The Influence of Service Quality and Customer Satisfaction on Customer Loyalty in The South African Retail Petroleum Industry

Basic Research Project (BUSA 7417A)

submitted by

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ABSTRACT

The South African petroleum products industry is a significant contributor to the South African economy. Like every other industry, its business environment is dynamic and prone to rapidly changing circumstances, thus companies must reinvent their operations to successfully deliver superior customer value. In today's competitive environment, businesses compete strategically based on marketing strategies to influence consumers to gain a competitive advantage. Retail petrol stations do not compete based on price or product qualities because these factors are regulated by the government. The uniformity of product and price means that there are other factors, or not, that consumers use to base their choice of petrol or diesel filling station.

The purpose of this study was to evaluate the influence of service quality and customer satisfaction on customer loyalty in the South African retail petroleum industry, using empirical studies based on primary survey data and verifiable hypotheses. This study undertook a quantitative approach in which a questionnaire was distributed to explore the influence of service quality dimensions on customer satisfaction, the influence of customer satisfaction on customer loyalty, and lastly, the influence of perceived service quality directly on customer loyalty. The findings of the study supported all three proposed hypotheses.

The findings of this study contribute to knowledge by providing an empirical exploration of the determinants of consumer preference regarding petrol station service outlet selection. This study also adds to existing literature on how service quality dimensions can be used as a lever to maintain customers and inadvertently grow company profits in the South African retail petroleum industry context. The findings of this study provide marketing practitioners with an understanding of strategies that can be employed to influence consumers buying behaviour through the design of an industry specific SERVQUAL model.

This study outlines the strategies, methods and suggests further research that can explored by future researchers. This study also adds value by showing how structural equation modelling can be used as a statistical tool to model consumer behaviour in different industries.

Keywords: *South African retail petroleum industry, Service Quality, Customer Satisfaction, Loyalty*

DECLARATION

I Musawenkosi Khaliphayo declare that this research report titled "The Influence of Service Quality and Customer Satisfaction on Customer Loyalty in The South African Retail Petroleum Industry" is my own work. I have acknowledged and referenced all the ideas and concepts that are the work of other researchers. I am submitting this research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration. This report has not been submitted to any other institution or for any other degree.

Signature:

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Reason:I approve

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Signed at Johannesburg on 24 May 2024

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1. OVERVIEW OF STUDY

This chapter describes the context and significance of the study. The chapter will outline the context of the study, problem statement, research objectives, purpose of the study, research hypotheses and questions, the significance of the research, and delimitations.

1.1 Background and context of the study

The petroleum industry in South Africa is a crucial part of the economy (Crompton et al, 2020). The industry is responsible for the production and distribution of petroleum products, namely petrol, diesel, jet fuel, illuminating paraffin, fuel oil, bitumen, and liquefied petroleum gas. The industry contributes roughly 8.5 percent to the country's GDP while providing circa 18 percent of its primary energy (PRNewswire, 2021). In 2021 it was reported that 10.8 billion litres of petrol were produced making it the second-largest liquid fuel produced after diesel (FTI Consulting, 2021). Trends indicated that the demand for refined petroleum products will rise because of factors such as rising car sales, liquified petroleum gas (LPG) penetration, and population growth in South Africa (Mordor Intelligence, 2021). Petrol is used domestically in various sectors such as transportation, industrial, commerce, and public, residential, and agricultural sectors (Ratshomo & Nembahe, 2019). The retail fuel industry in South Africa, which has 4 600 outlets across the country, accounts for the majority of petrol consumed (Ratshomo & Nembahe, 2019). In the South African petroleum industry, the major players include BP, Chevron, Engen, PetroSA, Sasol, Shell, and Total (SAPIA, 2022). They run production, storage and delivery facilities all around the country.

Since the 1930s, the South African government has regulated the markets that produce, distribute, and retail petroleum fuels (Crompton et al, 2020). It is assumed, based on research evidence, that the regulations or interventions were intended to protect various key stakeholders along the petroleum fuels value chain including the consumers of the petroleum products (Crompton et al, 2020). Key stakeholders in the value chain are protected by interventions such as limiting the vertical integration of manufacturers as they cannot own or operate forecourts. As a result of the regulations, there is less competition in the petroleum fuels market and all consumers are protected from exorbitant pricing (Crompton et al, 2020).

The consumer is protected through regulated pricing and standardised product specifications. The retail price of petrol in South Africa is heavily regulated compared to that of diesel.

The government plays a large role in the South African liquid fuels market through organisations like the Central Energy Fund (CEF) and the National Energy Regulator of South Africa (NERSA) (SAPIA, 2022). Petroleum companies cannot compete for a larger market share solely based on the petrol price. Since petrol is a uniform product, other components in the downstream activities of the petroleum product's value chain become increasingly critical levers in determining customers' purchase intention and loyalty. The focus of filling stations is no longer product quality but rather the customer, and how to make decisions at every step of the product delivery journey to ensure it achieves an edge over the competition (Maharasi et al, 2021).

The petroleum products industry is a significant contributor to the South African economy. Like every other industry, its business environment is dynamic and prone to rapidly changing circumstances, thus companies must reinvent their operations to successfully deliver superior customer value. In today's competitive environment, businesses compete strategically based on marketing strategies to influence consumers to gain a competitive advantage. Retail petrol stations do not compete based on price or product qualities because these factors are regulated by the government. The uniformity of petroleum products and price means that there are alternative factors that consumers use to base their choice of petrol or diesel filling station.

Despite significant strides being made in studies on consumer behaviour, particularly factors influencing brand loyalty, there has been little empirical research on the influence of service quality and customer satisfaction on consumer loyalty among petrol station customers in South Africa. This situation leaves the field unexplored, even though a few studies have confirmed a link between service quality, customer satisfaction, and customer loyalty in filling station company selection. This raises questions of whether companies can strategically use their capabilities to positively influence consumers' perception of service quality, what the casual relationship is between service quality and customer satisfaction, and lastly if companies can establish ways to use these two constructs to garner customer loyalty. The managerial implications of a misaligned consumer value proposition with consumers' needs and wants are that consumers will switch to other providers, thus negatively impacting profitability.

Service quality and customer satisfaction have been at the core of interest in marketing research (Shemwell et al, 1998). In present-day competitive markets, delivering superior service quality and keeping customers satisfied is the cornerstone to gaining a competitive advantage. It is clearly understood in business that keeping a loyal customer base is more profitable than trying to attract new consumers. Literature indicates that service quality can be measured using the SERVQUAL model (Parasuraman et al, 1988). Cronin and Taylor (1992) argue that the SERVQUAL model cannot be used as a universal tool for all industries and must be industry-specific. Consumers of products and services from different industries have different perceptions of service quality based on their rank of the SERVQUAL dimensions in comparison to other industries.

Studies have also shown that service quality is an antecedent of customer satisfaction. Consumers are believed to make a comparison between predictive expectations and perceived quality (Spreng & Mackoy, 1996). If the result of the comparison is positive, then the consumer is said to be satisfied. If the consumer does not perceive to have received what is expected, then they are not satisfied. Cronin and Taylor (1992) further posit that customer satisfaction has a signification direct effect on customer intention to purchase (Cronin & Taylor, 1992).

1.2 Problem statement

Businesses operating in the retail petroleum industry are increasingly forced to pay attention to end-users of their products. Increased competition in petrol station companies that sell fuel requires an understanding of the consumer perception of quality and satisfaction that leads to consumer retention. Consumer retention directly translates into profit for companies in comparison to attracting new customers which requires large capital (Zeithaml et al, 1996). To this effect, there is a growing challenge for marketing practitioners and academics, and managers to understand the impact of service quality and customer satisfaction as a determinant of a company’s profits, consumer loyalty, and attraction of new consumers thus achieving competitive advantage. This concern is magnified in the petroleum products retail market where there is an increasing number of companies selling almost the same products, to the same customers.

Consequently, scholars believe that the subject of the influence of service quality and customer satisfaction needs further empirical studies to explore the determinants of consumer preference, (Mahmood et al, 2018), regarding petrol station service outlet selection. Therefore, this research seeks to bridge a literature gap by investigating the determinants of consumer preference based on the SERVQUAL model for petrol consumption, in the case of petrol retail in South Africa. Furthermore, this research sets to determine if perceived service quality can influence consumer loyalty.

1.3 Research objectives

The main objective of this research is to determine the relationship between service quality, customer satisfaction, and customer loyalty in the South African retail petroleum products industry.

1.4 Purpose of study

The study will attempt to establish the effect of service quality and customer satisfaction on customer loyalty, using empirical studies based on primary survey data and verifiable hypotheses. In other words, the goal of the study is to determine the association between service quality, customer satisfaction, and customer loyalty, as well as the role of customer satisfaction as a mediating effect of service quality on customer loyalty.

1.5 Research Hypotheses

A hypothesis is a statement that can be proven or disproved using empirical evidence. The nature of a hypothesis is speculative and hypothetical (Blumberg et al, 2014). Hypotheses can also be defined as statements in which variables are assigned to cases. The case refers to a subject or entity that the hypothesis discusses. In a hypothesis, the variable is the feature, trait, or attribute that is assigned to the case (Blumberg et al, 2014). The following hypotheses were formulated:

H1: Service quality is positively associated with customer satisfaction.

H2: Customer satisfaction is positively associated with customer loyalty (recommend and repeat purchase).

H3: Service quality is positively associated with customer loyalty (recommend and repeat purchases).

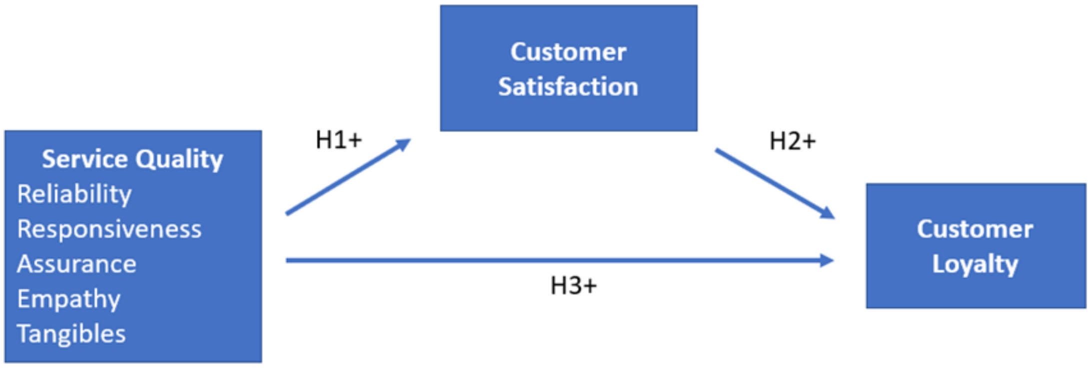

Figure 1: Conceptual Model. Source: Developed by Researcher (2024).

A variable is a characteristic, trait, or factor that is being studied and has the potential to change or vary. Researchers are concerned with the behaviour and relationship between variables (Blumberg et al, 2014). An independent variable (IV) is a variable that is an antecedent or predictor of the dependent variable (DV) in some way. A moderating variable (MV) is a second independent variable that is believed to have a significant contributory or contingent effect on the IV-DV relationship (Blumberg et al, 2014).

In the proposed conceptual model, customer loyalty is the DV that is influenced or predicted by the two IV service quality and customer satisfaction. The MV is customer satisfaction moderates the relationship between perceived service quality and customer loyalty. Bei and Chiao (2006) propose that the relationship between perceived service quality, customer satisfaction, and loyalty can be adopted into an integrated model that tests the antecedents, mediating and consequent relationships between the constructs (Bei & Chiao, 2001). The analysis of the results concluded that service quality is an important determinant of customer satisfaction. There is no direct relationship between service quality and customer loyalty, but customer satisfaction acts as a mediating variable because consumers can establish higher customer loyalty when their attitudinal and behavioural needs are satisfied (Bei & Chiao, 2001). Basically, perceived service quality influences customer satisfaction, which then motivates or induces customer loyalty. This study will confirm if such a conceptual model can be used in predicting the relationships in the constructs in the model in the South African retail petroleum market.

1.6 Research questions

In this study, the research question is: What influence do service quality and customer satisfaction have on customer loyalty in the retail petroleum products industry?

1.7 Secondary research questions

- What is the influence that service quality has on customer satisfaction?
- What influence does customer satisfaction have on customer loyalty?
- What influence does the service quality have on customer loyalty?

1.8 Significance of study

The study will contribute to theoretical and empirical knowledge on service quality, customer satisfaction, and loyalty in a South African context with a specific focus on the retail petroleum products industry. Greater managerial focus is now on maximising customer value in cooperative and long-term relationships to retain and gain customers over competitors.

1.9 Delimitations of the study

The research will be confined to South African retail petroleum customers that purchase petrol and diesel at petrol stations for their vehicles to utilise transportation. The study is not limited by the type of brand of petrol the customer uses. The study will only concentrate on the retail segment of the petroleum products value chain. This study is limited to the determinants of individual consumer preference and its impact on the petroleum retail consumption sector. Service quality, customer satisfaction, and customer loyalty will be the only constructs studied.

2. LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature and related conceptual framework of the research related to the variables identified in the research question: service, service quality, customer satisfaction, and customer loyalty. In addition, the chapter will outline hypotheses that support existing literature relating to the relationships between service quality and customer satisfaction, and customer satisfaction and customer loyalty.

2.2 Overview of the South African Petroleum Industry

Managers in the goods market where the product is homogeneous need to understand the influence of service quality on customer satisfaction, and the potential result of the intention to purchase and remain loyal (Anderson et al, 1997). Since petrol is a regulated petroleum fuel product, particular service quality dimensions as a downstream activity of the petroleum products value chain can be manipulated to retain or gain more of the fuel retail market share. Modern businesses are becoming more customer-centric, embracing marketing activities that aim to better understand, attract, maintain, and develop long-term relationships with profitable consumers (Nimako, 2012). Essentially, marketing activities can be viewed as the capability enabling businesses to stay relevant, reliable, convenient, and responsive to customers' ever-changing needs ensuring continued profitability. Service quality has been identified as one of the critical success factors for organisations that are in the services business. This is due to the close link between service quality and customer satisfaction (Rasyida et al, 2016). This study has examined the effects of service quality dimensions as a determinant of customer satisfaction leading to purchase intention and customer loyalty at South African filling stations. The study was limited to the purchase intention and customer satisfaction at South African filling stations. South Africa has 4027 petrol and diesel forecourts across the country with 6 brands being the main supplier (FTI Consulting, 2021). All forecourts are competing for their share of the petrol retail market. Through crucial features of service quality specific to the petroleum fuels industry, managers could impact the satisfaction and petrol purchasing intentions of customers. The work done in this study will provides insights adding knowledge confirming whether the dimensions of service quality result in customer satisfaction inducing purchase intention and customer loyalty for one filling station over another. The results also provide important theoretical and managerial implications applicable in the South African context.

2.3 Service

The concept of "service" has been described by Kotler and Keller (2011), as any act or performance that an individual can provide to another that is generally intangible (Kotler & Keller, 2011). Other researchers have defined service as deeds, performances, and processes (Zeithaml et al, 2010). Service has multiple definitions thus causing uncertainty in management literature. A definition that is relevant to business is that a service is defined as an economic activity that is consumed at the point of sale (Sivakumar, 2004). All definitions in the literature confirm that service is intangible and can be the sole revenue-producing activity for a business. However, another category of service has been defined as customer service. Customer service is an avenue or process that a business uses to support the business to provide its products to its customers (Zeithaml et al, 2010). Customer service is not the direct result of revenue for a business but provides solutions and value-add for the consumers of the company's core products.

The literature above confirms that services are portrayed as intangible with their result perceived as an activity rather than a tangible object and are provided to another party in return for economic gain. A business can be a services business such as a hotel or healthcare, where there is no tangible object sold to the customer. The "intangible" component of services causes confusion because certain service outputs do provide a tangible object such as the equipment or staff. Alternatively, customer service was coined as an economic activity that forms part of the process of delivering a tangible product to a customer. An example of customer service is getting groceries from a local grocery store. The act of shelving supplies, providing customers advice and completing the sale at the till all form part of delivering the grocery products to the customer. The concept of service is twofold and could be linked to a physical product or not. The service component of the whole offering can be minimal or large (Kotler & Keller, 2011). To differentiate themselves, manufacturers, distributors, and retailers are increasingly delivering value-added services, such as great customer service (Kotler & Keller, 2011). Managers in the tangible product markets have an added challenge to be able to transform their product offering into concrete benefits and a well-defined experience.

2.4 SERVQUAL Model (Service Quality)

In today's competitive markets, organisations are constantly looking for new ways to gain sustainable competitive advantage (Parasuraman et al, 1988). Management in all industries is concerned with the rise in market competition and demand for high quality resulting from a combination of globalisation, deregulation, and consumers with ever changing needs (Kandampully & Solnet, 2018). Companies that deliver high-quality service have been recognised to have the advantage of standing out in a market providing similar offerings. Research studies have numerous times proven the correlation between superior quality and increased market share and profits (Kandampully & Solnet, 2018). The understanding that any organisation exists to serve its customers is fundamental to service quality if the organisation is to survive and thrive in a highly competitive and ever-changing market (Hernon & Danuta, 2001). Customers are worth listening to, and they are the best judges of the quality as per the conceptualization of service quality.

Service quality is a critical element of consumer perceptions (Wilson et al, 2016). In industries of pure service, where the performance is intangible, service quality plays a vital role in customers' evaluations. Parasuraman et al. (1988), define service quality as the discrepancy between the consumers' perceptions of services offered by a particular firm and their expectations about firms offering of such services (Parasuraman et al, 1988). Parasuraman, Zeithaml, and Berry (1988) further qualify their definition of service quality by adding that it is a global judgement or attitude relating to the superiority of the service (Parasuraman et al, 1988). The judgement in the case of service quality is between two variables: the expected service and the perceived service. It is therefore logical that service quality is what results when a consumer undergoes a process of evaluation by comparing their expectations with the service they perceive to have received (Gronroos, 1984). Gronroos (1984), stipulates that for companies to compete successfully in their respectful marketplaces they need to define how their consumers perceive service quality and determine ways to influence service quality (Gronroos, 1984). Companies need to understand what resources, capabilities, and activities, in their control and outside their control, are available to assist in impacting perceived quality. Consumers' expectations can be influenced using traditional marketing activities such as advertising. Word of mouth and previous experience with a service are other avenues that can mediate customer expectations (Gronroos, 1984). Shaping customer expectations occurs before the consumer receives the performance from the service. On the other hand, the perceived performance of a service is divided into two processes: instrumental performance and expressive performance (Gronroos, 1984). Instrumental performance is related to the technical result of a service process and looks at what the consumer is left with after the performance of the service for example a financial transaction has taken place. The expressive performance of a service has to do with the psychological level of performance (Gronroos, 1984). The expressive performance focuses on the human or resource interactions that occur during the service performance process. The interactions will certainly influence the consumers' perceptions. Swan and Combs (1976) argue that customer satisfaction is achieved when both instrumental and expressive performance is satisfactory (Swan & Combs, 1976). Although instrumental performance may be satisfactory, it may not be enough. If the customer perceives that the expressive performance is not satisfactory, they will still not be satisfied with the overall service process meaning customer satisfaction would have not been achieved.

Service quality is regarded to be an “abstract and elusive” construct owing to its three unique characteristics of service: intangibility, heterogeneity, and inseparability of production and consumption (Parasuraman et al, 1988). The characteristics of a service introduce difficulty when trying to objectively measure service quality due to the lack of intrinsic indicators, thus there is a reliance on the consumers’ perceptions of quality to measure the quality of a company’s service. The SERVQUAL model was developed in 1985 by Arun Parasuraman, Valarie Zeithaml, and Leonard Berry in a multi-stage project to identify dimensions that measure service quality (Kandampully & Solnet, 2018). The model measures the discrepancy between consumer expectations and perceptions (Ramseook Munhurrun et al, 2010). The resulting model captured 5 dimensions that are considered highly by consumers when evaluating service quality. The five dimensions were: reliability, responsiveness, empathy, assurance, and tangibles (Parasuraman et al, 1988).

1. Reliability relates to service providers' ability to perform the promised service dependably and accurately (Parasuraman et al, 1988). Reliability includes qualities such as dependability, consistency and accuracy (Kandampully & Solnet, 2018).

2. Responsiveness relates to the willingness to help the consumer and provide service on time (Parasuraman et al, 1988). Responsiveness can be characterised by helpfulness, friendliness, warmth, willingness, and openness.
3. Assurance is portrayed by employee knowledge and courtesy and their ability to inspire consumer trust and confidence (Parasuraman et al, 1988). This is characterised by qualifications, skills, courtesy, politeness, credibility, trustworthiness, honesty, and security (Kandampully & Solnet, 2018).
4. Empathy is the individualised caring that the service provider offers to its consumers (Parasuraman et al, 1988). It includes the understanding of the consumer's needs and encourages understandable communication.
5. Tangibles consist of the appearance of the physical facilities, equipment, personnel, and means of communication (Parasuraman et al, 1988).

Reliability is the only dimension that is concerned with the service outcome, while the other four dimensions are concerned with the service process (Parasuraman et al, 1991). Quantitative research has shown that consumers regard reliability as the most important dimension relative to the other four dimensions. Furthermore, it has been established that although reliability is important in meeting consumer expectations, the other four dimensions are important in exceeding the customers' expectations. The reliability dimension is guaranteed because the service provider is expected to be accurate and dependable in providing what is expected by the consumer. The other four process delivery dimensions are a domain where the service provider could impress the consumer's willingness, knowledge, courtesy, caring, or understanding, thus enabling the service provider to perform beyond the consumer's expectation (Parasuraman et al, 1991).

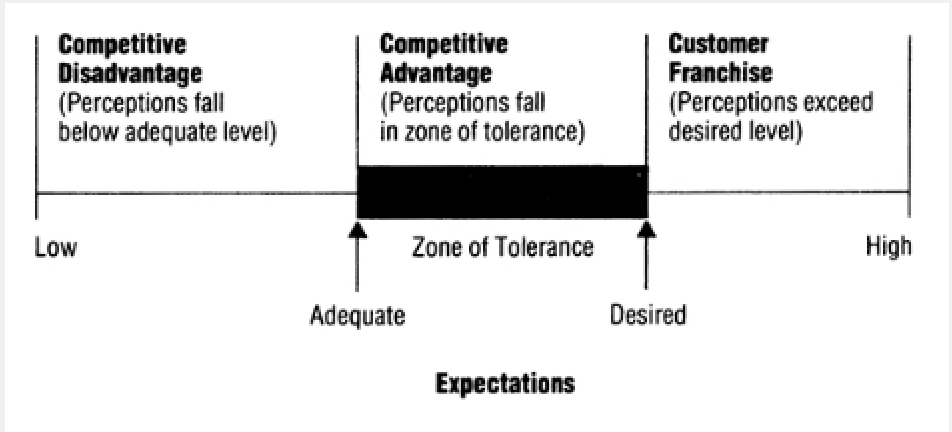

Figure 2: Customer Perceptions of Service Performance. Source: (Parasuraman et al, 1991).

Customers' service expectations exist at adequate and desired levels of expectation. Companies therefore must measure service quality between the perceived service and adequate service, and between perceived service and desired service (Parasuraman et al,1991). As illustrated by the figure above, the level of consumer's perceived service and expected service level, a company can be operating at a competitive disadvantage, competitive advantage, or consumer franchise (Parasuraman et al, 1991). The adequate level indicates the minimum performance expected by consumers. If a company is operating below the adequate level, it means that it is operating at a competitive disadvantage and its consumers may leave if ever, they are presented with a service alternative that they would perceive to be better. Companies operating above the adequate level of expectations are utilising service quality to differentiate their offerings. However, this competitive advantage may be temporary because companies that offer a service level above the desired levels of expectation remain a threat to the advantage. Developing a customer franchise means that the company's service level has surpassed the consumer's desired levels of expectation. Companies operating at this service level are perceived by their consumers to be exceptional to a point where it induces or enhances customer loyalty (Parasuraman et al, 1991).

Studies have corroborated significant correlations between service quality, marketing variables, and profitability. (Zeithaml et al, 1996). The findings have uncovered that companies with superior service quality benefit from increased market share resulting in increased profitability and have the advantage of charging a premium price for their servings which their consumers are willing to pay.

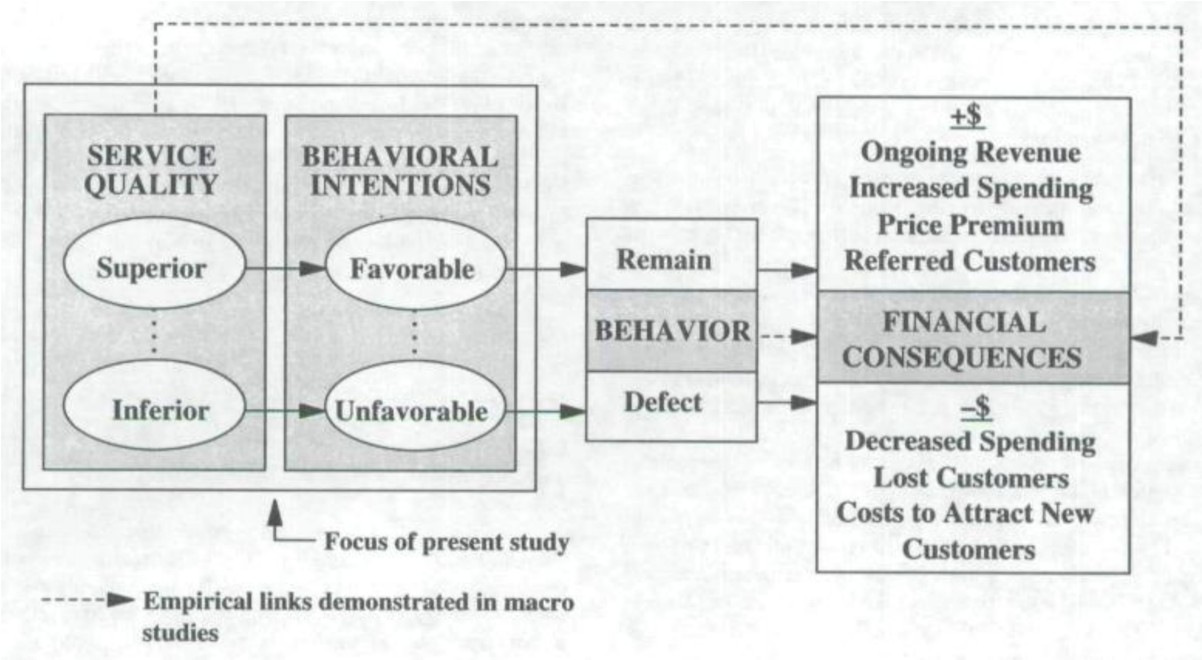

Figure 3: The Behavioural and Financial Consequences of Service Quality. Source: (Zeithaml et al, 1996).

Financial Consequences:

According to Zeithaml, Berry, and Parasuraman (1996), following a consumer retention strategy is more profitable than attempting to gain new consumers or cutting costs. Losing consumers adversely affects financials because a new consumer must be attracted as a replacement, and attracting new consumers is expensive. Financial resources have to be directed to advertising, promotion, sales costs, and start-up operating expenses to attract new consumers (Zeithaml et al, 1996). Another matter leading to the high costs of replacing a consumer that has left is that consumer profitability takes time, thus it will take time for the company to recover the new consumer acquisition costs. Attracting a new customer also requires a great deal of service improvement to convince them to switch.

Long-term consumers are more inclined to buy additional services and spread positive word-of-mouth in comparison to short-term consumers. The longevity of the consumer-company relationship favourably influences the company's profitability (Zeithaml et al, 1996). Long-term consumers value maintaining the relationship with the company to an extent that the company can charge a premium compared to its competitors and the customers would not leave.

Behavioural Consequences:

The conceptual model in figure 1 depicts the behavioural intentions of a consumer as a function of perceived service quality, and the resulting behaviour and financial ramifications for a company. Starting from the left to the right, when a consumer perceives that the service quality of a company is superior the behavioural intentions of the customer will be favourable resulting in the consumer remaining with the service provider. The financial consequences of the consumer remaining with the company are ongoing revenue, increased spending, the company can charge a premium, and the company will get referrals from existing consumers. The opposite of this relationship also holds; if the consumer perceives that the service offered by the company is inferior their behavioural intentions will be unfavourable leading to defective behaviour (leaving for alternatives with better service quality). The financial ramifications for the company would be decreased consumer spending, loss of customers, and increased cost to attract new customers.

2.5 Customer Satisfaction

Identifying customer needs and expectations is not an easy task for organisations because customer behaviour is not rational. There is no one universal method that can be used to comprehensively verify customer satisfaction. Though customer satisfaction can be understood to have varying meanings universally, at the core of its concept is a customer with needs that must be fulfilled (Biesok & Wyród-Wróbel, 2011). The existence of many companies in a similar market creates competition resulting in the need to offer the customers superior, unique, and valuable terms to satisfy their needs (Biesok & Wyród-Wróbel, 2011). Satisfying customer needs is not only associated with emotions related to the purchasing process but also encompasses the environment before and after the purchase has been made. For a company to achieve long-term satisfaction of customer needs it must bring itself closer to its customers to make it easier to understand how to fulfil their needs and desires.

Customer satisfaction can be defined as a business's ability to achieve its customer’s needs and surpass the customer’s expectations. According to Biesok and Wyrod-Wrobel (2011), customer satisfaction has to do with gratification (Biesok & Wyród-Wróbel, 2011). International Standard IOS 10004 defines customer satisfaction states “Satisfaction is a judgement, an opinion expressed by the customer. The degree of satisfaction reflects the gap between the customer's vision of the expected product, and the customer's perception of the delivered product" (Biesok & Wyród-Wróbel, 2011). Musafir (2017), further posits that the consumer's satisfaction is based on the pleasure or displeasure derived from the comparison between the outcome and perceived performance concerning the consumers' expectations (Musafir, 2017). Therefore, if a gap is perceived between performance and expectation then there is dissatisfaction.

Consumers, based on varying analyses, will decide which business provides value for their money. A company that provides this value will grow in revenue because existing consumers will tend to spend more money and refer new customers (Musafir, 2017). Customer satisfaction is important for a company because it is the one point of contact that allows for direct communication between consumers and the company when they are purchasing the product or service. This communication allows for the flow of information from the consumer to the company and gives the company insights into the consumer's intention to repurchase and the consumer's future loyalty. Communication also helps to eliminate the spread of bad word of mouth as the company can rectify its mistakes and Customer satisfaction gives companies the ability to differentiate themselves from others that offer similar products and services. Companies that prioritise customer satisfaction as a core component of their business strategy tend to prosper.

Customer satisfaction has cemented itself as a key concept in contemporary marketing theory and practice (Yi, 1993). The concept in marketing terms emphasises providing customer satisfaction while generating profits. This is expected to result in an overall improvement in the quality of life of the consumer. The consequence is that the diverse needs of consumers, businesses, and society are met through customer service. This significance has led to an explosion in research related to customer satisfaction for decades (Yi, 1993). In literature, the Expectation Disconfirmation paradigm has been dominantly used as the main paradigm that distinguishes consumer satisfaction (Isac & Sergiu, 2014). This paradigm encompasses a wide range of theories that explain the nature and evolution of consumer satisfaction from various perspectives.

According to the Expectation Disconfirmation model, consumers evaluate satisfaction in comparison to their expectations for a product or service, and the actual performance (Yi, 1993). The model has two variables that are expectation and performance (Elkhani & Aryati, 2012). These two variables have significance over two distinct periods. “Expectation” refers to the initial expectation regarding the performance of a product or service before purchase (Oliver, 1980). Performance refers to the post-purchase period after the consumer has experienced the actual performance of the product or service. The difference between expectation and perceived experience of the performance is “disconfirmation” of performance (Oliver, 1980). Positive disconfirmation occurs when perceived performance exceeds expectations. Negative disconfirmation occurs when perceived performance falls short of expectations. According to Oliver (1980), disconfirmation was ultimately related to higher levels of consumer satisfaction (Oliver, 1980). Positive disconfirmation increased consumer satisfaction, while negative disconfirmation decreased it. The research conducted by Oliver (1980) supported prior submissions from behaviourists that suggested that “satisfaction experiences influence future purchase” (Oliver, 1980) and the agreement submitted by Fishbein and Ajzen (1975) that dissatisfaction decreases intention to repurchase.

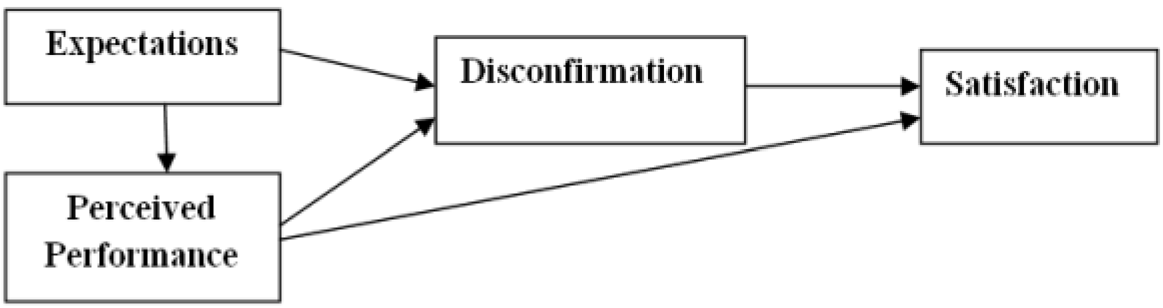

Figure 4: Expectation Disconfirmation Theory Model. Source: (Elkhani & Aryati, 2012).

2.6 Customer Loyalty

Customers are an essential component of any business. Every business exists to satisfy a customer's need to generate revenue and profits. Organisations that cultivate customer loyalty can achieve long-term revenue and profits (Alsulami, 2021). Loyalty is not a concept solely based on repeat purchases from one supplier for a particular service or product. There is a plethora of reasons for repeat purchases, for example, price, long-term contractual agreements, and habit are among some of the reasons consumers may be reluctant to switch suppliers. In today’s age of easy access to a wide range of information and knowledge, consumers can evaluate and monitor the trade of many competitors and choose companies to trade with that offer a competitive consumer experience (Alsulami, 2021). As a result, companies must develop strong customer loyalty by exceeding customer expectations. Companies can employ multiple mechanisms to ensure that their product or service offering is superior, for example, differentiating their offers from their competitors, degenerating demand from consumers, demonstrating superior value, and building customer loyalty (Loyalty Research Center, 2012).

Loyalty is a phenomenon that has been widely examined in the sphere of marketing research. There have been many definitions of the concept. Loyalty has been defined to occur when a consumer believes that a particular company’s product or service is the best available option (Loyalty Research Center, 2012). The product or service meets the consumers’ value proposition and when faced with a purchasing decision in the future, they will without a doubt accept any offer for that product or service. Duffy (2003) defines loyalty as the positive and measurable financial results generated by a customer's feelings about a brand (Duffy, 2003). Another basic definition of loyalty is defined as consumers staying with their service providers, using word-of-mouth to recommend it to other potential consumers, and even influencing other consumers’ decisions (Fisher, 2001). A comprehensive definition has been formulated by Oliver (1999), which states that loyalty is “a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing effort having the potential to cause switching behaviour” (Trif, 2013) (Oliver, 1999). According to these definitions, loyalty is a two-dimensional construct: a behavioural component indicating a desire to repurchase, and an attitudinal component based on the partner's preferences and impressions (Trif, 2013) (Lichtlé & Plichon, 2008). Essentially, loyalty includes a commitment to a brand due to having a positive attitude toward a brand, instead of simply repeat purchase.

The behavioural approach states that a consumer can be regarded as loyal due to repeated purchases of the same brand (Lichtlé & Plichon, 2008). The approach further posits that a satisfied customer will experience positive reinforcement and repurchase the product from the same brand again. The concept of the behavioural approach is rooted in retention, meaning an unspecified number of repurchases in a given period (BOBÂLCĂ, 2013). Often, the behavioural approach is based on quantitative indices: number of purchases, retention level, the amount spent, market share, and the number of clients who have chosen alternatives (BOBÂLCĂ, 2013). However, Pavlovian conditioning can become diminished due to either extinction or forgetting (Lichtlé & Plichon, 2008). Extinction occurs when the consumer does not derive satisfaction from using the product anymore, thus the positive reinforcement disappears. The probability of repurchasing also diminishes eventually disappearing. Forgetting is the result of diminished exposure to the stimulus that has in the past led to purchase. Examples of forgetting to include the consumer no longer purchasing the product thus the satisfaction associated with the product diminishes over time or is no longer exposed to the product advertising and he forgets about it. Lichtlé and Plichon (2008) propose that the management of the company supplying the product should deploy tools to continually trigger repeat purchases. Examples of these trigger tools can be continuous advertising to avoid forgetting and developing reward initiatives such as promotions.

According to the attitudinal approach, consumer opinions and perceptions about the brand, preferences, purchase intention, and repurchase intention are all used to determine loyalty (Lichtlé & Plichon, 2008) (Bass et al, 1972). Dick and Basu (1994), in agreement, state that the attitudinal approach is a consumer's willingness to continue his relationship with the company despite competing companies' lower prices and to recommend the products or services to his friends (Dick, 1994). When the consumer has a favourable attitude toward the brand then they are considered to be loyal. This approach goes on the assumption that consumers' information is available to make rational decisions. Consumers generally consider the ramifications of a particular action before acting on it. As a result, the direct predictor of behaviour is intention. Lichtlé and Plichon (2008) posit that when a customer's attitude toward a product or brand is highly favourable, we can expect him to buy. Attitudinal variables are highly important because behaviour reflects the current condition or, more likely, a series of past events, whereas attitudes provide insight into the consumers' future behaviour (BOBÂLCĂ, 2013). Managers have a vested interest in influencing this attitude to encourage positive behaviour toward the brand or product.

Customer loyalty is the primary goal of marketing efforts (Watson, Beck, Henderson, & Palmatier, 2015). Companies spend exorbitant amounts of money to build and maintain customer loyalty. Jacoby and Chestnut (1978) put forward that customer loyalty is defined by three distinct conditions in the development of customer loyalty, namely, a cognitive level, emotional level, and cognitive level (Lichtlé & Plichon, 2008). Cognitively, the consumer has the information required to evaluate that the brand they are selecting is superior to that which is offered by competitors. The antecedents of the cognitive level include accessibility, confidence, centrality, and clarity (McMullan, 2005). The cognitive level is sustained by cost, benefits derived from the experience with the product, and quality. Emotionally, the consumer must have an emotional bond or attachment to the brand and prefer the brand over other existing brands. The antecedents for the emotional level are emotions, moods, and primary satisfaction (McMullan, 2005). The emotional level is sustained through satisfaction with the product or service received involvement preference and cognitive consistency. Lastly, on a cognitive level, the consumer must have the intention to repurchase post the initial experience with the brand. The antecedents of the cognitive level of development are the switching and sunk costs (McMullan, 2005). The cognitive level can be sustained through constant persuasion and trial.

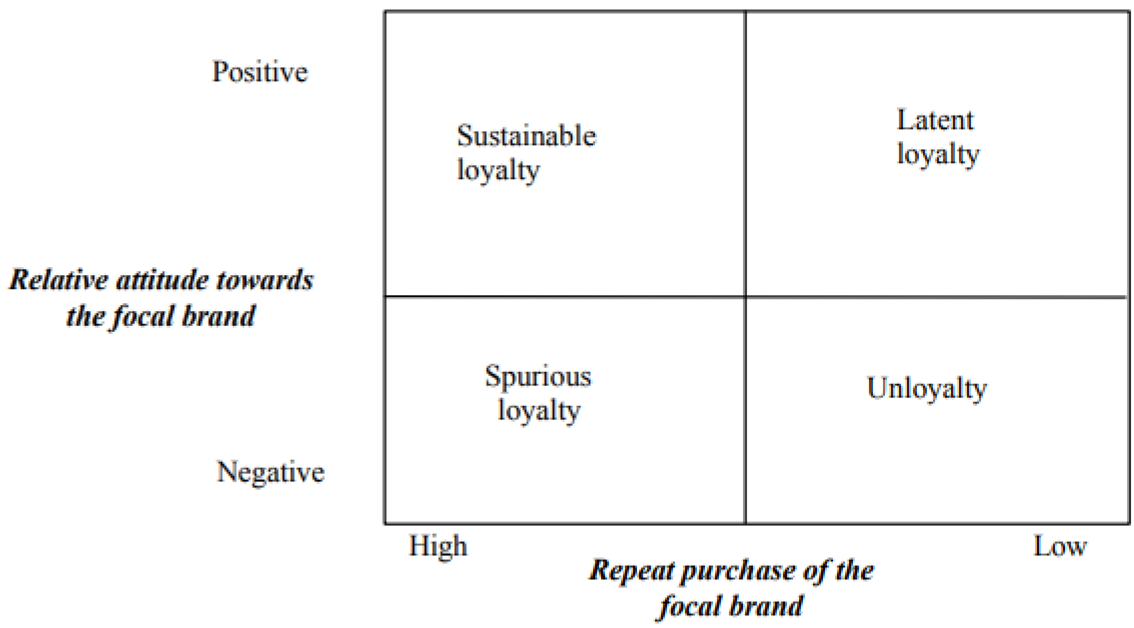

Figure 5: A taxonomy of loyalty based on attitudinal and behavioural approaches. Source: (Costabile et al, 2000).

Based on scholarship on attitudinal and behavioural approaches to loyalty a taxonomy (figure 5) of loyalty has been proposed categorising different types of loyalty by analysing the relative attitude toward a specific brand and the repetition of purchase behaviour toward the same brand (Costabile et al, 2000). Figure 1 depicts four types of loyalty identified using the attitudinal and behavioural approaches to customer loyalty definition: unloyalty, spurious loyalty, latent loyalty, and sustainable loyalty. Unloyalty in consumers is characterised by low repeat purchases from a brand and a negative attitude toward the brand. Spurious loyalty refers to high repeat purchases of a brand and a negative attitude toward the brand. Consumers exhibiting spurious loyalty are more likely to switch suppliers should they perceive another alternative supplier to offer higher value. Latent loyalty refers to a low repeat purchase probability of a brand but is satisfied due to previously experiencing positive reinforcement and should the stimulus present itself again then they would likely repurchase the product from the same brand again. Sustainable loyalty refers to consumers that have high repeat purchases from the same brand and have a positive attitude toward the brand. The model emphasises that consumer loyalty can present itself in any manner based on the constructs of behavioural and attitudinal dimensions. This highlights the importance of consumer loyalty mapping for managers to carefully tailor their offering to get as consumers as possible in the sustainable loyalty category.

It is widely understood in academia that consumer loyalty and satisfaction are related in a way that is impossible to separate (Oliver, 1999). Customer satisfaction is seen as a crucial driver of long-term supplier-buyer relationships (Lam et al, 2004). A satisfied client's attitude toward a company may encourage the customer to use the service provider again and suggest it to others. The relationship between customer satisfaction and repeat business isn't linear (Lam et al, 2004). This is because consumers may choose brands with a lower average quality level if the quality variance is smaller than a brand with higher average quality but greater volatility. Despite this fact, researchers still argue that an extremely satisfied consumer is still more likely to remain with one brand when compared to a consumer who is experiencing subpar satisfaction. This argument also holds for word-of-mouth recommendations.

Literature has shown that customer loyalty is crucial in maintaining company longevity. The relationship between consumer and supplier is vital in ensuring superior consumer satisfaction and long-term company profitability. There are many proposed loyalty theories and processes giving rise to a need for an integrated approach to customer loyalty. To do this, a shift from a static to a dynamic study is required to measure and comprehend loyalty processes (Lichtlé & Plichon, 2008). It is necessary to comprehend the relationship's history and overall trajectory. Due to the existence of a plethora of different loyalty processes, it's critical to understand them all to establish client loyalty. Management must be concerned with questions such as:

- What are the best levers to use and when should they be used?
- Which explanatory method provides the most behavioural loyalty?
- How can we develop a product that would increase customer loyalty?
- Is there a customer segment that would be easier to engage in a connection with?
- How can we help individuals become more resistant to rival offers and situational pressures?

The answers to such questions may begin to provide explanations for certain consumers' resistance to strategic loyalty programs and the strategies used by companies to gain and retain customers.

2.7 Conceptual Model and Hypothesis

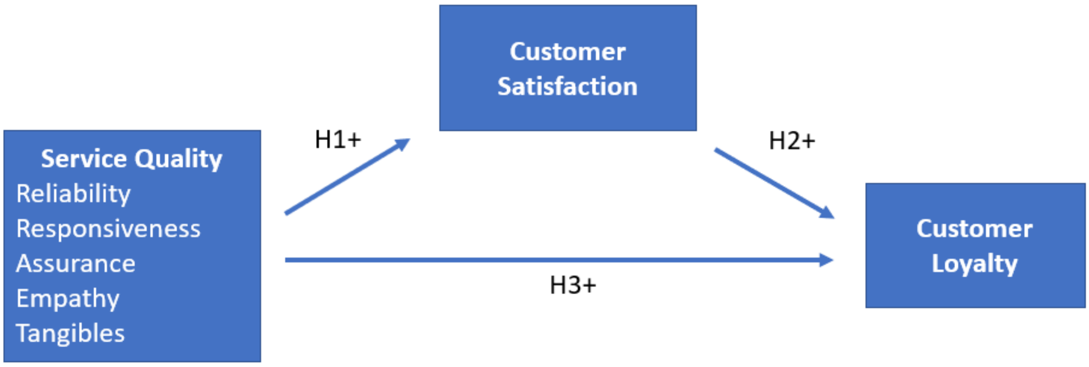

Figure 6: A proposed conceptual model developed for this study.

From the above-mentioned conceptual model, the following main hypothesis is developed:

2.7.1 Service quality and customer satisfaction

Maharasi, Njotoprajitno, Hadiaato, and Wiraatmaja conducted a study to evaluate the effect of service quality and customer satisfaction on petrol purchasing intention. The study concluded that service quality has a positive relationship with customer satisfaction (Maharasi et al, 2021). Bei and Chiao (2001), also verified that perceived service quality is a determinant of customer satisfaction (Bei & Chiao, 2001). Furthermore, studies have concluded that consumer satisfaction is a moderator for perceived service quality (Bei & Chiao, 2001).

H1 - Service quality is positively associated with customer satisfaction.

2.7.2 Customer satisfaction and customer loyalty

According to Yu and Dean (2001), a direct relationship between customer satisfaction and customer loyalty. Customer satisfaction comprises cognitive and emotional components (Yu & Dean, 2001). The study determined that the emotional component of customer satisfaction is the best predictor of customer loyalty in comparison to the cognitive component. Positive emotions toward a brand are associated with positive word of mouth, intention to repurchase, and willingness to pay more (Yu & Dean, 2001). A consumer with positive emotions is less prone to switching behaviour. The opposite of this argument is also valid, consumers with negative emotions are related to negative word of mouth, will probably not repurchase, and are unwilling to pay more. They are also highly associated with a high likelihood of switching behaviour.

Dabholkar, Shepherd, and Thorpe (2000) found that customer satisfaction has a strong mediating effect of service quality on behavioural intentions (loyalty). It was confirmed that customer satisfaction should be quantified separately from service quality when trying to ascertain a customer's evaluation of service (Dabholkar, Shepherd, & Thorpe, 2000). Customer satisfaction is a better predictor of loyalty while service quality is related to factor evaluation of the service. The evaluation factors act as antecedents to service quality and customer satisfaction strongly mediates the effect of service quality on loyalty. Consumers judge the level of service quality after consumption to determine whether their needs and wants were met. The outcome of judgement between expected service and perceived service will determine the level of satisfaction associated with consumption (Bougoure & Neu, 2010). If the judgement is favourable, then the consumer is satisfied, and the satisfaction will strongly affect the consumer' repurchase intentions. When managers understand the important factors customers use to evaluate the quality of service, then they can better configure their offerings to achieve customer satisfaction and allows for better prediction of the behavioural intentions of the consumer.

H2 - Customer satisfaction is positively associated with customer loyalty (recommend and repeat purchase).

2.7.3 Service quality and customer loyalty

According to a study conducted by Giovanis, Zondiros, and Tomaras (2014), it was determined that "both service quality aspects are positively associated with emotional satisfaction and customer loyalty" (Giovanis, Zondiros, & Tomaras, 2014). Bei and Chiao (2001), agree that service quality has a direct and indirect effect on customer loyalty. Service quality on its own has an indirect effect on consumer loyalty through satisfaction. Essentially, consumer satisfaction is a mediator for perceived service quality and customer loyalty. Consumer repurchase can be viewed as a motivator influencing consumer loyalty. The emphasis on service quality, in either a purely service industry or mixed (service and physical product) industry, is value-adding for the consumers and supports consumer retention programmes (Bei & Chiao, 2001).

H3 - Service quality is positively associated with customer loyalty (recommend and repeat purchase).

3. RESEARCH METHODOLOGY

In this chapter, the research methodology will be presented. The section will outline the research design and the sampling methods utilised in the study. Further, the chapter describes the research instrument (the self-administered questionnaire) and how the data was collected. In conclusion, the chapter outlines the data analysis method, the reliability, and validity of testing, and the ethical considerations of the examination.

3.1 Research Design

There are many definitions of research design, but no single definition expresses all its crucial components. Research design has been described as the architectural design or blueprint for data gathering, quantification, and analysis (Blumberg et al, 2014). Accordingly, as a blueprint, it is the plan and structure of an investigation developed to obtain answers to research questions. The plan is the research's overall scheme or proposal (Blumberg et al, 2014). It outlines what the researcher will do, from developing hypotheses and their operational implications to analysing the data.

For this study, a quantitative research design was used to answer the research questions. Quantitative research is typically classified as either experimental or descriptive (Lowhorn, 2007). Experimental research determines whether the independent variables affect the dependent variable. Surveys, correlation studies, and experimental outcome measures are frequently used to establish causality. Descriptive research design takes a snapshot of a population and simply describes its demographics (Lowhorn, 2007). Although this is not considered a statistically robust or difficult exercise, a good description of the variables assists the researcher in evaluating the statistical output in the appropriate context. This study examined the causal relationship between service quality (IV), customer satisfaction (IV), and customer loyalty (DV). This study also evaluated the influence of customer satisfaction (MV) as a mediating effect of service quality (IV) on customer loyalty (DV). Therefore, an experimental study was conducted with the use of numeric and unchanging data.

3.2 Research Approach

According to Rutberg and Bouikidis (2018), research is classified as quantitative or qualitative (Rutberg & Bouikidis, 2018). Quantitative methods are based on numbers and accuracy and are concerned with research based on measuring. To collect numerical data in quantitative studies, the researcher employs standardized questionnaires or experiments (Rutberg & Bouikidis, 2018). Quantitative research is typically conducted in a more structured environment that provides the researcher control over study variables, the environment, and study objectives. Quantitative research can be used to probe the relationship among variables and the outcomes can be employed in developing causal relationships between variables. The quantitative study includes developing and testing a hypothesis. The process of hypothesis testing involves describing the expected result, relationship, or expected outcome from the research question and then testing it to determine whether there is a relationship that can be generalised about the variables involved in the study.

Qualitative research methods are more concerned with personal experience and human perceptions. Most quantitative research is more structured than qualitative research. Qualitative research does not rely on self-administered questionnaires with structured response formats. It is more researcher-dependent in the sense that the researcher must obtain meaning from unstructured responses, such as text from a recorded interview or a collage representing the meaning of some personal experience (Zikmund et al, 2013). The researcher then interprets the qualitative data collected to extract meaning from it and transform it into information.

Mixed research methods fall in the middle of a continuum between qualitative and quantitative methods because it combines elements of both qualitative and quantitative approaches. Recognizing that all methods have disadvantages, researchers believed that prejudices inherent in any single method could be potentially neutralised or cancelled by biases inherent in other methods.

The quantitative approach was used for this study because the nature of the data could allow for the investigation of customer loyalty as determined by customer satisfaction and perception of service by fuel station consumers.

3.3 Research Philosophy

Research philosophy is concerned with the formation and nature of knowledge (Saunders et al, 2009). The principle of philosophy is the search for philosophical answers to all questions using a critical and systematic approach based on rational argument (Kenaphoom, 2021). There are several research paradigms such as phenomenology and positivism.

The phenomenological research paradigm is a concept that is concerned with both scientific methods and social science research. The concept focuses on studying human behaviour in knowledge, feelings, abstract concepts, and complexities that are difficult to measure precisely (Kenaphoom, 2021). Phenomenology is the foundation of qualitative research that uses an inductive reasoning method to discover reality (Kenaphoom, 2021).

This study was based on the paradigm of positivism because the paradigm of research of positivism is a quantitative research methodology that focuses on reality and draws conclusions based on quantitative data (Kenaphoom, 2021). Positivism is also a belief that patterns (trends), generalisations, methods, procedures, and cause-and-effect issues are also applicable to the social sciences (Vosloo, 2014). This positivist viewpoint holds that the objects of the social sciences, namely people, are appropriate for the application of the scientific method. For data collection, an objective instrument is used. The research methodology is broken down into steps. Sampling is based on theories and the possibility of collecting data through a questionnaire, an observation form, a test, an interview form, and an experiment (Kenaphoom, 2021). The instruments are objective and contain numerical data. This study focussed on testing existing hypotheses using quantitative methods. Testing of hypotheses was confirmed the existence of a causal relationship between service quality, customer satisfaction, and customer loyalty based on observable conclusions. The hypotheses were tested in the South African petroleum products retail industry.

3.4 Sampling design

This section introduces the sampling design that was used for this study. It begins with a description of the target population, followed by the sampling frame, sampling size, and sampling methods.

3.4.1 Target Population

Pandey and Pandey (2015), target population refers to “all the members of a real or hypothetical set of people, events or objects to which we wish to generalise the results of our research” (Pandey & Pandey, 2015). The population of this study is South African drivers. To be considered for this study the participants had the following characteristics:

- Participants owned or had access to the use of a vehicle that uses diesel or petrol.
- The participants are over 18 years of age.
- The participants have owned a vehicle or had access to a vehicle for over a year.
- The participants have been a South African resident for over a year.

3.4.2 Sampling frame

According to Blumberg, Cooper, and Schindler (2014), a sample frame is defined as “the list of cases in the target population from which the sample is drawn; it is a complete and correct list of population members only” (Blumberg et al, 2014). For this study, the sample frame includes all individuals that have filled their vehicles with fuel at any fuel station across South Africa.

3.4.3 Sample size

According to Malterud, Siersma, and Guassora (2016) sample size refers to “usually refers to the number of participants” selected from a population (Malterud, 2016). The sample size is an important aspect of any empirical study in which the goal is to conclude the population from a sample. A random sample must be of sufficient magnitude to generalise from it and avoid sampling errors or biases (Taherdoost, 2017). There are numerous statistical formulas used to determine the sample size. Larger sample sizes tend to decrease sampling error (Taherdoost, 2017). It has been advanced as a rule-of-thumb Structural Equation Modelling (SEM) requires a minimum sample size of 100 or 200 (Taherdoost, 2017). The sample size for this study was over 200 participants.

3.4.4 Sampling technique

There are two classes of sampling techniques, namely probability and non-probability techniques. A probability sampling technique is one in which the sample is chosen based on well-defined mathematical guidelines, ensuring that every representative of the population has an equal chance of being selected (Oribhabor & Anyanwu, 2019). Probabilistic techniques include simple random sampling, systematic sampling, stratified sampling, and cluster sampling (Zikmund, Babin, Carr, & Griffin, 2013). On the other hand, non-probability sampling is a sampling procedure that does not adhere to any mathematical guidelines, and as a result, members of the population do not have an equal chance of being chosen (Oribhabor & Anyanwu, 2019). This method is based on the availability principle, rather than a predefined formula or set of guidelines. Non-probability techniques include convenience sampling, judgement sampling, quota sampling, and snowball sampling (Zikmund et al, 2013). This study used probability sampling techniques because it allows for a better representative sample to be produced and inferences drawn from the sample can be generalised to the population (Oribhabor & Anyanwu, 2019).

3.5 Data collection methods

The primary data collection method used for this study was an online questionnaire developed using Qualtrics or SurveyMonkey. A link to the questionnaire was distributed on various social media platforms such as email, LinkedIn, and WhatsApp. Initially, the questionnaire was sent to a few participants to test for any issues and ensure that participants can respond. Feedback received from the test run was addressed accordingly and then the final questionnaire was distributed to the sample.

3.6 Research instrument

The most preferable data collection method in this quantitative study is a self-administered 5-point Likert scale questionnaire with evaluations consisting of "strongly disagree", "disagree", "somewhat disagree", "neutral", "somewhat agree", "agree" and "strongly agree" will also be used to assess the variable service quality, customer satisfaction, and customer loyalty. All scales have been adopted and modified for this study from Maharsi, Njotoprajitno, and Wiraatmaja (2021) (Maharasi et al, 2021).

- A five-item performance-based service quality scale adopted from Maharsi, Njotoprajitno, and Wiraatmaja (2021) and SERVQUAL model was used to measure perceived service quality. The items used to measure the service quality are tangibility, reliability, responsiveness, assurance, and empathy.

- Because satisfaction is mostly emotional, the adjectives used in the scale were emotional in nature. Respondents were asked to rate their level of satisfaction based on how happy they were.
- As mentioned in the literature review, attitudinal loyalty is related to emotional attachment and can be determined by assessing how much a consumer likes a brand on a given scale. A favourable attitude can be recommended and positive word of mouth.
- Purchase frequency, probability of repurchase, a company's customer retention rate, and the likelihood of switching are all indicators of behavioural loyalty (Lichtlé & Plichon, 2008). These behaviours are easily visible in customer data and thus easily monitored. The behavioural outcomes discussed in the literature review, namely repurchasing, customer loyalty, and word-of-mouth intentions, were measured.

The original and adapted measurements used to create the instrument for this study are presented in the tables below:

Table 1 : Original and adapted items for Service Quality.

Research Construct		**Original Measurement Item**	**Adapted Measurement Item**
Service Quality: Tangibility	T1	Pertamina affiliated-gas stations provide the modern means of payment of petrol.	I prefer gas stations that provide modern means of payment.
	T2	Gas stations affiliated with the Pertamina provide visually attractive facilities	I am satisfied with filling stations that provide visually attractive facilities.
	T3	The staff at the gas station affiliated with Pertamina are dressed neatly.	I am satisfied by a filling station with well-dressed staff.

	T4	Information about the type of petrol available is written around the station.	I am satisfied when information about the type of petrol or diesel available is written around the station.
Service Quality: Reliability	REL1	There is an accurate filling of petrol always in Pertamina-affiliated gas stations.	I am satisfied when there is an accurate filling of petrol or diesel at a filling station.
	REL2	Pertamina-affiliated gas stations always open and close according to their schedule.	I am satisfied with filling stations that always open and close according to their schedule.
Service Quality: Responsiveness	RES1	The staff at the Pertamina-affiliated gas station serve their customers quickly.	I am satisfied when the staff at a filling station serve their customers quickly.
	RES2	Pertamina-affiliated gas station's staff always remind vehicle drivers to put out/extinguish their cigarettes or not smoke and turn off the engine during petrol purchase.	I am satisfied when the filling station's staff always remind the vehicle drivers to put extinguish their cigarettes or not smoke and turn off the engine during petrol purchase.
	RES3	Pertamina-affiliated gas station's staff always remind both the driver and passengers in the vehicle to turn off their cellular phones during petrol purchase.	I am satisfied when the filling station's staff always remind both the driver and passengers in the vehicle to turn off their cellular phones during petrol purchase.
Service Quality: Assurance	A1	The staff at the Pertamina-affiliated gas station are polite.	I am satisfied when the filling station staff is polite.

	A2	The Pertamina-affiliated gas station staff can answer customers' questions, like vehicle drivers, owners, and passengers.	I am satisfied when the filling station staff can answer all customers' questions, like vehicle drivers, owners, and passengers.
Service Quality: Empathy	EMP1	Operating hours of Pertamina–affiliated gas stations make its customers calm.	I am satisfied when the filling station staff shows individualised care to keep the customer calm.
	EMP2	The staff at the Pertamina-affiliated gas station prioritise their customer interest.	I am satisfied when the filling station staff prioritises their customer interest.

Table 2: Original and Adapted Measurement Items for Customer Satisfaction.

Research Construct		**Original Measurement Item**	**Adapted Measurement Item**
Customer Satisfaction	CS1	I get good service when buying petrol in the gas station affiliated with Pertamina.	I am satisfied when my perceived service quality exceeds my expected service quality when purchasing petrol or diesel at a filling station.
	CS2	I feel happy with the service when purchasing petrol in the gas station affiliated with Pertamina.	I feel happy when I receive good quality service when purchasing petrol or diesel from a filling station.
	CS3	I enjoy the service given by the Pertamina-affiliated gas stations.	I enjoy good customer service from a filling station.

Table 3: Original and Adapted Measurement Items for Customer Loyalty.

Research Construct		Original Measurement Item	Adapted Measurement Item	Adapted Measurement Item
Customer Loyalty	L1	I prefer to buy petrol in gas stations affiliated with Pertamina.	I prefer to re-purchase fuel at a filling station with good service quality.	I am likely to re-purchase fuel at a filling station if I am satisfied with their service.
	L2	I will recommend my friend buying petrol in the gas stations affiliated with Pertamina.	I recommend filling stations to my friends and family when they provide me with exceptional service.	I recommend filling stations to my friends and family when I am happy with their service.
	L3	New	I do not mind paying a premium price for a homogeneous product if I am satisfied with the service quality.	I would re-purchase at a premium price due to a good long-term relationship with the filling station.

Source: Maharsi, Njotoprajitno, and Wiraatmaja (2021).

The questionnaire developed with the adapted measurement items is presented in the appendix.

3.7 Data Analysis

To assess the reliability and validity of the measures, a two-step SEM will be applied. First, the measurement model was evaluated using confirmatory factor analysis (CFA), and, secondly, the structural model was evaluated using the path model. According to Hsu et al. (2015), the measurement model should be evaluated and “fixed” before assessing the structural model.

The hypothesised relationships for the study were analysed using Structural Equation Modelling. Once the data was collected, statistical analysis was performed using the SPSS and

AMOS software packages. Creswell (2009), suggested the following research steps for data analysis procedures:

The following activities took place during the data analysis for this study:

- Collected data was organized in a Microsoft Excel spreadsheet before analysis. All responses and non-responses to the questionnaire were described (Creswell, 2009).
- Descriptive statistics analysis was utilized to describe the data using the mean and standard deviation of each factor.
- Statistical Packages for the Social Sciences (SPSS) was used to analyse the data fit between correlational data, obtained from experimental or non-experimental research.
- Multiple regression analyses using AMOS was be performed for the structural equation model (SEM).

3.9 Validity and Reliability

Data analysis should be adequate to reveal the significance of the data, and the methods of analysis used should be appropriate. The data's validity and reliability should be thoroughly examined.

The consistency of a set of data is referred to as reliability (Pandey & Pandey, 2015). For example, if a respondent responds to a specific item, he is expected to provide the same response to that item even if he is asked again. The consistency will be lost if he changes his response to the same item. As a result, the researcher should structure the items in a questionnaire so that they provide consistency or reliability.

When a measuring instrument measures what it is supposed to measure, it is said to be valid (Pandey & Pandey, 2015). Validity seeks to determine if there is a causal relationship between two variables (Saunders, Lewis, & Thornhill, 2009). For example, an intelligence test to determine IQ should measure only intelligence and nothing else, and the questionnaire should reflect this.

Since this study used a modified instrument as proposed by Maharsi, Njotoprajitno, and Wiraatmaja (2021), similar validity and reliability tests were employed in this study. Confirmatory factor analysis (CFA) by loading factor (LF) and average variance extracted (AVE) was determined and evaluated. If the LF and AVE are greater than 0.5, the respondent's answer on the question items is convergently and discriminantly valid (Maharsi et al, 2021). To inspect the reliability condition, the composite reliability coefficient was used. If this coefficient exceeded 0.7, the correct answer to the question items was considered to be consistent (Maharasi et al, 2021).

3.10 Ethics Consideration

The researcher received ethical clearance from the University's Ethics Committee. Participants of the study were required to give consent at the beginning of the questionnaire to participate in the study. All personal information and responses received from the questionnaire was treated with confidentiality without revealing the participants' identities. The researcher signed a plagiarism declaration and submitted with the final dissertation submission. Moreover, the references list provided includes all books, journals, and the network resource used in compiling this research.

4. PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents the results obtained from the questionnaire answered by participants of the study. The questionnaire contained a total of 27 questions and was divided into four sections. Section one captured information relating to demographic information of the participants. Section two contained questions related to service quality dimensions. Section three asked questions related to customer service. Lastly, section four consisted of questions relating to loyalty. SPSS (Statistical Package for the Social Sciences) version 28 and AMOS version 28 was used for the analysis of the collected data. This chapter contains an overview of the results for descriptive statistics, an analysis of reliability and validity of the model, an analysis of the model fit and lastly, a path modelling analysis.

4.2 Data Collection and Cleaning

The questionnaire was distributed to participants via Qualtrics on social media platforms, namely WhatsApp, LinkedIn and by email distribution. Participants received a link that allowed them to record their responses. A total of 350 responses were returned for the questionnaire. The data collected was transferred from Qualtrics into an Excel workbook for evaluation. Upon evaluation it was noted that only 280 responses were valid to be utilised in this study as they had responses to all the questionnaire questions. It was decided that a sample of 280 responses was sufficient for the study. The 70 other responses were not suitable for data analysis based on having missing data or responses on critical measurement items. The data was then transferred from the Excel workbook into SPSS for descriptive statistics, Confirmatory Factor Analysis, and Path modelling & SEM.

4.3 Descriptive Analysis

This section provides a demographic profile of the respondents that took part in this study. A summary of the sample's demographic profile is presented in graphical representation for gender, age, level of education and employment. The respondents were also requested to indicate if they own a vehicle or not.

Descriptive statistics or analysis is used in research to describe and summarise collected data relating to a target sample (Cooksey, 2020). "Describe" simply refers to the use of methods such as graphical representation or computations designed to represent a specific characteristic (Cooksey, 2020). Descriptive statistics provides the reader with an overview of the key characteristics of a sample and organises the collected data in a meaningful way that provides ease of interpretation. Furthermore, the statistical methods used in descriptive statistics are designed to identify trends that are evident in the data collected from a sample (Cooksey, 2020).

4.3.1 Respondent gender profile

Figure 7 below presents the gender profile of the sample.

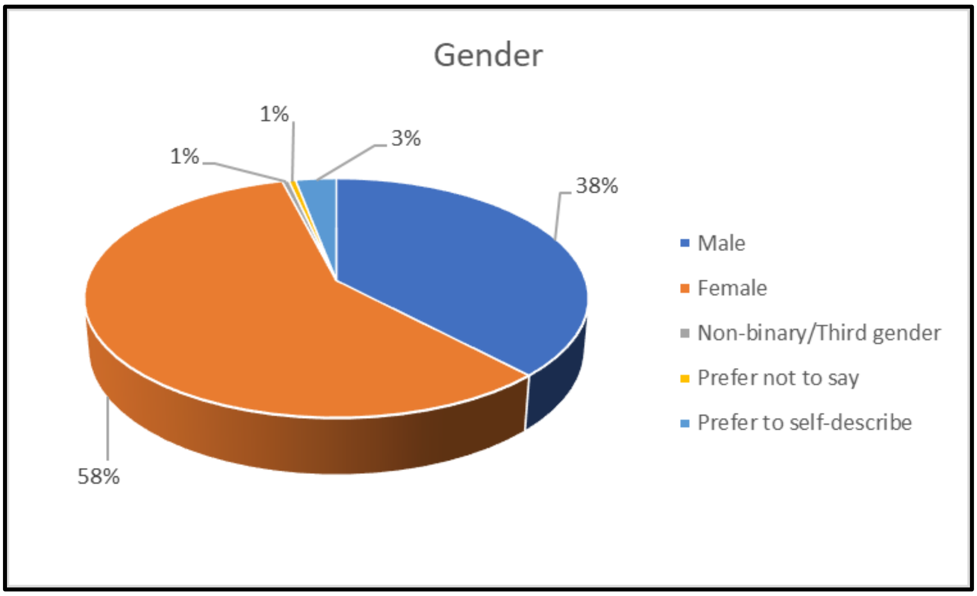

Figure 7: Respondent's gender profile.

The gender profile of the sample shows that 38% of the respondents identified as male and 58% identified as female. Three other gender categories were introduced to ensure that there was no discrimination of individuals that did not identify as male or female. 3% of the sample identified as non-binary or third gender. 1% of the sample preferred not to say whether they are male or female, and the remaining 1% preferred to self-describe.

4.3.2 Respondent's age

Figure 8 below presents the age profile of the sample.

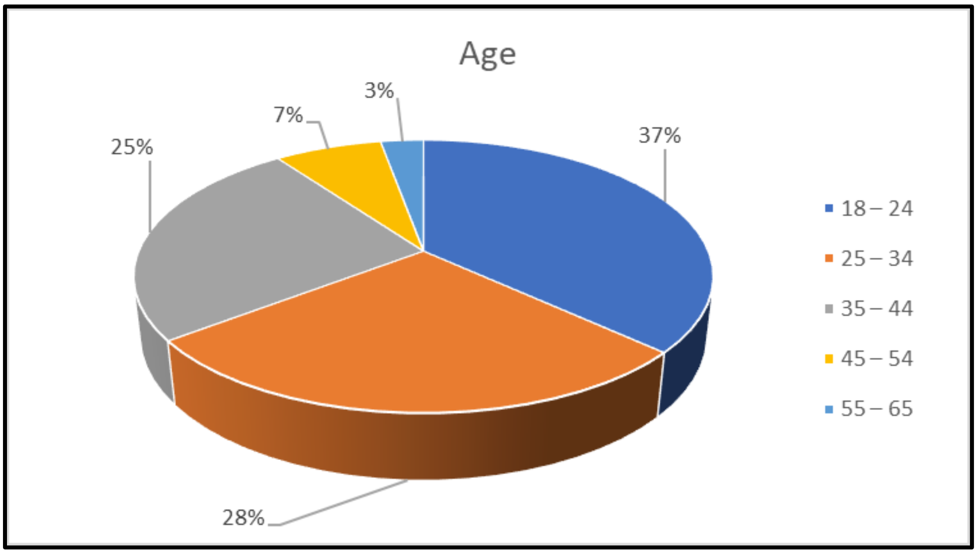

Figure 8: Respondent’s Age Profile.

The age profile of the respondents shows that 37% of the sample are between the ages of 18 and 24 years. 28% of the respondents aged between 25 and 34 years. 25 % of the respondents aged between 35 and 44 years, and the rest of the sample were all older than 45 years of age.

4.3.3 Respondent’s level of education

Figure 9: below presents the education level of the respondent in the study’s sample.

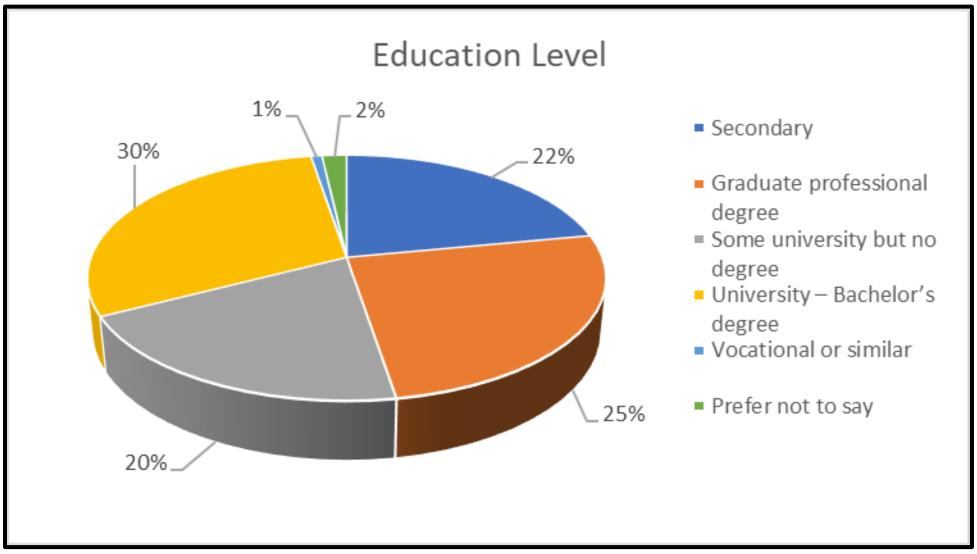

Figure 9: Respondent’s Education Level.

The profile indicates that in terms of education a large majority (30%) of the sample had a university bachelor’s degree level of education, followed by a professional degree education level accounting for 25% of the sample, and 22% and 20% of the respondents had a Secondary and some university education but no degree, respectively. A minor percentage of the respondents had a vocational level of education, while 1 % of the respondents preferred not to say what their level of education was.

4.3.4 Respondent's employment

Figure 10 below presents the employment status of the respondents.

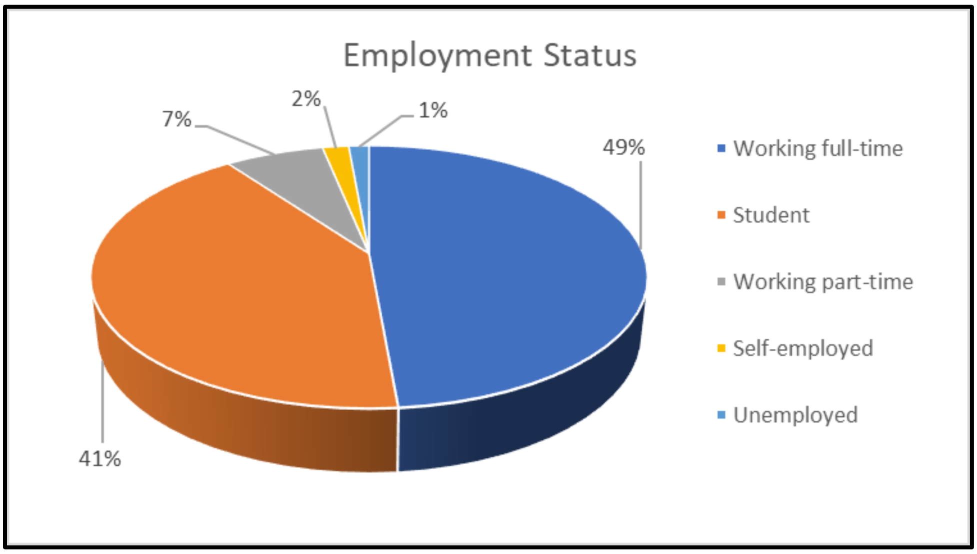

Figure 10: Employment Status

Figure 10 indicates that 49% of the respondents are working full time and 41% of the sample are students. Respondents that are working part time and self-employed accounted for 7% and 2% of the sample, respectively. 1% of the respondents are unemployed.

4.4 Measurement Instrument Analysis

The constructs measured for this research were, namely service quality, customer satisfaction and loyalty. The constructs were analysed for reliability and validity, and the results of the analysis are presented and discussed in this section.

4.4.1 Testing for Reliability

Reliability assesses consistency between the measurements of a variable (Hair et al, 2014). Reliability was evaluated by examining the Cronbach Alpha coefficient and measures derived from confirmatory factor analysis, namely composite reliability (CR) and average value extracted (AVE).

4.4.1.1 Cronbach Alpha Coefficient

The Cronbach alpha assesses the consistency of an entire scale and ranges from 0 to 1 (Hair et al, 2014). A general rule is that the Cronbach alpha must be larger than 0.7 to be regarded as an acceptable indicator of reliability (Hair et al, 2014). Table 4 below presents the Cronbach alphas for the measurement instruments of service quality, customer satisfaction and loyalty derived using SPSS version 28. It is evident from the Cronbach alphas presented in table 4 that the measurement instruments for the three constructs are above the reliability acceptance criteria of 0.7, thus confirming that the measurement instruments used in this study are reliable.

Table 4: Cronbach's Alpha Coefficient

Construct	Cronbach's Alpha
Service Quality	0.916
Customer Satifaction	0.865
Loyalty	0.827

4.4.1.2 Composite Reliability

Internal reliability was also evaluated using the Composite Reliability (CR) score. Composite reliability scores are determined by combining all the variables with high loading factors for a construct into a single average score. The single average score then represents multiple aspects of a single concept into a single measure (Hair et al, 2014). The composite reliability values range between 0 and 1. According to Hair et al. (2014), a CR value of between 0.6 and 0.7, and above is an indication of internal consistency reliability. Composite Reliability scores were determined for each concept using equation 1 and is computed by the squared sum of the factor loadings (λ_i) for each construct and the sum of the error variance terms ($1-\lambda_i$) for a construct. Table 5 presents the composite reliability scores computed for this study.

Equation 1: Composite Reliability. Source: (Hair et al., 2014)

$$CR = \frac{(\sum_{i=1}^{i} \lambda_i)^2}{(\sum_{i=1}^{i} \lambda_i)+(\sum_{i=1}^{i} 1-\lambda_i^2)} \text{ ...Equation (1)}$$

Table 5: Composite Reliability Estimates.

			λ_i	$1-\lambda_i^2$	$(\sum\lambda_i)^2$	$\sum(1-\lambda_i)$	CR
A2	<---	SQ	0,62	0,62	22,59	2,12	**0,91**
A1	<---	SQ	1,064	-0,13			
REL1	<---	SQ	0,821	0,33			
T4	<---	SQ	0,765	0,41			
T3	<---	SQ	0,722	0,48			
T2	<---	SQ	0,761	0,42			
CS3	<---	CS	0,805	0,35	6,25	0,91	**0,87**
CS2	<---	CS	0,909	0,17			
CS1	<---	CS	0,785	0,38			
L2	<---	L	0,864	0,25	8,37	1,72	**0,83**
L3	<---	L	0,514	0,74			
L4	<---	L	0,512	0,74			
L5	<---	L	1,003	-0,01			

The results in table 5 indicate that the CR scores for service quality, customer satisfaction and loyalty are 0.65, 0.07 and 0.57, respectively. The CR scores exceed the criteria used in literature; thus indicating internal reliability of the measurement instruments.

4.4.2 Testing for Validity

Validity measures the extent to which the measurement scale accurately measures what it asserts to measure (Hair et al, 2014). Simply put, validity measures the ability of the instrument in measuring what the researcher is trying to measure and nothing else. Validity was evaluated by examining the Average Value Extracted (AVE) measure derived from confirmatory factor analysis. Table 6 below shows a summary of the Average Value Extracted (AVE) and Shared Value (SV) that were calculated using the loading factors from confirmatory factor analysis. AVE scores were determined for each construct using equation 2. below by computing the sum of the factor loadings (λ_i^2) squared for each construct and the sum of the error variance terms ($1-\lambda_i$) for a construct. Table 6 presents the AVE scores for this study.

Equation 2: Average Value Extracted. Source: (Hair et al., 2014)

$$AVE = \frac{(\sum_{i=1}^{i} \lambda_i{}^2)}{(\sum_{i=1}^{i} \lambda_i) + (\sum_{i=1}^{i} 1-\lambda_i^2)} \text{...Equation (2)}$$

Table 6: Average Value Extracted (AVE) and Maximum Shared Value (SV).

			λ_i	λ_i^2	$1-\lambda_i^2$	$(\sum\lambda_i^2)$	$\sum(1-\lambda_i)$	AVE	SV
A2	<---	SQ	0,62	0,38	0,62	3,88	2,12	**0,65**	**0,62**
A1	<---	SQ	1,064	1,13	-0,13				
REL1	<---	SQ	0,821	0,67	0,33				
T4	<---	SQ	0,765	0,59	0,41				
T3	<---	SQ	0,722	0,52	0,48				
T2	<---	SQ	0,761	0,58	0,42				
CS3	<---	CS	0,805	0,65	0,35	2,09	0,91	**0,70**	**0,62**
CS2	<---	CS	0,909	0,83	0,17				
CS1	<---	CS	0,785	0,62	0,38				
L2	<---	L	0,864	0,75	0,25	2,28	1,72	**0,57**	**0,04**
L3	<---	L	0,514	0,26	0,74				
L4	<---	L	0,512	0,26	0,74				
L5	<---	L	1,003	1,01	-0,01				

4.4.1.2 Convergent Validity

Convergent validity examines the internal validity of a construct by evaluating that the components of the construct can be clearly mapped back to that distinct construct (Hair et al, 2014). The measures of a construct must show convergence to each other, and not relation to another construct measuring another aspect. The factor loadings and average value extracted were both assessed to determine convergent validity of the constructs. According to Hair et al., (2014), to indicate construct validity the standardised factor loading (λ_i) should be 0.5, ideally 0.7, or higher and the AVE should be 0.5 or above. Table 6 shows the factor loadings and AVE for this study. The factor loadings for each construct measurement are above 0.5 and the AVE for each construct is also above 0.5, thus supporting convergent validity for all the construct measurements.

4.4.1.2 Divergent Validity

Divergent validity examines the extent to which measures of concepts present distinction between each other (Hair et al, 2014). Evidence of discriminant validity is demonstrated by not observing high correlation between the measure of different constructs.

Inter-construct Correlation

The correlation between the constructs was used to determine divergent validity between the constructs. High discriminant validity is achieved by aiming for inter-construct correlation values that have a high deviation from 1 (Chinomona et al., 2010). The results of the correlation matrix for this study are presented in table 7.

Table 7: Correlation Matrix.

Correlation Matrix	Service Quality	Loyalty	Customer Satisfaction
Service Quality	**0,80**		
Loyalty	0,18	**0,75**	
Customer Satisfaction	0,79	0,19	**0,83**

The inter-correlation values are below 0.8 indicating evidence of discriminant validity. Customer satisfaction and service quality shows a lower level of discriminant validity, but the correlation of 0.79 is still below 0.8. Loyalty shows the weakest linear relation to service quality and customer service indicating that the constructs are very distinct. According to the assessment of the inter-correlations the constructs the individual construct measurements are considered to show evidence of adequate discriminant validity.

<u>Highest Shared Variance</u>

Discriminant validity was further examined by determining the highest shared variance (SV) of the constructs and comparing them to the AVE. The highest shared value of inter-constructs is the square of the correlation coefficients in table 7 and are presented in table 8 below. Discriminant validity is evident when the AVE for a construct is values for the construct are greater than the highest shared variance of a pair of constructs (Hair et al, 2014).

Table 8: Highest Shared Variance.

MSV	Service Quality	Loyalty	Customer Satisfaction
Service Quality	**0,65**		
Loyalty	0,03	**0,57**	
Customer Satisfaction	0,62	0,04	**0,70**

As can be seen in Table 6, the AVE value is 0.65 for the service quality, 0.70 for the customer satisfaction and 0.67 for the loyalty. The results for AVE and highest SV for service quality shows an AVE of 0.65 which is greater than the SV of customer satisfaction (0.62) and loyalty (0.04). Similarly, the AVE scores of customer satisfaction and loyalty were individually assessed and found to be larger than the SV values of the other construct measurements, thus proving the existence of discriminant validity.

4.5 Structural Equation Modelling

Analysis of the data in this study was done by incorporating structural equation modelling (SEM). SEM has recently become a widely popular statistical technique for researchers in academia (Nusair & Hua, 2008) (Hair et al, 2014). SEM is a multivariant statistical technique that combines regression and confirmatory factor analysis to model complicated behavioural relationships (Nusair & Hua, 2008). A prerequisite for SEM is a strong theoretical basis to specify a measurement and structural models (Hair et al, 2014).

4.6 Confirmatory Factor Analysis

Theory is used in all multivariant methodologies, but it is crucial for SEM which is considered a confirmatory analysis of theory (Hair et al, 2014). Confirmatory factor analysis (CFA) is statistically testing if the hypothesised theories can be reproduced by the sample data (Nusair & Hua, 2008). CFA specification is driven by prior research evidence thus giving it added benefits compared to exploratory factor analysis (EFA) (Brown, 2006). CFA allows the researcher to evaluate a more frugal solution by providing prior information on the number of factors, pattern of factor loading and suitable error theory (Brown, 2006). Additionally, CFA has outstanding modelling flexibility and has the ability to examine all sources of invariances in the factor solution (Brown, 2006). Figure 10 below presents the CFA model for this study.

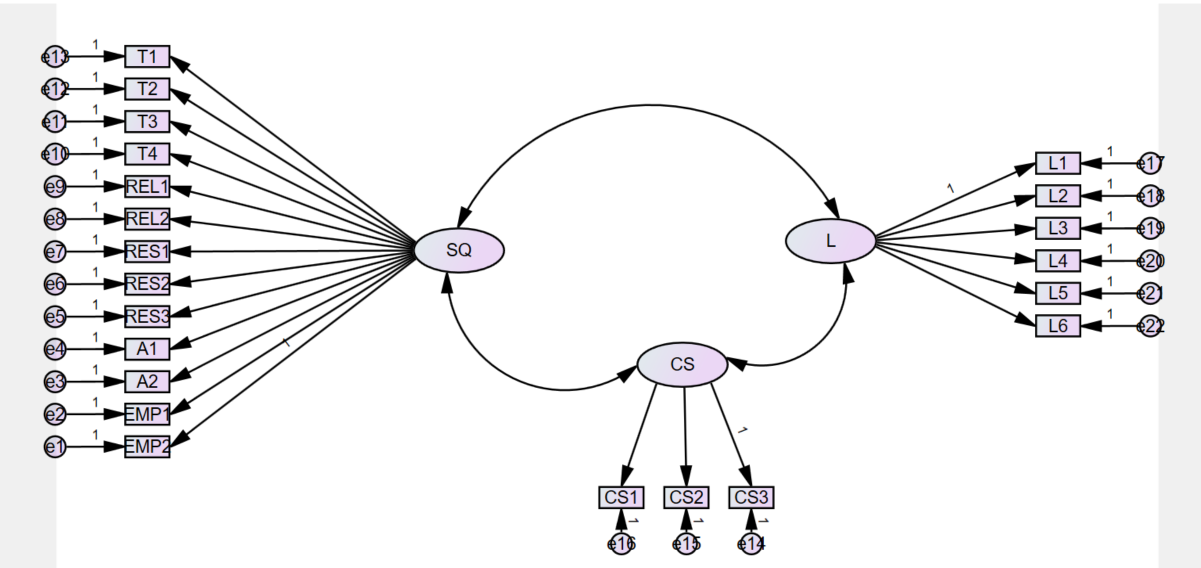

Figure 11: CFA Model.

4.7 Model Fit Indices

This section presents the model analysis conducted using several indices to assess if the model fit is good or bad. The following indices are examined: CMIN, the normed fit index (NFI), incremental fit index (IFI), Tucker-Lewis Index (TLI), goodness of fit index (GFI), and the Root Mean Square Error of Approximation (RMSEA). Due to low standardised regression weights T1, REL2, RES1, RES2, RES3, EMP1, EMP2, L1 and L6 were removed. Thereafter, model fit was improved. Furthermore, errors were also correlated to further improve model fit.

4.7.1 Chi-square Index

The chi-square index was examined (CMIN/DF) the table below presents the findings.

Table 9: Chi-square Index.

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	32	133,23	59	0	2,258
Saturated model	91	0	0		
Independence model	13	2274,75	78	0	29,163

Table 9 indicates a CMIN/DF value of 2.258. According to Hair et al. (2014), a CMIN/DF ratio of 3 or less is associated with good fit (Hair et al, 2014). A Chi-square index of 2.258 is an indication of good model fit since it is less than 3.

4.7.2 Goodness-of-Fit Index

Table 10 below presents the goodness-of-fit (GFI) index findings.

Table 10: Goodness-of-Fit Index.

Model	RMR	GFI	AGFI	PGFI
Default model	0,079	0,936	0,902	0,607
Saturated model	0	1		
Independence model	0,354	0,301	0,184	0,258

According to Hair et al. (2014), a GFI index greater than 0.9 is an indication of good model fit. The findings indicate that the GFI index for this current model is 0.936, therefore confirming a good model fit.

4.7.3 Baseline comparison

Table 11 presents the findings of the baseline comparison indices.

Table 11: Baseline Comparison Indices.

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	0,941	0,923	0,966	0,955	0,966
Saturated model	1		1		1
Independence model	0	0	0	0	0

Examination of the baseline comparison indices showed the following:

- The NFI index of 0.941 is acceptable since an NFI of 1 is indicative of a perfect fit (Hair et al, 2014). 0.941 is significantly close to 1 thus confirming a good model fit.
- RFI indicated a good model fit since it is a value of 0.923, which is higher than the acceptance criteria of greater than 0.9 (Hair et al, 2014).
- The IFI (0.966), TLI (0.955) and CFI (0.996) are all well within the suggested limits of being above 0.9 (Hair et al, 2014), therefore all exhibiting a good model fit.

4.7.4 Root Mean Square Error of Approximation

Table 12 presents the findings for the Root Mean Square Error of Approximation (RMSEA). The rule of thumb for RMSEA indices is that the RSMEA for a good model fit is between 0.03 and 0.08 (Hair et al, 2014). The RSMEA indicated in table 12 is 0.067, which satisfies the condition for an acceptable model fit.

Table 12: RMSEA Index.

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0,067	0,052	0,082	0,032
Independence model	0,318	0,307	0,329	0

In conclusion, after examining the Chi-square, the baseline comparison indices, the GFI and the RMSEA, it is confirmed that the model shows an acceptable model fit.

4.8 Path Modelling and Hypothesis Testing

The following section presents the correlation path coefficients resulting from path modelling as well as the hypotheses testing. According to Valenzuela and Bachmann (2017), path analysis is a statistical technique that allows for testing relationships between constructs (Valenzuela & Bachmann, 2017). In addition, these relationships can either be direct or indirect, and the sum of all relationships results in the total association for a variable. Path modelling is advantageous over regression analysis, which renders path modelling as the superior technique, due to its ability to detect every possible association (Valenzuela & Bachmann, 2017). However, it is cautioned that path analysis is not an indication of causality (Valenzuela & Bachmann, 2017). Path analysis may identify direct, indirect, and total associations, but not effects. Path coefficients resulting from path analysis are an indication of strength of association between variables i.e., a high coefficient can be interpreted as stronger association between the corresponding variables. The test for whether a hypothesis is supported or not is based on the significance (p-value) of a path coefficient. At a 95% level of significance a hypothesis is supported and vice versa. Supported hypotheses are indicated with three asterisks (***) or p value less than 0.005.

Table 13: Path coefficients.

Path			Hypothesis	Estimate (β)	Standard Error	Critical Ratio	P Value*	Result
Service Quality	<--	Customer Satisfaction	H1	0,787	0,045	8,07	***	Supported
Customer Satisfaction	<--	Loyalty	H2	0,189	0,041	2,885	0,004	Supported
Service Quality	<--	Loyalty	H3	0,184	0,045	3,163	0,002	Supported

*** Denotes significance at a 0.005 significance level.

Evaluation of the results in Table 13 indicates that all three hypotheses are significant and therefore are supported. The strongest relationship was found to be hypothesis 1, which tested the relationship between of service quality and customer satisfaction (0.787). This indicates that service quality has a strong positive influence on customer satisfaction. Hypotheses two and three indicated weak relationships between loyalty and customer satisfaction (0.189), and between loyalty and service quality (0.184) . Although hypothesis two and three showed weak relationships, it is important to note that hypothesis two showed a stronger relationship relative to hypothesis three. This indicates that customer satisfaction has a greater positive influence on loyalty relative to service quality. The conceptual model in figure 12 was derived to depict that conceptual model.

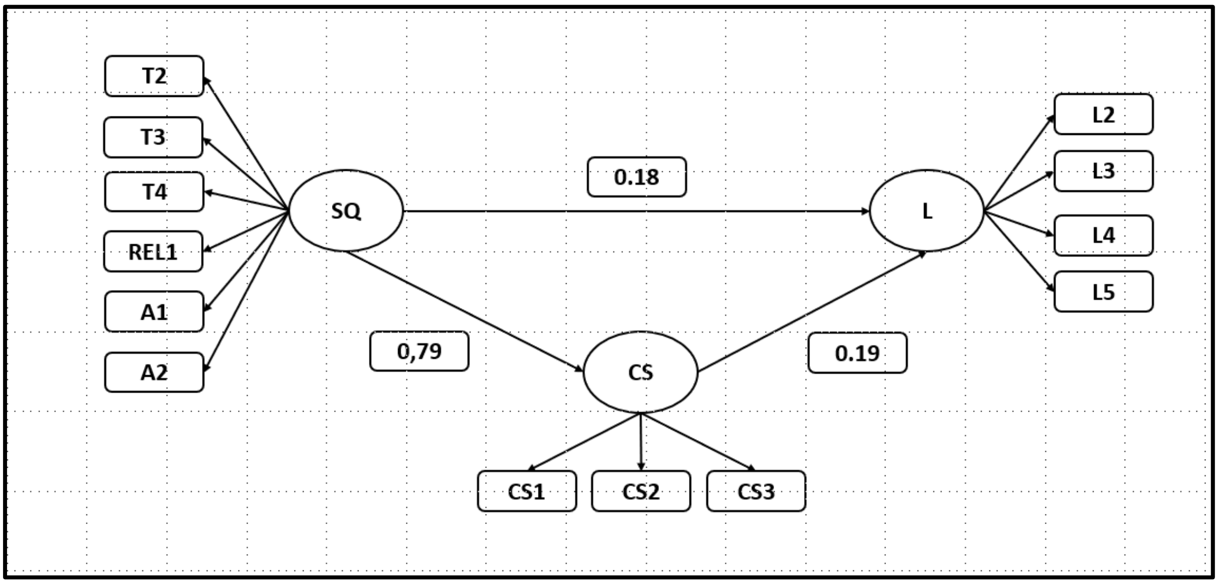

Figure 12: Conceptual Model. Source: Compiled by Researcher (2024).

4.8.1 Hypotheses Results

H1: Service quality is positively associated with customer satisfaction.

The results from the path modelling support the first hypothesis that states that service quality is positively associated with customer service. This indicates that a positive relationship exists between these two variables. The path coefficient yielded by path analysis is positive meaning service quality has a positive influence on customer satisfaction. This means that customer's judgement of the level of service quality is positive and directly influences the customer's feelings of satisfaction associated with the consumption of the services or products they have received. An increase in the perception of service quality results in an increase in customer satisfaction. Examination of the path coefficient (0.787) reflects a positive and strong relationship between these two variables.

H2: Customer satisfaction is positively associated with customer loyalty (recommend and repeat purchase).

The second hypothesis that states that customer satisfaction is positively associated with customer loyalty was also found to be significant. The proposed hypothesis was therefore also supported, and this indicates that customer satisfaction influences customer loyalty. This means that if customers have positive emotions toward a brand, then they are likely to have loyalty towards the brand portrayed by positive word of mouth, intention to repurchase, and have willingness to pay more. However, the strength of this relationship is presented by a path coefficient of 0.189, which indicates a weak relationship.

H3: Service Quality is positively associated with customer loyalty (recommend and repeat purchase).

The path modelling results yielded a positive and significant path coefficient for the third hypothesis indicating that it is supported. This indicates that a consumer's perception of an exceptional level of service quality has a positive direct association to customer repurchase intention and supports retention (customer loyalty). The path coefficient for hypothesis three is 0.184 indicating a weak relationship between service quality and customer loyalty.

4.9 Conclusion of Results

To conclude, this chapter presented the results of the statistical analysis that was performed with that data collected to determine the effect of service quality and customer satisfaction on the loyalty of fuel station customers. This chapter provided an overview of the descriptive statistics to provide a demographic profile of the sample, testing of the reliability and validity of the measurement instrument, an overview of the model fit and lastly, the path modelling results to assess the association of the proposed hypothesis. The results of the analysis performed on the measurement instrument demonstrated construct reliability and validity, the model fit indices examined showed that the measurement instrument had a good fit and lastly, the path coefficient results from path analysis showed that all three hypotheses that were being tested are supported.

5. DISCUSSION

5.1 Introduction

In this chapter, the research findings are discussed to answer the research questions presented in chapter 1, which seeks to determine if service quality and customer satisfaction have an influence on customer loyalty in the retail petroleum products industry. Previous research that has been conducts will be used to either corroborate the findings of this study or dispel them.

5.1.1 What influence does the service quality have on customer satisfaction?

The responses obtained from the main variables were analysed to determine the influence of service quality on customer satisfaction. The hypothesis testing results from path modelling indicate that hypothesis 1 (H1) is supported and service quality has a high influence on customer satisfaction. That is, when customers perceive to have received a level of service that is on par or exceptional, it influences the customer to have positive emotions towards the retail petroleum site or brand. The path coefficient of 0.787 is indicative of a strong relationship between service quality and customer satisfaction. This means that when petroleum retail sites deliver exceptional service quality to their customers they are ensured to have satisfied customers that have positive emotions toward their site and their brand. A positive impact of service quality on customer satisfaction confirms the earlier research of Maharasi et al. (2021) and Bei & Chiao (2001) that confirm a similar pattern between the two variables. Perceived service quality is a curial determinant of customer satisfaction. This ultimately means that sites can leverage the dimensions of service quality such as tangibles, reliability, and assurance to garner customer satisfaction. Fonna et al. (2022), corroborated the findings of this study and further postulated that the model of increasing customer loyalty is dependent on increasing perceived service quality (Fonna, Adam, & Putra, 2022). This means that for South African petroleum retailers to increase their customer satisfaction they must improve their service quality, thus increasing the customer’s level of the perceived quality.

From a practical perspective, petroleum site service quality attributes such as attractive facilities, well-dressed attendants, branding that is informative, accurate filling, polite staff and knowledgeable staff influence positive emotions in customers, thus resulting in customer satisfaction when perceived to be of an exceptional level. Petroleum retailers can ensure that all the necessary service quality attributes associated with the purchase of petroleum products are in place to ensure a customer base that is satisfied with their service quality, and should take opportunities to develop new attributes such as the latest payment solutions and added services to keep their customers satisfied. Petroleum products prices are heavily regulated in South Africa, and this leaves retailers with little room to differentiate themselves on price of the products they sell in order to attract customers. Perhaps the customer perception of their service quality is a domain that they can employ to attract customers and retain.

Petroleum product retailers need to understand that customer satisfaction is driven by service quality. It is important for retailers to pay attention to carefully packaging the transaction between the retailer and their customers. The activities involved in the transaction will determine the customers satisfaction with the retailer’s brand, and ultimately positively impact the retailer’s profits and prospects of growing their customer base. The impact of dissatisfied customers is that they may start looking for alternative petroleum products retailers, spread bad word of mouth about the retailer and will not be willing to pay a premium, thus adversely impacting sales revenues. Given the impact of service quality on customer satisfaction, petroleum product retailers should constantly look for opportunities to improve customer satisfaction through impeccable service quality and invest appropriately towards sustaining or improving service quality.

It is clear from the literature review that service quality influences the behavioural intentions of consumers and has financial ramifications for a company. When a consumers perceive that the service quality of a company is superior the behavioural intentions of the customer will be favourable resulting in the consumer remaining with the service provider. The financial consequences of the consumer remaining with the company are ongoing revenue, increased spending, the company can charge a premium, and the company will get referrals from existing consumers.

5.1.2 What is the influence of customer satisfaction on customer loyalty?

It is evident from the findings that there is a significant positive relationship between service quality and customer loyalty. The path analysis results show that the second hypothesis (H2) is supported, meaning, as Yu and Dean (2001) indicated, that if customers have positive emotions toward a brand, then they are likely to have loyalty toward a brand portrayed by positive word of mouth, intention to repurchase, and willingness to pay more. A consumer with positive emotions is less prone to switching behaviour. The opposite of this argument is also valid, consumers with negative emotions are associated with negative word of mouth, will probably not repurchase, and are unwilling to pay more. They are also highly associated with a high likelihood of switching behaviour. In a similar study performed in Indonesia, Maharsi et al. (2021) confirmed the findings of this study when it was found that there is a positive impact of customer satisfaction on customer loyalty in the retail petroleum industry.

The path coefficient between service quality with customer satisfaction, customer satisfaction with loyalty, and the coefficient between service and loyalty all indicate a significant positive relationship. This indicates that customer satisfaction acts as a variable that mediates the service quality on customer loyalty. Furthermore, the mediating role played by customer satisfaction is partial because service quality can directly influence the customer loyalty. This observation and rationale is supported by Dabholkar et al. (2000) and Fonna, et al. (2022), that found that customer satisfaction has a strong mediating effect of service quality on behavioural intentions (loyalty). The implication is that customer satisfaction is a good predictor of loyalty. Consumers judge the level of service quality after consumption of the service or product and the outcome of judgement between expected service and perceived service will determine the level of satisfaction associated with consumption (Bougoure & Neu, 2010). If the judgement is favourable, then the consumer is satisfied, and the satisfaction will strongly affect the consumer' repurchase intentions. When managers understand the important factors customers use to evaluate the quality of service, then they can better configure their offerings to achieve customer satisfaction and allows for better prediction of the behavioural intentions of the consumer.

The results in this study suggest that better customer satisfaction will contribute positively to the increase in customer loyalty. This finding means that the model of increasing customer loyalty at retail petroleum stations is a function of increasing customer satisfaction.

5.1.3 What influence does service quality have on customer loyalty?

The indicated that consumer's perception of an exceptional level of service quality has a positive direct association to customer repurchase intention and supports retention (customer loyalty). This supports previous studies emphasizing that better the retail service quality yields an increase customer loyalty to a brand (Fonna, 2022). When customers perceive that the service quality of a brand is of an exceptional nature, they tend to have a positive attitude toward the brand. This can result in the customers recommending the brand to other potential customers based on their experience with that brand. Customers that have a good experience of service from a particular brand or retailer are most likely to purchase. Positive previous experience of service from a brand or retailer increases the probability of repurchase from the same brand. This finding highlights the importance of consumer loyalty mapping for managers to carefully tailor their offering to get the highest perception of service quality from their consumers as possible to achieve sustainable loyalty.

5.1.4 Closing of discussion of findings

The research findings were discussed based on the statistical findings with the purpose of answering the research questions. It is evident that service quality and customer satisfaction have a direct impact on customer loyalty in the retail petroleum industry in South Africa. This was supported by similar studies conducted in various parts of the world where similar observations were noted. The following chapter outlines the conclusions, recommendations for future studies and limitations of this study.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The purpose of this study to determine the influence of service quality and customer satisfaction on customer loyalty in the South African retail petroleum industry. This study intended to determine that dimensions of service quality influenced customers level of satisfaction and, thus leads to customer retention in the petroleum retail industry. The study was also intended at determine whether there was any direct influence of the service quality dimensions on customer loyalty. This chapter will present the conclusions drawn from the results of this study in relation to the influence of service quality and customer satisfaction on loyalty in the South African petroleum retail industry.

6.2 Conclusions and Recommendations

The service quality perception consumers have of a brand is strongly influenced by external factors related to delivering products and services to consumers. These external factors must satisfy the consumers' expectations to effectively influence the consumers emotions towards the brand and the consumers loyalty to the brand. The service quality dimension applicable to a particular industry can be manipulated in several ways to improve consumer service quality perception thus increasing the customer satisfaction and customer loyalty. This study has shown that consumers of petroleum products retailers are influenced by tangible attributes of petrol stations, the reliability of the site and the behaviour of staff towards customers. Managers need to pay special attention to the mix of service quality dimension employed in their service delivery to ensure that they can yield high customer satisfaction and inevitably high customer loyalty. Furthermore, service quality has been proven to be the antecedent for customer loyalty directly and indirectly through customer satisfaction.

In the context of this study, petroleum retailers could ensure that their facilities are attractive and offer a pleasant environment for customers at their retail sites. This can be achieved further by ensuring store design is of an acceptable modern design and offers the latest technologies to ensure a seamless customer experience. Staff plays a crucial role as they are the point of contact for any consumer that visits the retail site, therefor staff have tool look presentable, and be informative and polite to consumers. Good customer service could be encouraged effectively by recognizing good customer service and rewarding it through various incentives both financial such as an employee bonus and non-financial such as employee of the month recognition. Another approach is the introduction of customer service standards and providing continuous training for employees on the quality of customer service. and to introduce customer service standards in the retail petroleum station network.

Customer satisfaction is related to the emotions that customers have toward a brand based on their perceived level of service quality. A high level of perceived service quality drives higher customer satisfaction. Managers of petroleum retailers have the challenge of determining the determinants of customer satisfaction and tailoring their customer experience to yield high customer satisfaction. Driving high customer satisfaction will have positive implications on retailers as customers will become repeat customers, spread positive word of mouth on the brand, recommended the brand to other potential new customers and won't mind paying a premium for their products thus increasing the brands profits and revenue.

It is evident that service quality and customer satisfaction both have a positive impact on customer loyalty. The antecedent of customer loyalty is perceived service quality, whether it be a direct or an indirect influencer. Therefore, service quality dimensions, especially the mix that is relevant to the retail petroleum industry customers should be well understood and developed to garner higher customer satisfaction and loyalty. Managers should be aiming on developing customers with sustainable loyalty because they tend to have high repeat purchases from the same brand and have a positive attitude toward the brand.

The regulation of fuel retailing businesses and homogeneity of petroleum products means retailers must come up with creative ways to keep customers satisfied and loyal. This implores managers to start using other marketing tactics to reach customers and keep them engaged, incorporate value adding services not related to fuel and to improve their convenience offerings to influence customer satisfaction and loyalty. The research findings and model will enable companies to create differentiation and tap a large growing customer base. The service quality model or standard should be contentiously assessed and improved to retain the current customer based and to gain more customers.

6.3 Contributions of Study

The study will contribute to theoretical and empirical knowledge on service quality, customer satisfaction, and loyalty in a South African context with a specific focus on the retail petroleum products industry. Greater managerial focus is now on maximising customer value in cooperative and long-term relationships to retain and gain customers over competitors. The identified framework provides significance for retail petroleum products companies in appraising different service quality dimensions to garner consumer satisfaction and loyalty, thus ensuring they remain profitable. This study will also encourage these companies to explore other marketing avenues like loyalty programs to retain customers and in the long run gain more customers.

6.4 Limitations to the study

This study was mainly focused on the aspects of the retail petroleum industry related to only the forecourt. The forecourt only deals with getting the fuel into the customers vehicle. There are other aspects of the petrol stations that can influence customer loyalty such as the convenience store offerings, added services such as ATMs and car cleaning services, and having quick service restaurants onsite. This study does not consider the impact of these other aspects that can be offered by a petroleum products retailer that can act as an antecedent to customer satisfaction and loyalty, and thus does not give a full picture of how having such added services and offerings can impact a customer’s loyalty. These added services and offering should be understood and taken into consideration when creating the customer value proposition of a petrol station. There has also been a sudden boom of petroleum product retailers starting loyalty programmes and the impact of these programs can form part of the journey leading to customer loyalty.

This respondents to this study were mostly restricted to the Johannesburg area. The perceptions of customers may change based on geographical area. There, it is crucial that similar studies are done in more urban areas to confirm the conclusions of this study to be able to infer these finding to the entire South African population. Similarly, such studies should be performed for rural areas to determine if the fuel customers in those areas share similar sentiments as those in urban areas.

This study was quantitative, and the data was collected using questions previous researchers deemed suitable for the retail petroleum industry. It did not offer respondents the opportunity to qualify their responses and thus limiting them in terms of identifying what is crucial to them when purchasing fuels at a petrol station. A semi-qualitative study would have offered insights on the improvements that can be made at petrol stations other than the already existing interventions to ensure high levels of customer satisfaction and prolonged loyalty.

6.5 Scope of future research

Based on the limitations in section 6.3, the following recommendations are made for future studies.

- It is recommended to consider the full scope of the offerings of a petrol station to evaluate the determinants of customer satisfaction and loyalty. This includes non-fuel related offerings such as ATMs, quick service restaurants and vehicle maintenance services.
- It is recommended that a similar study is done in other urban and rural areas to ensure that the implications of service quality on customer satisfaction and loyalty are homogenous.

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8. Appendix

8.1 QUESTIONNAIRE

Section A: Demographic Information

This section describes the background information of participants. Please mark (X) where applicable:

1. Gender Profile of Participants

Female ☐ Male ☐

2. Age Grouping of Participant

Below 20 years	
20-29 years	
30-39 years	
40-49 years	
50-60 years	
Above 60 years	

3. Highest Education Qualification of Participant

Below Grade 12	
Grade 12	
Certificate	
Diploma	
Degree	
Masters	
PhD	

4. Does the Participant Own/Often Uses a Vehicle that is Fuelled with Petrol or Diesel?

Yes ☐ No ☐

Section B:

Participants will have to indicate the extent that which they agree/disagree with the statements below.

Service Quality

Questions related to proving or disproving H1 - Service quality is positively associated with customer satisfaction.

		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
T1	I prefer gas stations that provide modern means of payment.	1	2	3	4	5
T2	I am satisfied with filling stations that provide visually attractive facilities.	1	2	3	4	5
T3	I am satisfied by a filling station with well-dressed staff.	1	2	3	4	5
T4	I am satisfied when information about the type of petrol or diesel available is written around the station.	1	2	3	4	5
REL1	I am satisfied when there is an accurate filling of petrol or diesel at a filling station.	1	2	3	4	5
REL2	I am satisfied with filling stations that always open and close according to their schedule.	1	2	3	4	5
RES1	I am satisfied when the staff at a filling station serve their customers quickly.	1	2	3	4	5
RES2	I am satisfied when the filling station's staff always remind the vehicle drivers to put extinguish their cigarettes or not smoke and turn off the engine during petrol purchase.	1	2	3	4	5
RES3	I am satisfied when the filling station's staff always remind both the driver and passengers in the vehicle to turn off their cellular phones during petrol purchase.	1	2	3	4	5
A1	I am satisfied when the filling station staff is polite.	1	2	3	4	5

A2	I am satisfied when the filling station staff can answer all customers' questions, like vehicle drivers, owners, and passengers.	1	2	3	4	5
EMP1	I am satisfied when the filling station staff shows individualized care to keep the customer calm.	1	2	3	4	5
EMP2	I am satisfied when the filling station staff prioritizes their customer interest.	1	2	3	4	5

Customer Satisfaction

Questions related to proving or disproving H4 - Customer satisfaction mediates the effect of service quality on customer loyalty.

		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
CS1	I am satisfied when my perceived service quality exceeds my expected service quality when purchasing petrol or diesel at a filling station.	1	2	3	4	5
CS2	I feel happy when I receive good quality service when purchasing petrol or diesel from a filling station.	1	2	3	4	5
CS3	I enjoy good customer service from a filling station.	1	2	3	4	5

Customer Loyalty

- L1, L2 and L3 are related to Service Quality as a direct determinant of Customer Loyalty. (H3 - Service quality is positively associated with customer loyalty (recommend and repeat purchase)).
- L4, L5 and L6 are related to Customer Satisfaction as a mediating variable between Service Quality and Customer Loyalty. (H2 - Customer satisfaction is positively associated with customer loyalty (recommend and repeat purchase)).

		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
L1	I prefer to re-purchase fuel at a filling station with good service quality.	1	2	3	4	5

L2	I recommend filling stations to my friends and family when they provide me with exceptional service.	1	2	3	4	5
L3	I do not mind paying a premium price for a homogeneous product if I am satisfied with the service quality.	1	2	3	4	5
L4	I am likely to re-purchase fuel at a filling station if I am satisfied with their service.	1	2	3	4	5
L5	I recommend filling stations to my friends and family when I am happy with their service.	1	2	3	4	5
L6	I would re-purchase at a premium price due to a good/satisfactory long-term relationship with the filling station.	1	2	3	4	5