon (Daniel, 2016). Qualitative research is also regarded as humanistic as it focuses on personal, subjective experiences based on knowledge and practice (Kielmann, Cataldo & Seeley, 2012). According to Kielmann *et al.* (2012), qualitative research is a holistic approach that seeks to situate the meaning of certain behaviours and ways of doing things in a given context.

With qualitative research design, the data collected cannot be accurately measured and counted but can be expressed in words as opposed to numbers (Walliman, 2011). Qualitative research involves the analysis of human interactions, behaviours, perceptions and attitudes concerning their environments (Robson, 1993). In this regard, qualitative data is descriptive. A qualitative research design is usually adapted for a study with research questions that requires textual data (Mohajan, 2017). Compared to quantitative data, qualitative data provides richness and allows the researcher to gain deeper insight and understanding of the research phenomenon at hand (Walliman, 2011). It involves a careful examination of the meaning of words, development of key concepts and linking of interrelationships between them (Cropley, 2019; Walliman, 2011). In this regard, the approach to understanding what is going on is interpretative, which allows participants to explain the phenomenon rather than describe it (Kielmann, 2012).

The current study employed a qualitative research approach, which is based on the principle that reality is subjective wherein each human being constructs their personal view of the external world based on their interaction with it (Cropley, 2019). In this regard, what a person views as reality are a construction of impressions, inferences and opinions. The choice of a qualitative research approach for the current study was based on the need to gain insights into these constructions of reality, to investigate measures that can be introduced to promote the suitability of the fuel retail sector in South Africa. This was in the context of gaining participants' views on measures that can promote the balance of power between fuel retailers and oil companies in South Africa, ways in which the issue of low margin in the fuel retail sector can be addressed, and mechanisms that can be employed by the fuel retail sector to enhance SMEs' success.

The qualitative research approach is inductive and involves the exploration of meanings and gaining a deeper understanding of the research phenomenon at hand (Haradhan, 2018). This will allow the researcher to interact with subjects in their natural settings and obtain rich information

from the participants based on their own experiences and observations. Furthermore, the current study is explorative, allowing the researcher to be iterative to further explore the how and why aspects of the research phenomenon or how it involves a particular manner (Reiter, 2017). This study seeks to gain a detailed understanding of how the current legislative environment, business models and structure of the fuel retail sector have posed challenges and how they can be addressed to ensure the success of SMEs in the sector.

3.3.2. Research design

According to Vosloo (2014), a research design can be described as a practical plan that outlines the methods and techniques that are employed to conduct a research study. A research design guides the researcher on how data can be collected to produce credible results (Babbie & Mouton, 2008). In this regard, it helps to ensure that the data gathered is appropriate to answer the pertinent research questions at hand. A narrative research design was adopted for the current study. The key defining feature of a narrative study is that it includes the collection of data through a group of individuals narrating their stories about their experiences of the research phenomenon (Brown & Thompson, 2013). According to Brown and Thompson (2013), one of the main advantages of using a narrative research design is that it is easy to gather in-depth data as narratives usually provide thick descriptions about the research phenomenon.

3.4. RESEARCH METHODS

3.4.1. Study population

The population for the current investigation is made up of SME owners within the fuel retail sector in Johannesburg. The distribution of retail sites in Gauteng is 1 351, which is 34% of the total national distribution.

3.4.2. Sample

Purposive sampling was used for the current study as it allows the recognition and picking of cases rich in knowledge about the research phenomenon (Patton, 2002). Thus, the researcher identified and selected individuals who were especially informed and familiar with the case of interest (Creswell & Plano, 2011). In this regard, six interviews were conducted with the SMEs in the fuel retail business in Johannesburg.

3.4.3. Data collection

Primary data for the current was collected through semi-structured interviews. In this regard, an interview guide consisting of open-ended questions was used as a data collection tool. This was used as a referral point to assess the insights of the participants regarding measures that can be introduced to support the sustainability of fuel retailers in South Africa.

3.4.4. Data collection instrument

An interview guide was used as a reference point for the researcher during the data collection process. The interview guide contained five sections as shown in Table 4.

Table 4: The structure of the interview guide

SECTION	DESCRIPTION
Section A	This section seeks to obtain background information on the participants.
Section B	This section is concerned about the impact of the fuel levy increase on the success of SMEs in the petroleum retail sector in South Africa.
Section C	This section deals with the effect of strikes and stock-outs on the success of SMEs in the petroleum retail sector in South Africa.
Section D	This section seeks to determine the effects of fuel distributors' strikes on SMEs in the petroleum sector.
Section E	Deals with the recommendations that can be introduced to the fuel retail sector in South Africa to promote a high degree of success in the context of price fluctuations, strikes and supply chain challenges?

3.4.5. Data analysis

Data was analysed through thematic analysis, which involved coding and grouping data into themes. Data analysis was conducted manually in which the researcher analysed the data, coded and group it into these using the traditional approach.

3.5. TRUSTWORTHINESS

For the current study, trustworthiness is assessed as credibility, transferability, dependability and confirmability.

3.5.1. Credibility

According to Korstjens and Moser (2018), credibility in qualitative research is the confidence that is associated with assurance in the research results. According to Passi and Jackson (2018), credibility is about ensuring objectivity and precision in the data collection and interpretation of data. It is the confidence that can be placed on the truth attached to the research findings (Korstjens, 2018). In other words, credibility seeks to establish the extent to which the research findings represent credible information emanating from the original responses from the participants. It emphasizes the correct interpretation by the researcher of the participants' original views.

For the current study, the researcher maintained credibility by selecting the appropriate data collection methods in line with the questions the study sought to answer. The qualitative data was collected through semi-structured interviews with the participants. Before the interviews, the interview guide was reviewed by the Research Supervisor to ensure that there is alignment between the questions asked and the main research question. A pilot study was also conducted to ensure that the questions drafted were clear and suitable for the study. During data analysis, the interview transcripts were re-analysed to detect and eliminate any form of biased that was picked up.

The researcher also kept field notes and recordings of interviews for further analysis. Regular peer reviews with other researchers were held in an endeavour to ensure that the interpretation of the data was consistent and free of bias.

3.5.2. Transferability

Transferability can be viewed as the extent to which the research findings can be applied to other study contexts or participants. It is concerned about how similar findings can be observed in a similar context elsewhere (Korstjens, 2018). To ensure that the results of the current investigation are transferable to another similar context, the researcher provided a detailed description of the research processes followed to conclude. This detailed description included the participants that were interviewed, the interview procedures, demographics and excerpts from the interviews.

3.5.3. Dependability

Dependability in qualitative research is concerned with the repeatability of the study elsewhere within the same cohort of participants in a similar context (Forero, Nahidi, De Costa, Mohsin, Fitzgerald, Gibson, McCarthy & Aboagye-Sarfo, 2018). It refers to the stability of data over time and under different circumstances (Elo, Kääriäinen, Kanste, Pölkki, Utriainen & Kyngäs, 2014). For the current study, dependability was ensured by providing a detailed description of the methodological approaches employed. This entailed outlining the criteria for the selection of participants and detailing the characteristics. Furthermore, the researcher establishes an audit trail throughout the data collection and analysis process. The researcher also followed stepwise replication of the data. This entailed measuring the coding accuracy.

3.5.4. Confirmability

Confirmability refers to the objectivity associated with the researcher's dependence on ensuring that the data is accurate and relevant for the study (Elo, 2014). It is also the degree to which the findings of a study are a true product of the enquiry and not the biases or prejudice of the researcher (Riege, 2003). In other words, confirmability entails that the data is an accurate representation of the information that was provided by the participants and its interpretation if not influenced by the researcher's personal opinion and judgement (Polit & Beck, 2012). In this regard, the researcher provided the rationale for the theoretical, methodological and analytical strategies adopted for the study.

3.6. ETHICAL CONSIDERATIONS

The section discussed the steps that were taken by the researcher throughout the study in general and during data collection in particular, as part of ethical considerations.

3.6.1. Ethical approval and access to participants

The current study was conducted in line with Rhodes University and Ethical Standards guidelines. The study commenced after it was approved by the Rhodes University ethics board. The research compiled an introductory letter that sought to provide clarity on the nature of the research phenomenon at hand. The ethical application was approved under number: 4985 and the approval letter is attached in Annexure C.

3.6.2. Informed consent and voluntary participation

The researcher first set up preliminary meetings with people who had good expertise in the petroleum retail sector to seek recommendations. Once identified, the researcher contacted the potential participants to make a presentation about the study, before enrolment. This also helped the researcher to establish interest and willingness to participate in the study. This was considered the initial part of the informed consent in line with the Protection of Personal Information Act (POPIA or the Act), No. 4 of 2013. The researcher ensured that the information shared clearly and accurately represents the study. Consideration was given to meeting the requirements of POPIA, which have implications for all research activities that involve the collection, processing, and storage of personal information. In this regard, the participants were informed about the fact they can withdraw their consent from the study without any consequences to them, the nature of the personal information that will be collected, and how it will be used and scored. In line with Section 15 of the POPIA, participants will be informed that the information collected will be for the research purpose only. In addition, the following measures will be taken in line with the requirements for POPIA:

- Protect all participant's data obtained before and provided during the interviews. Also, no individually identifiable information will NOT be used in the research report. Self-generated codification will be used.
- Only obtain and use personal information for purposes that will be known to individuals (and only keep the information for as long as it is necessary to do so) by stating the purpose of obtaining the information which will be the subject of a separate communication.
- Only use sensitive information if it is necessary and will adhere to appropriate.
- Never transfer personal information obtained during the data collection to third parties.

A consent form was signed coming that participants are not obligated to participate. Furthermore, an information sheet was provided to the participants before data collection to accord them ample time to read and ask clarifying questions. Participants were advised that participation in the study was voluntary and that they were free to withdraw from the study at any stage. The participants were also informed of the possibility of the data collected to be used in future for further research studies. However, the information gathered from the participants was strictly for the completion of the current study. There were no monetary benefits or compensation that were promised to the

participants for partaking in the study. Also, those who have decided to withdraw or not to participants were not disadvantaged in any way.

3.6.3. Anonymity and confidentiality

The participants were informed about the nature of data that is required and how it will be processed and stored in line with the Protection of Personal Information Act 4 of 2013. The participants were also informed about the process they can take in the future should they need access to the data they have shared. The nature of the study did not require participants to provide identifiable information. The responses provided during data collection were kept confidential and were only used for the study. It should be noted that confidentiality and anonymity were preserved through the use of pseudonyms, aggregation of data and generalisation to ensure that particular responses cannot be traced back to the participants (Saunders, 2012; Saunders, Lewis & Thornhill, 2016). Therefore, the direct quotations used in the study were attributed to the anonymised participants.

3.6.4. Data protection

Data collected for this study were stored in an encrypted folder with password authentication on the researcher's computer. The stored data will be provided upon request and after all the required procedures are followed. All the notes and physical documents compiled during the study were shredded. A summary of the research findings of the study will be provided at any stage upon an email request to the researcher.

3.6.5. Participant's right to privacy

The right to privacy, as a result of that person's personal information, is adequately protected and they will not in any way be identified. In this regard, identifiers will be used to protect the identity of the participants and geographical identifiers will be used to identify the location of the service stations. Furthermore, the collection information i.e. audio recordings, interview transcripts, and interview notes will be kept in an encrypted password-protected folder on the researcher's computer.

3.7.CONCLUSION

This chapter provided a discussion of the research methodological approach that was employed for the study. The chapter presents the philosophical approach adopted by the research. In this regard, the study considered a symbolic interactionist appropriate for the study as it is capable of deriving meaning from the participants. Thus, the interpretivist approach was adopted for the current study as it has been highly used to gain a deep understanding of the complex situations within the business and management disciplines. The chapter also deals with research methodology, in which a qualitative research approach, is based on the principle that reality is subjective wherein each human being constructs their personal view of the external world based on their interaction with it. A narrative research design was adopted for the current study. The chapter also discussed the research methods employed for the study. The population for the current investigation is made up of SME owners within the fuel retail sector. In this regard, ten SMEs in the fuel retail business were purposively selected to participate in the study. Primary data for the current was collected through semi-structured interviews based on an interview guide. The collected qualitative data was analysed through thematic analysis, which involved coding and grouping of data into themes with the aid of a computer programme, Atlas. ti. Software. The chapter also discussed the measures that were taken to ensure trustworthiness in the research processes followed in the study. The chapter concluded by outlining the ethical considerations that the observed during the study.

Having discussed the methodological process followed in the study, the next chapter will present the findings from the study.

CHAPTER 4

PRESENTATION OF THE STUDY FINDINGS

4.1.INTRODUCTION

This chapter presents the research findings based on the primary data obtained from the interviews conducted. The first section provides a profile description of the participants. The second section is concerned with the impact of the fuel levy increase on the success of SMEs in the petroleum retail sector in South Africa. The third section deals with the effect of strikes and stock-outs on the success of SMEs in the petroleum retail sector in South Africa. The fourth section seeks to determine the effects of fuel distributors' strikes on SMEs in the petroleum sector.

4.2.PROFILE OF THE PARTICIPANTS

Table 5 shows the profile of the participants for the study. The table shows that there was diversity among the participants in terms of gender and race. There was also diversity in terms of business sizes, and location.

Table 5: Profile of the participants

CODE	GENDER OF THE BUSINESS OWNER	RACE OF THE BUSINESS OWNER	DESCRIPTION OF AT THE ENTITY (SME)
INT1E	Male	Indian	This business is located in Johannesburg Central and has been in operation for 17 years. It is situated along an urban road, selling fuel which is more than 500 000 litres per month.
INT2B	Male	White	This business is located in Johannesburg Northern Suburb and has been in operation for 16 years. It is situated on a transient road, selling more than 500 000 litres of fuel per month. The owner is a Principal Lease.

CODE	GENDER OF THE BUSINESS OWNER	RACE OF THE BUSINESS OWNER	DESCRIPTION OF AT THE ENTITY (SME)
INT3D	Female	Black	This business is located in Johannesburg Southern Township and has been in operation for 16 years. It is situated in a township, selling between 300 000 and 500 000 litres of fuel per month. The owner is a Principal Lease.
INT4R	Male	Indian	This business is located in Johannesburg Northern Suburb and has been in operation for 16 years. It is situated on an urban road, selling more than 500 000 litres of fuel per month. The business is operating on a Company Owned Franchise Operated (COFO) model and the site is BP-owned.
INT5R	Male	Black	Retailer-owned has four service stations in the Gauteng townships: two in Tembisa, one in Tsakani and one in Evaton. One site in Tembisa sells between 300 000 and 500 000 litres of fuel per month and the other one sells more than 500 0000 litres per month. The site located in Tsakani sells more than 500 000 litres of fuel per month and the one in Evaton sells between 200 000 and 300 000 litres of fuel per month.
INT6B	Male	Black	This business is located in Johannesburg Northern Suburb and has been in operation for 16 years. It is situated on an urban road, selling between 300 000 and 500 000 litres of fuel per month. The business is operating on a COFO model and the site is BP-owned.

4.3.PRESENTATION OF RESULTS FROM THE INTERVIEWS

This section presents the results emanating from the interviews with the participants. In some instances, the responses or voices from some participants are not included under the theme due to that they either did not provide their perspective on it or the responses were not in line with the subject matter although the researcher tried every way possible to steer the discussions to focus on the topic at hand.

4.3.1. The impact of the fuel levy increase

4.3.1.1. *On reduced fuel demand*

INT2B	The expensive fuel price translates to people limiting their travel and from the dealership's point of view, it results in declining volumes and thus less profitable. Although the levy does not impact the retail margin as the dealer can pass the 100% levy component of the fuel price to the customer – it is the volume that declines because people have less rand to spend per litre...Then the impact is on profitability since the profitability is driven by volumes. The retail margin stays the same as is only adjusted annually. The fuel levy is a big problem for everybody because the fuel levy is a tax on the fuel industry so the higher the price of fuel goes the less that people must spend on fuel and other things. The implementation of increases in fuel tax affects the people that are battling to afford to pay for fuel already because the fuel now is more expensive so fewer people will drive because fuel is more expensive. Secondly, the fuel levy takes out a certain amount of surplus from the income that consumers are getting from their salary to spend on other things, then which means it's a two-way impact on economic activity.
INT3D	The fuel levy has just made the petrol much more expensive, although the costs are 100% passed to the final customer, the impact is felt on lesser fuel being purchased. People are feeling up less and less due to the affordability of the actual petrol.

INT4R	Price increases in conjunction, customers budget the Rand and not volumes. People fill up the same amount of money. Levy increase has the same impact. In the range of R1 increase is 10% and less.
INT5R	So we can say the decrease in volume related to fuel price changes has ranged in the average of 10% and less per occasion. The key to note is that LSM matters, elasticity varies between high LSM and low LSM. Township had more transactions but lower volumes and high LSM lower transactions but high volume – they have a high budget. Payday and midmonth volume varies on the 25th and last day of the month.
INT6B	So the issue of the increase in fuel price is driving the customer away.

The above interview content suggests that fuel levy increase was identified as one of the major problems faced by SMES in the retail sector. Participants indicated that one of the impacts of the fuel levy increase is the increased cost of fuel. The participant highlighted while they can pass the increased cost to the consumer, their business mostly suffers due to reduced sales volumes. The elasticity of demand however varies depending on the income groups of the customers. According to INT5R, for locations with high a Living Standards Measure (LSM), there are lower transactions but high volumes due to the large budget. On the other hand, for locations with low LSM, the transactions are high but the volumes are lower due to low budgets.

4.3.1.2. *On reduced profits*

INT1E	Bearing in mind that it is a retailer with a fixed margin cent per litre over a year. So, whether the price of petrol costs retails for 10 grand or 21 when something sold. The difference is that it costs more to handle that. So, everything from storing it on the ground to selling it to the customer. I'm paying more in terms of charges to customers and cause I'm paying more in terms of the bank deposit charges, card fees, and other operating fixed costs, such as insurance, salaries, and electricity. Retailers pay more in terms, of insuring against the risk of a running service station, and increased attraction to commit fraud on fuel. The
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	losses are related. So, profitability is still the same at 100,000 litres, but as the price goes up, the profit margin doesn't go up because costs stay the same.
INT3D	Because their margins are fixed, and the business is less profitable the dealers look at reducing manpower. Other costs are difficult to cut such as electricity.
INT4R	Huge drop in the profitability because the costs have not gone up, the profitability shrink, and profits drops are more than 10% due to the cost factor.
INT5R	“In the past, the petrol price change was not often, however in the current environment the price change happens almost every month. Therefore, the impact is not so much on profit, for instance, with the price change of between 10cpl and 50cpl, there is minimal impact in terms of forecourt volumes. There is however a noticeable change in the volume and profitability impact when the price change is 90cpl and higher.
INT6B	In terms of profitability is that whenever the fuel prices go up the customers fill up less, the same rand for fewer litres of petrol. The fuel industry is volume-driven, and therefore if people are spending less than before that means the profitability will shrink in the same direction.

In light of the above, participants highlighted that while the profit margins remain fixed despite the fuel levy increases, operating costs increase, which adversely affects their profitability. Thus, cost increases are related to bank deposit charges, card fees, insurance, salaries, and electricity, among others. INT3D and INT4R alluded to the fact that SMEs’ profitability is negatively affected since the margins remain the same irrespective of the fuel levy increases. In this scenario, profit levels are difficult to maintain due to the lack of flexibility by the SME to cut costs. INT6B highlighted that when the fuel levy is increased, the price of fuel goes up leading to consumers buying less leading to lower profits. This is mainly because the fuel retail sector is volume-driven. INT5R however have a different view when it comes to the effect of fuel levy increases on the fuel retailers. INT5R argues that the impact is largely determined by the extent to which the price has increased. Thus, there is a minimum impact on profitability for prices increased between 10cpl and 50cpl. On the other hand, the negative impact is felt for both sales volumes and profitability for price increases that are above 90cpl.

4.3.1.3. *On cash flow fluctuations*

INT5R	The regular price increases have a negative impact on the cash flow, for example, 3 months increases equalling 80cpl 40 000 litres per load, volumes you are selling and the frequency you refill the service station, that is, average (Volume and tank turn over).
INT6B	The levy increase with take effect in April each year increases the price of fuel, and the impact is from the cash flow point of view.

Overall, participants stressed that the increase in the fuel levy and the general increases in the price of fuel negative impact on their cash flow. However, it appears that participants attributed much of the price fluctuations to other factors other than fuel levy increases such as exchange rate changes and international oil prices.

4.3.1.4. *On poor services*

INT3D	The challenge with operating with skeleton staff is that when it is busy the service gets negatively affected, therefore you end up losing customers due to non-service. One of the tactics implemented to reduce manpower costs is to not have a night shift and the other thing that is helping is the curfew (10 pm). When the country fully opens cutting the night shift may not be possible because Oil companies/investors expect the sites to run 24-hour service. Manpower costs can easily be reduced in the short term but for other fixed costs, there is little you can do about it.
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In addition to the quote above, participants stated that they have to take measures to offset the declining profits following the increase in the fuel levy. One of these measures is cutting down on the workforce, which means most of the fuel retailers will be operating on a skeleton staff. This negative impact on the quality of services offered, leading to them losing customers and further losses.

4.3.1.5. Increased barriers to entry

INT1E	When the cost of fuel goes up, the barrier to entry into the market becomes even higher. The monthly price fluctuations do not change the dealer margin (adjusted annually by the regulator) however it has an impact on the profitability due to overhead costs/operations costs being fixed. Retail fuelling business is a high volume, low margin product, and therefore every litre pumped is critical for business sustainability.
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The increased costs due to the fuel levy increase were reported to be associated with the increase in barriers to entry. INT1E states that these barriers to entry emanate from high costs of overheads and other operating costs. INT1E further stressed that the fuel retail business is characterised by high volumes of sales and low margins and as such any threat to sales volumes affects the sustainability and growth of the industry.

4.3.1.6. On business closure

INT4R	Longer period to recovery, 6 months or more. Budget dip for customers and retailers. Changes to the cost management/adjustments, reduce labour hours. Fewer litres, lesser hours' service attendants/ cut hours not the people, compromise service delivery. Cutting on the electricity by reducing the cooking/baking. Additional Rand per litre: It is for a longer period, taking longer to recover the cash flow. Until the price decrease, either sell the site. 10 rand per litre, 80 000 (800k). When the price goes up by 1 Rand 880K in stock vs the 800k.
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It was highlighted by the participants that the increase in fuel levy takes longer to recover. Each time there is an increase in the fuel levy, fuel retailers need to recover from cost adjustments, reduced labour hours and compromised service quality. According to INT4R, this process takes at least 6 months after the increase in fuel levies. It emanated from the interviews that the worst-case scenario for price increases for SMEs in the fuel retail sector is business closure. This is mainly attributed to the prolonged recovery period wherein some businesses may fail to recover at all.

4.3.2. Petroleum SMEs experience of fuel stock-outs and their effects

4.3.2.1. On high overhead costs

INT5R	Some overhead costs are fixed and still need to be covered, for the period that the service station is non-operational either due to distributor strikes or fuel shortage/stock-outs. The cash component to operate the service station is very high therefore the profitability of the service station is highly dependent on the tank turnaround (high working cash requirement), high turnover but low margin (fixed margin) and most overheads are fixed for over a period.
INT6B	If you are pumping low volume the increase does not cover the increase in expenses, so the margin increase does not normally cover the increase in expenses. This is because of a decrease in gross margin (reduced revenue due to lower sales).

The participants highlighted that stock-out has a negative impact on their business operations. This was premised on the fact that while the business is not operational, there are overhead costs that still need to be covered. Due to the high volumes of sales required and small margins for a fuel retailer to be profitable, any interruption to the fuel supply had a significant adverse effect on their profitability. INT6B highlighted that the margins are small to the extent that they cannot cover the increase in expenses.

4.3.2.2. On reduced profits

Another impact of the stock out is the loss of business profit so for the period you are not selling volumes, you will still have the same running costs to cover from lower revenue.

4.3.2.3. On lack of brand loyalty

INT6B	The negative impact is when there are Bulk Vehicle Operators (BVO's) strike to deliver fuel to the service station. The stock-outs during the strike have a longer-term impact on the sites in that customers can be lost to competitors - customers will be loyal to the brand that had fuel during the strike and
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	sometimes they don't return. It does not matter to the customer how much marketing you can do but fuel availability is what is important to retain customers.
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According to INT6B, fuel distributors' strikes lead to stock-outs, which negatively affect customer loyalty. The risk associated with losing customers is that there is a high probability they will never return despite any marketing initiatives.

4.3.2.4. *Shutdown of sites*

INT4R	Petrol attendants' salaries, the dealers are mandated to give 8% per year over 3 years, are not validated due to the slumping economy. It makes it difficult to run the business. For example, 7 days without selling any volumes. Volume loss is linked to the monthly volume sold, costs do not change, and 2 to 3 months to your profit.
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The worst-case scenario described by the participants which can occur due to stock-outs is the shutting down of the site. INT4R highlighted that fuel retailers resort to site shutdown as a way to save on costs such as labour and overhead costs.

4.3.3. The effects of fuel distributors' strike on SMEs in the petroleum sector

4.3.3.1. *On fuel shortages*

INT1E	In terms of strikes; whether is a strike within the industry that is the wage negotiations strikes by the Chemical Workers' Industrial Union (CWIU), or other sectors such as the South African Transport and Allied Workers Union (SATAWU) (these sectors include railways, harbours, parastatals, aviation, passenger transport (buses and taxis) freight (trucking), contract, cleaning and security), and other external non organized civil unrests the fuel sector will experience an impact to the degree of the overall coverage and duration of such strikes.
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	Sites stocking out due to fuel supply disruption is one of the immediate impacts on the retail fuel stations and therefore loss of sales. Property damage, majority of the fuel service stations belongs to the oil companies and therefore the costs to rebuild the infrastructure will be for the oil company. The cost of not operating (loss of business) due to property damage though is for the retailer. Although where the property is owned by the dealer it means the cost of keeping and bringing back the structure will be for the dealer, hopefully, that will be covered by insurance. Regarding the issue of petrol attendants, the regulator is very proactive. The wage adjustments usually happen in September; the wage negotiations are done in batches of three to five years. So, the increases for the next three years are already known, which serves as an advantage to the retailer for their annual financial planning. This also provides a level of certainty at least for the next two to three years. And the wage increases are always subject to the minister granting a ring-fenced margin to the dealer.
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According to the participants, the resulting impact of fuel distributors' strikes on SMEs is fuel shortages. INT1E highlighted that these disruptions are likely to occur at various distribution points such as railways, harbours, parastatals, aviation, and passenger transport. Also, interruptions in fuel distribution can be caused by civil unrest. INT1E however had a different view and highlighted that the occurrence of wage-related strikes is minimal due to the nature of collective agreements that are signed in the sector. According to INT1E, the retailers and the trade unions involved in the sector have resorted to three-year wage agreements to promote stability. This somehow enhances planning and certainty among fuel retailers.

4.3.3.2. *On the destruction of property*

INT1E	The impacts of strikes and associated riots and many instances of looting of goods are very catastrophic to the industry when they happen. Also, the location of where the service station is very critical i.e., township's locations are mostly hit hard due to other the country's social issues. In the recent June/July 2021
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	Civil unrest, we have noticed the community participating in the riots drawing petrol directly from underground tanks. On the assumption that the stock (non-consignments) belongs to the dealer, the stock loss is for the dealer (unless the costs can be recovered from the insurance).
INT2B	The service stations have been impacted by the very worst conditions and it will likely be going to more than just a month or two to recover especially those that were heavily impacted. Some service stations were burned down and some infrastructure is being destroyed.
INT3D	At the Dosbsonville site, the shop was looted, the property was vandalised, and the site is currently closed and not operating it is going to take for the site to come back online. The dealer has submitted the claims to the insurance and waiting on the insurance to respond. This is for the shop products that were looted and for the property that was damaged. The damage done will be like building a new site altogether and that can take up to 6 months- It is 3 to 6 months after the insurance pay out the claim. Whilst the business is not operating fixed costs like electricity still need to be covered.

There were sentiments that strikes and civil unrest or riots that are associated with looting and destruction of property have more devastating effects on fuel retailers. For instance, the June 2021 unrest has seen the community draining fuel from the tanks at service stations. However, apart from the supply disruptions and lack of business during the period of unrest, INT1E stated that the costs are borne by the dealer and sometimes recovered through insurance claims. INT1E also mentioned that the impact of unrest is mostly felt by those fuel retailers located in townships. Townships in South Africa are mostly characterised by social and economic challenges such as poverty and unemployment. While there are prospects of recovery following the recent protest, participants indicated that the recovery for some retailers may take between two to three months. However, some fuel retailers were burnt to the ground and the prospect of recovering was described as minimal.

4.3.3.3. *On high operating costs*

INT2B	On the dealer, during the closure of the sites, there is a huge effect on the actual profitability of the business because the costs (fixed operating expenses) obligations remain with the dealer - i.e. you still got to pay staff salaries, finance interest, rates & taxes and any other expenses that are fixed monthly and those are only on the dealer.
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INT2B stated that fuel distributor strikes result in high operating costs being incurred by fuel retailers. These operating costs are a result of fixed costs that the business has to pay even though they are not operating. These costs are related to staff salaries, finance interest, rates and taxes.

4.3.3.4. *On reduced sales*

INT2B	Additionally, even if your infrastructure wasn't damaged during the strike, because of the safety risks to travel and reduced operational hours the volume sales went down and on those operating smoothly stock-outs were experienced due to the disruption of the supply chain. Loss of volume with fixed costs resulted in low profits. In the extreme cases where there are no contingency funds, you are you're most likely to just run out of the business.
INT6B	A very high secure area does not normally get affected by the strikes in terms of disturbances in operation or the need to close the site for safety risks. There are normally no distractions to the location, so the location of the site is very key. The secure location is an advantage when it comes to strikes in terms of protest which are highly unlikely in the High-Income Group locations. The same location can still be a disadvantage in that people tend to stay at home for their safety and work remotely (working from home as we have seen reduced volume during different levels of lockdown Covid19).

The challenges of fuel distributors' strikes were outlined to have a cumulative effect on reduced sales. It was stated that the reduced sales emanate from reduced operational hours. On the other, INT6B explains that the impact of strikes or protest actions depends on where the fuel retailer is

located. According to INT6B, fuel retailer is not adversely affected if they are located in secure and high LSM locations. However, INT6B sales volumes can be impacted if the customers decide to stay home for fear of their safety.

4.4.CONCLUSION

This chapter shows that there are several ways in which fuel retail SMEs are affected by the fuel levy increases. According to the results from the study, fuel levy increases result in reduced demand for fuel, reduced profits, cash flow fluctuations, poor services, prolonged recovery period, increased barriers to entry and business closure. All these factors were found to have a negative effect on the sustainability of the fuel retail SMEs. However, there were sentiments among the participants that external factors such as exchange rates and international oil price fluctuation have a more deleterious effect on fuel retail SMEs compared to domestic factors such as fuel levy increases.

The results also show that stock-outs have negative effects on fuel retail SMEs, which is felt through high overhead costs and in worst cases, shutting down of operations. Fuel distribution strikes were found to negatively affect fuel retailers through fuel shortages, destruction of property and infrastructure, high operating costs and reduced sales. Petroleum SMEs' experiences of fuel stock-outs and their effects were explained through high overhead costs and shutting down of sites. When it comes to the effects of fuel distributor strikes on SMEs in the petroleum sector, the study found that the retailers are affected in four ways, which are fuel shortages, destruction of property, high operating costs and reduced sales.

CHAPTER 5

DISCUSSION OF THE FINDINGS OF THE STUDY

5.1.INTRODUCTION

The previous chapter presented the results emanating from the semi-structured interviews conducted with fuel retailers. This chapter provides a discussion and interpretation of the findings. The chapter is structured in line with the research objectives as outlined in Section 1.5. The chapter involves a detailed discussion that seeks to validate the empirical findings by appealing to findings from related past studies.

5.2.DISCUSSION OF THE KEY RESEARCH FINDINGS

This section presents a discussion of the key research findings. The section is divided into three sections in line with the research objectives of the study:

- a) To assess the impact of the fuel levy increase on the SMEs in the petroleum sector, particularly petroleum retailers in South Africa.
- b) To explore how Petroleum SMEs experienced fuel stock-outs in South Africa.
- c) To examine the effects of fuel distributor strikes on SMEs in the petroleum sector in South Africa.

The first section deals with the impact of fuel levy increase on the SMEs in the petroleum sector, the second section discusses the petroleum SMEs' experiences of fuel stock-outs and the third section focuses on the effects of fuel distributors' strike on SMEs in the petroleum sector.

5.2.1.1. The impact of the fuel levy increase on the SMEs in the petroleum sector

The study found that there are seven areas in which SMEs in the petroleum sector are impacted by the increases in fuel levy in South Africa. SMEs are affected by reduced fuel demand, reduced profits, cash flow fluctuations, increased barriers to entry and business closures. The effect of each of these on fuel retailers is discussed in detail below.

Cost

The study fuel levy increase results in the increased costs of fuel (INT2B, INT3D, INT4R). While increased costs can be passed on to the consumer, fuel retailers suffer through reduced sales volume. INT3D states that *“The fuel levy has just made the petrol much more expensive, although the costs are 100% passed to the final customer, the impact is felt on lesser fuel being purchased. People are feeling up less and less due to the affordability of the actual petrol.”* (INT3D). According to INT2B, this is mainly because: *“the higher the price of fuel goes the less that people must spend on fuel and other things.”* (INT2B). The reduced sales volumes negatively impact on fuel retailers because *“profitability is driven by volumes. The retail margin stays the same as is only adjusted annually.”* (INT2B). This finding mirrors that of Matsho (2010) who found that fuel retailers in the City of Tshwane Metropolitan Municipality in Gauteng’s profitability were mostly impacted by fuel price increases. The study however was not explicit in terms of the statistical cause of the price increases and the extent of such price increases. Also, similar to these findings, Sartorius *et al.* (2007) found that sales volumes are a key determinant of the profitability of fuel retailers. Therefore, any factor or policy decision that increases the fuel price has a significant impact on profitability through reduced sales volumes.

Customers/ Consumers

Consumers are sensitive to fuel price increases because they are already financially overburdened. INT2B explains this situation as *“The implementation or increases of fuel tax affects the people that are battling to afford to pay for fuel already...”* (INT2B). Thus, according to INT4R and INT5R, as the fuel levy increases, *“People fill up the same amount money... In the range of R1 increase is 10% and less per occasion.”* (INT4R, INT5R). These results are congruent to those of Hauksdóttir (2010), who found a negative association between fuel price increases and the demand for fuel. This finding however contradicts those of Sartorius *et al.* (2007) who found the demand for petrol to be inelastic in the short term and that for diesel to be completely inelastic. It however could be that the effect is dependent on the source of demand for fuel, between private consumers and business consumers. In the context of individual consumers, where income remains static in the face of rising fuel prices, the expectation will be a decline in the volumes of fuel purchased.

Reduced sales amongst fuel retailers

An interesting finding however is that while the fuel levy increases are felt through reduced sales volumes, the impact is not the same across fuel retailers. The elasticity of demand varies depending on the location for which it is elastic for those retailers in high LSM locations and inelastic for those located in lower LSM locations. According to INT5R, *“Township has more transactions but lower volumes and high LSM lower transactions but high volume due to the have high budget...”* (INT5R). This finding is in line with that of Sartorius *et al.* (2007) who found that a fuel station location plays a significant role in the ability of a retailer to make increased sales. Similar findings were also reported in a study by Bailey (2011) who emphasised the importance of location, among other factors, towards the sustainability of a fuel retailer. Location was also found to have a significant influence on the success of small businesses in the fuel retail sector in a study by Daraboš and Polić (2014) and Onyeizugbe *et al.* (2018). Similarly, Matsho (2010) discovered that every Rand increase in the price of fuel per litre reduces the number of litres that can be purposed for the same amount of money in the following month. In this context, the current study reveals that location plays a significant role in how fuel retailers are affected by fuel levy increases. The study demonstrates that those hit hard by the fuel levy increases are those located in lower-income locations. This finding corroborates with the dynamic capabilities perspective based on the RBV’s view of organisational capabilities where the location, which is synonymous with the environment of the business operations provides a unique advantage to a fuel retailer for its survival.

Increased operating costs

The study further found that while the profit margins remain fixed despite the fuel levy increases, operating costs increase, which adversely affects their profitability (INT1E, INT3D, INT4R). INT1E explains this situation *“...bearing in mind that it is a retailer with a fixed margin cent per litre for a year. So, whether the price of petrol costs retails for 10 grand or 21 when something sold. The difference is that it costs more to handle that* (INT1E. Thus, cost increases are related to bank deposit charges, card fees, insurance, salaries, and electricity, among others. In this case, profit levels are difficult to maintain due to limited flexibility by the SME to cut costs. INT4R reported a *huge drop in the profitability because the costs have not gone up, the profitability shrink, profits drops are more than 10% due to the cost factor.”* (INT4R). Contrary to Mondliwa and Roberts (2014) who argue that retail margins are calculated based on the possibilities of all

operational costs incurred, the current study revealed that the cost per litre of fuel increases with each increase in the fuel levy due to reduced sales volumes.

Negative price-volume sales relations

Interestingly, the study revealed that the impact of fuel levy increases on fuel retailers is largely determined by the extent to which the price has increased. According to INT5R, there is a minimum impact on profitability for price increases between 10cpl and 50cpl. On the other hand, the negative impact is felt for both sales volumes and profitability for price increases that are above 90cpl. While this observation cannot be ignored, it is possible based on the general prices-price increase associated with international oil price functions and exchange rate. This observation also implies that a fuel levy increase has a minimum effect on fuel retailers. This finding also supports the dynamic capabilities perspective based on the RBV's view of organisational capabilities in which those fuel retailers with large financial capabilities can easily absorb the effects of price fluctuations through high sales volumes.

Reduced cash flow

The cash flow for the fuel retailers is another area that was found to be highly impacted by fuel levy increases. The effect is further exacerbated by price fluctuations caused by other factors such as exchange rate changes and international oil prices. INT5R explained that: *"The regular price increase has a negative impact on the cash flow."* (INT5R).

The study found that fuel retailers react to fuel levy increases by introducing cost-cutting measures to offset the declining profits. Staff reduction was highlighted as one of the strategies employed, resulting in understaffing, which hurts the quality of services rendered. Consumers react to poor services by shunning away from such fuel retailers further impacting their profitability. INT3D explains that *"The challenge with operating with skeleton staff is that when it is busy the service gets negatively affected, therefore you end up losing customers due to non-service."* (INT3D). This finding is in line with several past studies such as Molefe (2006), Petljak and Naletina (2017 and the Boston Consulting Group (2019). In a study by Molefe (2006), it was found that customer experience is important for the profitability of fuel retailers. Thus, in line with the dynamic capabilities perspective based on the RBV's view, those fuel retailers that offer a unique customer experience are likely to survive. International studies such as that of Petljak and Naletina (2017)

reported similar results, emphasising that the success of fuel retailers extends beyond the location factor to also include consumer orientation. According to the Boston Consulting Group (2019), there is a shifting trend toward customer-centric, which is a great determinant of the success of fuel retailers. In line with the resiliency theory, these strategies allow fuel retailers to survive under harsh conditions. It follows that fuel retail SMEs are facing a double sword. While they are trying to reduce staff costs by reducing staff complement, they find themselves in a situation where they are losing customers, further threatening their survival. This also suggests that fuel retailers have limited flexibility in terms of strategies that they can implement to save costs.

Barriers of entry

The increased costs due to the fuel levy increase were found to be associated with the increase in barriers to entry. INT1E states that these barriers to entry emanate from high costs of overheads and other operating costs: *“When the cost of fuel goes up, the barrier to entry into the market becomes even higher”* (INT1E). INT1E further stressed that the fuel retail business is characterised by high volumes of sales and low margins and as such any threat to sales volumes affects the sustainability and growth of the industry. INT1E stated that *“Retail fuelling business is a high volume, low margin product, and therefore every litre pumped is critical for business sustainability.”* (INT1E). In other past studies, such as that of Paelo, Robb & Vilakaz (2014), it was also found that increased costs are one of the top five barriers to entry into the space of the liquid fuel. Similar results were also reported in a study by Sihlobo (2016), who found that the fuel levy adds to the cost burden, further increasing barriers to entry.

It was also found that it takes some time for fuel retailers to fully recover following the fuel levy increases. According to INT4R, *“Longer period to recovery, 6 months or more. Budget dip for customers and retailers. Changes to the cost management/adjustments, reduce labour hours. Fewer litres, lesser hours’ service attendants/ cut hours not the people, compromise service delivery. Cutting on the electricity by reducing the cooking/baking.”* (INT4R). In some instances, most businesses fail to recover at all leading to business closures. INT4R explains the business closures to be caused by *“... It is for a longer period, taking longer to recover the cash flow...”* (INT4R). While some businesses may have failed to recover, those that do have demonstrated strong resilience in response to external shocks to the business. In this regard, resilience theory

explains that over time a business can develop some mechanisms that give it the ability to deal effectively with stress and strains to thrive under harsh conditions.

5.2.1.2. Petroleum SMEs' experiences of fuel stock-outs

The study found that stock-outs impact fuel retail business operations through overhead costs that are incurred while the fuel stations are out of stock. These overhead expenses cannot be recovered in future due to small margins and the fact that high volumes of sales are required for a fuel retailer to be profitable. INT5R explains their experiences of stock-outs as: *"There are overheads costs which are fixed that still need to be covered, for the period that the service station is non-operational either being due to distributors strikes or fuel shortage/stock-outs..."* (INT5R). This finding mirrors that of Matsho (2010) who found that fuel stock-outs have a negative impact on the sales revenue of fuel retailers and their overall performance.

Similar findings were also reported in a study by Sartorius *et al.* (2007) who found that the fuel stock-outs experienced by fuel retailers emanating from supplier challenges affect both current sales (as there is no fuel to sale) and future sales (due to customer loyalty diminution). It suggests that stock-outs have both short-term and long effects on petroleum retailers. Short-term effects are related to the inability to make sales due to the unavailability of fuel. This immediately translates into financial losses and a relatively high cost of operations. The long-term effects are related to the inability to maintain the service quality standards, which leads to deterioration of customer loyalty, which damaging effect on future sales.

The study also found that stock-outs have a negative influence on brand loyalty. Customers who switch to other fuel retailers during the stock-out period are unlikely to return, INT6B explains this challenge as *"The stock-outs during the strike have the long-term impact to the sites in that customers can be lost to competitors - customers will be loyal to the brand that had fuel during the strike and sometimes they don't."* (INT6B). A similar observation was reported in a study by KPMG (2020) who found that stock-outs disrupt brand loyalty in the retail fuel sector. Customer loyalty can also be negatively affected by the inability of the fuel retailers to adhere to their service quality dimensions, especially on the dependability aspects. This was also echoed by Jesaya, Nuuyandja, Silva, *et al.* (2020) who highlighted that each time there is a stock-out, customers need reliable services, which the fuel retailer may find difficult to meet at such times.

It was also revealed in this thesis that when stock-outs exist for a prolonged period, some businesses will have to wind up their operations as they struggle to sustain the overhead expenses. In this regard, INT4R explains the decision by retailers to shut businesses to save costs as: “...It makes it difficult to run the business. For example, 7 days without selling any volumes. Volume loss is linked to the monthly volume sold, costs do not change, 2 to 3 months to your profit.” (INT4R).

5.2.1.3. The effects of fuel distributors' strike on SMEs in the petroleum sector

Fuel shortage is one of the effects found to be induced by the fuel distributors' strike on SMEs. Apart from labour-related industrial strikes, interruptions in fuel distribution can also be caused by civil unrest. INT1E states that: “other external non-organized civil unrests the fuel sector will experience an impact to the degree of the overall coverage and duration of such strikes. (INT1E). The fuel distributors' strikes were also found to result in loss of sales and cause property damage. INT1E explains that: “Sites stocking out due to fuel supply disruption is one of the immediate impacts to the retail fuel stations and therefore loss of sales, property damage” (INT1E). Therefore it is clear that strikes and protests actions interrupt the supply of fuel, resulting in shortages and loss of sales at the fuel retailers.

An interesting observation from this study was that the occurrence of wage-related strikes is minimal due to the nature of collective agreements that are signed in the sector “The issue of petrol attendants, the regulator is very proactive. The wages adjustments usually happen in September; the wage negotiations are done in batches of three to five years.” (INT1E). This finding could be a reflection of the effectiveness of strategic measures that were taken years ago to curb the deleterious effect of strikes on the operations of fuel retailers and other parties within the supply chain. These strategies have seen the sector opting for three-year wage agreements to promote stability. This also provides a level of certainty at least for the next two to three years. And the wage increases are always subject to the minister granting a ring-fenced margin to the dealer.” (INT1E). Furthermore, it somehow enhances planning and certainty among fuel retailers: “So the increases for the next three years is already known, which serves as the advantage to the retailer for their annual financial planning.” (INT1E). This speaks to the strategic contingency theory which emphasises how businesses can adopt strategies that will allow them to survive in turbulent socio-economic contexts and other situations that pose threats to the success of small businesses.

Similarly, the structural configuration approach is reflected through the SMEs' management's ability to quickly reconfigure their business structures and operation to align with the changing operating environment.

It was however found that strikes and civil unrests or riots that are characterised by looting and destruction of property have more devastating effects on fuel retailers. INT1E recalled that: *“In the recent June/July 2021 Civil unrest, we have noticed the community participating in the riots drawing petrol directly from underground tanks.”* (INT1E). Besides the supply disruptions and lack of business during the period of unrest, INT1E stated that *“On the assumptions that the stock (non-consignments) belongs to the dealer, so the stock loss is for the dealer (unless if the costs can be recovered from the insurance).”* (INT1E). This implies that somehow, the fuel retailers are cushioned from the direct impact of damages caused during violent strike actions and protests, as explained by the contingency theory.

Location was also found to be an important consideration when assessing the effect on industrial action and protests. INT1E mentioned that the impact of unrest is mostly felt by those fuel retailers located in townships, *“the location of where the service station is very critical i.e., township's locations are mostly hit hard due to other the country's social issues.”* (INT1E). Thus, townships in South Africa are mostly characterised by social and economic challenges such as poverty and unemployment.

It was also revealed in this study that while there are prospects of recovery following the recent protest, participants indicated that the recovery for some retailers may take between two to three months. However, some fuel retailers were burnt to the ground and the prospect of recovering was described as minimal. The resilience of these fuel retailers is explained by the resiliency theory, which demonstrates how they have managed to navigate through various challenges that confronted their businesses.

Fuel distributors' strikes and protests were found to result in fuel retailers incurring high operating costs. For example, INT2B explains that: *“On the dealer during the closure of the sites there is a huge effect on the actual on the profitability of the business because the costs (fixed operating expenses) obligations remain with the dealer.”* (INT2B). These operating costs are a result of fixed costs that the business has to pay even though they are not operating. These costs are related to staff salaries, finance interest, rates and taxes.

The challenges of fuel distributors' strikes were found to have a cumulative effect on reduced sales. It was stated that the reduced sales emanate from reduced operational hours and this was explained by INT2B as follows: *“Additionally, even if your infrastructure wasn't damaged during the strike, because of the safety risks to travel and reduced operational hours the volume sales went down and on those operating smoothly stock-outs were experienced due to the disruption of supply chain...” (INT2B).*

5.3.CONCLUSION

This chapter presented a discussion of the findings from the study in line with the research objectives as stated in Section 1.5. The study found that in line with the existing literature and theories, the SMEs in the petroleum sector is impacted by the increases in fuel levy in South Africa through reduced fuel demand, reduced profits, cash flow fluctuations, and increased barriers to entry and business closures. The study further found that stock-outs impact fuel retail business operations through overhead costs that are incurred while the fuel stations are out of stock. However, stock-outs have both short-term (inability to make sales due to the unavailability of fuel) and long effects (inability to maintain the service quality standards, leading to deterioration in customer loyalty on the petroleum retailers. Strikes and protests actions were found to interrupt the supply of fuel, resulting in shortages and loss of sales at the fuel retailers. The occurrence of wage-related strikes was however found to be minimal due to the nature of collective agreements that are signed in the sector. The fuel retailers take a while to recover following strike or protest-related disruptions due to high costs incurred.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1.INTRODUCTION

This chapter concludes the study. It presents the conclusions and recommendations based on the key findings of the study. The first part of the chapter presents the overall conclusions from the study. The second part provides the recommendations from a practical point of view. The fourth section presents the delimitations of the study and the fifth section provides areas for further studies.

6.2.FINDINGS

The main research goal of the study is to investigate the impact of three critical incidents of fuel levy increases, stock-outs and strikes on SMEs within the Petroleum retail sector in South Africa. The following addressed three specific objectives: (1) To assess the impact of the fuel levy increase on the SMEs in the petroleum sector, particularly petroleum retailers in South Africa, (2) To explore how petroleum SMEs experienced fuel stock-outs in South Africa, and (3) To examine the effects of fuel distributors strike on SMEs in the petroleum sector in South Africa. Each of these objectives was achieved.

On the impact of fuel levy increase on SMEs, findings revealed that any policy decision that results in an increase in the fuel price, such as the fuel levy, has a significant impact on profitability through reduced sales volumes. The effect of a fuel levy increase on fuel retailers is however dependent on the source of demand for fuel, between individual consumers and business consumers. For individual consumers, the amount of fuel purchased declines with every increase in the fuel levy while for businesses, the demand is likely to remain constant. Thus, the demand for fuel is fairly elastic for individual motorists and inelastic for business customers. For example, transport operators can simply pass on the increase in fuel prices to passengers.

It was also revealed that location plays a significant role in how fuel retailers are affected by fuel levy increases. The study demonstrates that those hit hard by the fuel levy increases are those located in lower-income locations. Therefore, the demand for fuel is elastic for those fuel retailers

operating in lower LSM locations and inelastic for fuel retailers located in high LSM locations. The effect is felt for price increases above 90cpl, which are only associated with international oil price functions and exchange rates. This implies that fuel levy increases have a minimum effect on fuel retailers.

The study further reveals that the cost per litre of fuel increases with each increase in the fuel levy due to reduced sales volumes. The cash flow for the fuel retailers is another area that was found to be highly impacted by fuel levy increases. Poor services were also found to be the resulting factor, which occurs when fuel retailers attempt to reduce costs by cutting down on staff complement. This demonstrates that fuel retailers have limited flexibility in terms of strategies that they can implement to save costs following fuel levy increases. The increased costs we found to be associated with the increase in barriers to entry. It was also found that it takes a considerable amount of time for fuel retailers to fully recover following the fuel levy increases. In the worst-case scenario, some businesses fail to recover at all leading to business closure.

With regards to how fuel stock-out is experienced by retailers, the study found that stock-outs affect fuel retailers' operations through overhead costs incurred while the fuel stations are out of stock. The small margins make it impossible for fuel retailers to recover quickly, as their profitability is dependent on sales volumes, which are compromised during stock-outs. Apart from the reduced current sales volumes, fuel retailers also suffer from reduced future sales volumes due to waning customer loyalty. Similar to past studies such as KPMG (2020) and Jesaya, Nuuyandja, Silva, *et al.* (2020), the current study found that stock-outs have a negative influence on brand loyalty, which they are unlikely to regain in future.

Lastly with regards to fuel distributors' strike on retailers the study findings showed that they interrupt the supply of fuel, resulting in shortages and loss of sales at the fuel retailers. However, the study found that the occurrence of wage-related strikes is minimal due to the nature of collective agreements that are signed in the sector. In situations where stock belongs to the dealer, fuel retailers are somehow cushioned from the direct impact of damages caused during violent strike actions and protests. Location was also found to have a bearing on the extent to which a fuel retailer experiences the effect of strikes and protest action. Location was also found to be an important consideration when assessing the effect on industrial action and protests. the impact of unrest is mostly felt by those fuel retailers located in townships where poverty levels and

unemployment are rife. Besides high operating costs incurred by fuel retailers during strikes and protest actions, their businesses are likely to suffer from a cumulative effect of reduced sales.

6.3.RECOMMENDATIONS

The study makes the following recommendations:

- **To fuel retailers:**
 - On location, it is recommended that they target locations with a high LSM such as affluent suburbs, which are less likely affected by protest actions.
 - On fuel levy, it is recommended that they focus on increasing business customers as their clientele base and use it to dampen the effect of fuel levy increases on their profitability.
 - On the inflexibility of cost reduction, it is recommended that fuel retailers reconsider their business models and move away from considering themselves to meeting the needs of vehicles but the need of the drivers and passengers. This is increasingly becoming a reality in the face of the rising demand for electric vehicles.
 - Further on the inflexibility of cost reduction, it is recommended fuel retailers consider expanding on other revenue streams such as providing 24-hour pharmaceuticals, electric vehicle charging systems, convenience stores, courier services, last mile and logistics, online depots or laundry services, and new real estate play among others.
- **To fuel retailers and distributors:** to strengthen collaborative business linkages, it is recommended that they employ demand forecasting techniques and ensure that they have intimate knowledge about what is happening on the supply side. This will assist them to be proactive and ensure that they maintain their service quality standards.
- **To the fuel retailers and dealers:** to reduce the effects of stock-outs, it is recommended that the franchise agreements between the fuel retailers and dealers include a component of insurance risks and include stock-out loss compensation. Insurance for business risk related to stock-outs caused by external causes such as strikes, civil unrest, and natural disasters, among others can be made as a provision to cover overhead costs.

6.4.DELIMITATIONS OF THE STUDY

The following delimitations should be noted for the current study:

- The study adopted a qualitative research approach; wherein primary data was collected from SMEs in the fuel retail sector located in Johannesburg. The study is limited in the sense that the findings cannot be generalised to other SMEs outside Johannesburg. However contextual factors need to be taken into consideration if the results are to be extended to other SMEs outside Johannesburg
- Given that the study was qualitative, there is a possibility of researcher bias during the interpretation of results due to own experience and knowledge of the industry. However, the researcher tried to be as objective as possible by only interpreting the results as presented by the participants.
- The results presented in this study are purely based on the perceptions of the SME owners interviewed. Therefore, the veracity and authenticity of the information provided could not be objectively verified. However, the findings were validated by appealing to what exists in the literature.

6.5.AREAS FOR FURTHER STUDIES

Based on the findings, the study identifies several areas for further research to gain new insight into the understanding of the challenges of SMEs in the petroleum industry. In this regard, the following recommendations can be made for future studies.

- Relationship between elasticity demand and LSM location: The current study found that while the fuel levy increases are felt through reduced sales volumes, the impact is not the same across fuel retailers. The study revealed that the elasticity of demand varies depending on the location for which it is elastic for those retailers in high LSM locations and inelastic for those located in lower LSM locations. Future studies should further interrogate this assertion to determine the extent to which these elasticities differ based on different LSM levels.
- Linking fuel price increases to demand elasticity: The effect of fuel levy increase on fuel retailers is however dependent on the source of demand for fuel, between individual consumers and business consumers. For individual consumers, the amount of fuel

purchased declines with every increase in the fuel levy while for businesses, the demand is likely to remain constant. Thus, the demand for fuel is fairly elastic for individual motorists and inelastic for business customers. For example, transport operators can simply pass on the increase in fuel prices to passengers.

- The impact of fuel price increases on profitability based on the degree of increase: This study revealed that the impact of fuel levy increases on fuel retailers is largely determined by the extent to which the price has increased. There is a minimum impact on profitability for price increases between 10cpl and 50cpl. On the other hand, the negative impact is felt for both sales volumes and profitability for price increases that are above 90cpl. While this observation cannot be ignored, it is potentially based on the general prices-price increase associated with international oil price functions and exchange rates. This observation also implies that a fuel levy increase has a minimum effect on fuel retailers. Future studies should further investigate the potential impact of fuel price increases at various levels.

6.6.CONCLUSION

The current study is an endeavour to investigate the impact of three critical incidents of fuel levy increases, stock-outs and strikes on SMEs within the Petroleum retail sector in South Africa. The location of fuel retail SMEs plays out to be an important determinant of how the fuel retailers are affected by the three incidents of fuel levy increases, stock-outs and strikes. About the first objective, the current study found that while the fuel levy increases are felt through reduced sales volumes, the impact is not the same across fuel retailers. The study revealed that the elasticity of demand varies depending on the location for which it is elastic for those retailers in high LSM locations and inelastic for those located in lower SLM locations. It was found out that the impact is far much less for those fuel retailers located in affluent suburbs with a high LSM. In these locations, the demand for fuel remains constant irrespective of price increases. The locations are also less likely to be adversely affected by protest actions. Concerning the second objective, the study found that stock-outs impact fuel retail business operations through overhead costs that are incurred while the fuel stations are out of stock. The small margins make it impossible for fuel retailers to quickly recover, as their profitability is dependent on sales volumes, which are compromised when there are stock-outs. Fuel retailers also suffer from reduced future sales volumes due to waning customer loyalty. For the third objective, the study found that the

occurrence of wage-related strikes is minimal due to the nature of collective agreements that are signed in the sector. However, protests actions were found to have deleterious effects on the fuel retailer situated in lower LSM locations.

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ANNEXURE A: INTERVIEW GUIDE

Interview guide for retailers

A. General:

- i. Can you describe the state of profitability as a business in terms of growth, stagnation and declining?

B. The impact of fuel levy increase on the success of SMEs in the petroleum retail sector in South Africa

- i. Can you please explain how regulations (fuel levy) affect your business profitability in terms of the current situation and future prospects?
- ii. Can you describe and explain how low margins (e.g. the issue of unregulated costs versus regulated margins) impact on your business operations and business success?

C. The effect of strikes and stock outs on the success of SMEs in the petroleum retail sector in South Africa

- i. Can you explain how the supply chain issues such as strikes and stock outs affect your business?

D. The effect of imbalance of power along the supply chain on the survival of SMEs in the petroleum retail sector in South Africa

- i. Can you explain how the imbalance of power along the supply chain, in which a retailer cannot negotiate the contracts you enter with the oil companies affect your survival as a small business?

E. Recommendations

- i. What measures do you think can be introduced to the fuel retail sector in South Africa to promote a high degree of success in the context of price fluctuations?

ANNEXURE B: INFORMED CONSENT



RHODES UNIVERSITY

INFORMED CONSENT FORM
RHODES BUSINESS SCHOOL

Research Project Title:	An investigation into factors that threaten the success of fuel retailers in the South African petroleum industry
Principal Investigator(s):	Portia Makhaya

Participation Information
• I understand the purpose of the research study and my involvement in it • I understand the risks of participating in this research study • I understand the benefits of participating in this research study • I understand that I may withdraw from the research study at any stage without any penalty • I understand that participation in this study is done on a voluntary basis • I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential • I understand that I will receive no payment for participating in this study

Information Explanation
The above information was explained to me by: [name of investigator]
The above information was explained to me in: ☐ English ☐ Afrikaans ☐ isiXhosa ☐ isiZulu ☐ Other:

and I am in command of this language

OR, it was comprehensibly translated to me by: [name of translator]

Voluntary Consent

I, [leave space for full name of participant], hereby voluntarily consent to participate in the above-mentioned research.

Signature:	OR, right hand thumb print	Date: / /
		
	Witness signature:	

Investigator Declaration

I, [full name of investigator], declare that I have explained all the participant information to the participant and have truthfully answered all questions ask me by the participant.

Signature:	Date: / /
------------	-----------------

Translator Declaration

I, [full name of translator], declare that I translated a factually correct version of:

1. all the contents of this document
2. all questions posed by the participant
3. all answers given by the investigator

In addition, I declare that all information acquired by me regarding this research will be kept confidential.

Signature	Date: / /
-----------	-----------------

Notes to Researcher:

- The informed consent must explicitly exclude minors and other vulnerable populations that need bystanders

ANNEXURE C: ETHICAL CLEARANCE



Rhodes University Human Ethics Committee
PO Box 94, Makhanda, 6140, South Africa
t: +27 (0) 46 603 7727
f: +27 (0) 46 603 8822
e: s.mangele@ru.ac.za
NHREC Registration number: RC-241114-045

<https://www.ru.ac.za/researchgateway/ethics/>

19/10/2021

lumbulani makaya

Email: g17m2322@campus.ru.ac.za

Review Reference: 2021-4985-6371

Dear Prof Tshidi Mohapeloa

Title: An exploratory study on the impact of three critical incidents on SMEs within the Petroleum retail sector in South Africa

Principal Investigator: Prof Tshidi Mohapeloa

Collaborators: Mrs Portia Makaya.

This letter confirms that the above research proposal has been reviewed and **APPROVED** by the Rhodes University Human Ethics Committee (RU-HEC). Your Approval number is: 2021-4985-6371. Please note that the participant consent form attached to the application has not been filled in with the details of the study. Please ensure that this is done to your satisfaction prior to the commencing of the research. Further there are suggestions to assist in providing greater clarity to the first section of the questionnaire attached as a new comment to the resubmitted application form.

Approval has been granted for 1 year. An annual progress report will be required in order to renew approval for an additional period. You will receive an email notifying when the annual report is due.

Please ensure that the ethical standards committee is notified should any substantive change(s) be made, for whatever reason, during the research process. This includes changes in investigators. Please also ensure that a brief report is submitted to the ethics committee on the completion of the research. The purpose of this report is to indicate whether the research was conducted successfully, if any aspects could not be completed, or if any problems arose that the ethical standards committee should be aware of. If a thesis or dissertation arising from this research is submitted to the library's electronic theses and dissertations (ETD) repository, please notify the committee of the date of submission and/or any reference or cataloging number allocated.

Sincerely,

Prof Arthur Webb

Chair: Rhodes University Human Ethics Committee, RU-HREC

cc: Ms Danielle de Vos - Ethics Coordinator