A quality management perspective on customer service in the South African mobile telecommunication industry

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DECLARATION

I, **LP du Preez**, declare that **A quality management perspective on customer service in the South African mobile telecommunication industry** is my own work, all sources used are acknowledged in the reference list, and that this dissertation has not been submitted for a degree at any other tertiary institution.

REMARKS

The reader is reminded of the following:

- The font size used throughout the document is Arial 11 (in-text, i.e. paragraphs) and Arial 10 (tables and figures), the editorial style is based on the North-West University's template for dissertations and theses.

- The North-West University's referencing guide (NWU Harvard) (2012) was used and all the referencing as well as the reference list followed the guidelines as set out in the guide.

- In order to strengthen the relevance of this dissertation's content, sources were strictly limited between 2012 and 2020. Sources used prior to 2012 are seminal authors which were included due to their contribution towards the areas of interest to the dissertation.

- This dissertation refers to planning, organising, leading, motivating, and controlling as the tasks of business management, whilst the functions of business management refer to the functional areas within a business.

- The statistical analysis of the data was conducted by the North-West University's Statistical Consultation Services. However, the researcher also conducted statistical analyses, and the results concurred with the North-West University's Statistical Consultation Services, thus enhancing the credibility of the reported results.

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ABSTRACT

The South African mobile telecommunication industry is a highly competitive industry, which is challenged by rapid changes such as declining revenues, price competition, high inflation rates, and increased technological advances and innovations. Consequently, these providers have turned to a value-added service approach in an effort to differentiate themselves from their direct competitors.

Based on the literature review, it was uncovered that mobile telecommunication providers can adapt to these changes by managing the quality of their services throughout the business. In addition, customers' expectations and experiences of the service quality offered will determine whether these customers are satisfied with the quality of the services delivered.

The primary objective of this study was therefore to investigate service quality (expectations and experiences) and customer satisfaction within the South African mobile telecommunication industry, and to determine whether the quality of services influence customers' satisfaction. This objective was realised by means of an in-depth literature review, as well as an empirical investigation into service quality and customer satisfaction as pertaining to the South African mobile telecommunication industry. A combination of exploratory and descriptive research designs was used, and a quantitative research approach was utilised to collect the data by means of computer and self-administered methods. A non-probability sampling method with a convenience sampling technique was used to reach respondents, and the self-administered questionnaire was distributed to mobile telecommunication customers in the North West Province who had been using the services of their provider for at least six months. A sample size of 300 respondents was realised.

From the empirical results, it was established that respondents' service quality expectations differed statistically significantly in terms of gender. However, no statistically significant differences were uncovered between respondents' service quality experiences and satisfaction in terms of their gender or the type of subscription they had with their mobile telecommunication provider. In addition, respondents' service quality expectations differed statistically significantly from their experiences in all five of the dimensions of service quality, and it was uncovered that respondents had much higher expectations about service quality than compared to the actual quality of services delivered to them. From the multiple regression, it was determined that reliability and empathy were the only two dimensions of the five dimensions of service quality that influenced respondents' satisfaction. In addition, the reliability dimension had the strongest influence on respondents' satisfaction.

Based on the results, it is recommended that in order to achieve sufficient customer satisfaction, mobile telecommunication providers should ensure that the quality of the services delivered matches the customer's expectations pertaining to service quality. In order to ensure the delivery of quality services, mobile telecommunication providers should specifically focus on providing reliable services (see Sections 6.3.3 and 6.3.6), as well as being empathetic in their service delivery process (see Sections 6.3.3 and 6.3.6).

Recommendations for future research suggestions include the use of a continuous or omnibus design, whereby service quality and customer satisfaction can be measured on a continuous basis. Extending this study to other South African provinces to assess whether respondents differ in terms of their service quality expectations, experiences and satisfaction can also be done. Qualitative research can also be used to gather more insight pertaining to the reliability and empathy dimensions of service quality experiences.

LIST OF KEYWORDS AND DEFINITIONS

- **Customer expectations**

  Verma (2012:266) defines expectations as the beliefs that customers have with regard to the expected receipt of performance or service provided by a business.

- **Customer experience**

  Alam *et al*. (2016:57) define customer experience (or customer perceptions) as the feeling a customer will have relating to the performance of a product or service received when compared to his/her expectations.

- **Customer satisfaction**

  Schiffman and Kanuk (2014:10) define customer satisfaction as the evaluation made by a customer with regards to the customer's expectations in relation to the actual experience (i.e. perceptions) of the performance of products or services offered by a business.

- **Mobile telecommunication industry**

  The mobile telecommunication industry is defined as the industry where communication is made possible through the means of mobile or cellular devices (Lioudis, 2018; MarketLine, 2018:7).

- **Service quality**

  Ahmed *et al*. (2014:310) and Parasuraman *et al*. (1988:17) define service quality as the variance or divergence that exists between what customers expect from a service and the actual service experience (i.e. perception) delivered.

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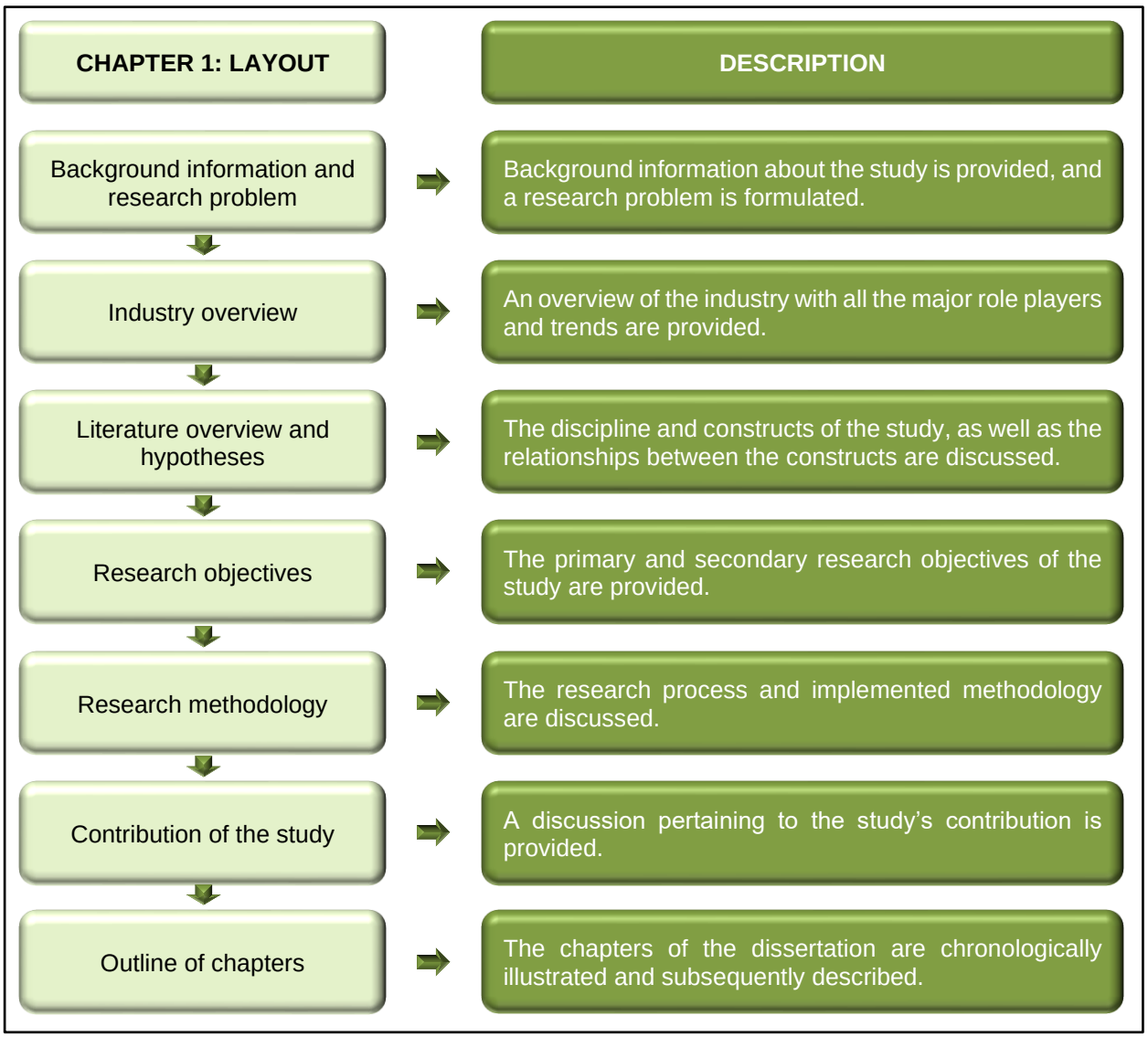
INTRODUCTION AND OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This study sets out to investigate customers' service quality expectations, experiences, and satisfaction in the South African mobile telecommunication industry. Customers influence the survival and profitability of these mobile telecommunication providers, and as such it is essential to ensure that customers are satisfied with the services that are provided by these providers. Thus, this study employed a managerial perspective to enhance the understanding of the importance associated with providing customers with quality services. Hence, quality management is essential for mobile telecommunication providers since it enables them to deliver quality services that will satisfy customer needs. Subsequently, customer service, service quality, and customer satisfaction are investigated in this study to determine how it affects the continued existence of mobile telecommunication providers.

This chapter provides background information pertaining to the study in order to conceptualise the research problem, as well as provide an overview of the South African mobile telecommunication industry. Subsequently, a literature overview is provided on the discipline and theoretical constructs of the study, as well as the relationship between the constructs in order to formulate the research hypotheses. After this section, the primary and secondary objectives of the study are presented, followed by a discussion of the applied research methodology. Thereafter the contribution of this study is highlighted, concluding with an outline of the remaining chapters of the dissertation. The chronological structure of Chapter 1 is illustrated in Figure 1-1 below.

Figure 1-1: Chapter 1 structure and flow



Source: Researcher's own compilation.

1.2 BACKGROUND INFORMATION AND RESEARCH PROBLEM

The telecommunication industry, especially the mobile telecommunication industry, is one of the fastest growing industries in the world. As such, this industry is experiencing rapid changes, such as an increase in telecommunication network usage, widely accessible information, and continuous development, as well as upgrades of information technology and growth (MarketLine, 2018:7). Therefore, the industry is becoming more multifaceted with regards to technological innovation such as fifth generation (5G) networks (BusinessTech, 2019b; Francis, 2019) and improvements offered (Abd-Elrahman, 2018:11; Dicey, 2018; Lioudis, 2018; Zhao *et al*., 2012:645). Due to these innovations, it is of utmost importance for businesses to ensure they remain competitive. In order to achieve this, it is essential to investigate every possible aspect so

that the business' competitiveness is maximised. One such method of enhancing competitiveness is differentiation by means of satisfying customers (Alhkami & Alarussi, 2016:117). The assurance of customer satisfaction results in loyal and profitable customers (Adamu, 2017:3; Burch, 2018). As such, the business should evaluate their product and service offerings so that customer satisfaction is optimised. The main product offering of mobile telecommunication providers are telecommunication services, thus necessitating an investigation into the customer service offered by these providers to ensure that quality services are offered.

Providing quality customer service is a necessity for a business, because unsatisfactory customer service will negatively influence the profitability of a business (Adamu, 2017:3; Burch, 2018), as not all customers' experiences match their expectations – resulting in dissatisfied customers (Bagram & Khan, 2012:2; Iacobucci, 2013:185; Schiffman & Kanuk, 2014:10). The notion of delivering the ultimate customer experience is not new amongst businesses. As a result, many businesses follow a customer-oriented approach (or customer centricity) to ensure that the business delivers the ultimate customer experience (Adamu, 2017:2; Lemon & Verhoef, 2016:73).

Most customers are, however, still somehow dissatisfied with the customer experiences provided by their mobile telecommunication providers (Alam *et al.,* 2016:63; Alhkami & Alarussi, 2016:124; Ali, 2017:525; Arokiasamy & Abdullah, 2013:7; Kisworo, 2013). Therefore, certain factors of the business' service delivery process should be addressed in order to satisfy customers' needs. The customer service experiences offered by a business are generally compared to the pre-formed expectations that the customer has before entering the store and purchasing a product. As such, the comparison formulates the possibility of three outcomes, namely satisfaction, dissatisfaction, or delight (Bagram & Khan, 2012:2; Iacobucci, 2013:185). The provided experience, therefore, forms the main focus of the comparison process, since this experience will be measured against the customer's pre-formed expectations, which influences the service quality perceptions and satisfaction level of the customer, which is in turn used by the customer as a basis to evaluate the next service interaction (Lemon & Verhoef, 2016:69).

Morgan (2017) found that it is not an easy task to deliver the ultimate customer experience, since more than 60 million customer service issues were reported during 2016 in the United States of America (USA) alone. Similarly, customer service in general in South Africa is also a very important aspect for businesses to improve on, since citizens deem customer service in general to be below average and rapidly declining (BrandsEye, 2019:1; Burger, 2017; Dlamini, 2015). According to Singh (2018), more customers have the desire to fulfil and solve their customer service issues themselves, because of the continuous poor quality services that are provided by businesses.

Research conducted in the mobile telecommunication industry assert that a positive relationship exists between service quality and customer satisfaction in Botswana (Selelo & Lekobane, 2017:220) and Pakistan (Arslan *et al*., 2014:91). Furthermore, other studies conducted on service quality expectations and experiences in the mobile telecommunication industry in Bangladesh (Alam *et al*., 2016:63), India (Ali, 2017:525), Malaysia (Arokiasamy & Abdullah, 2013:7), Saudi Arabia (Ali, 2017:525), Taiwan (Kisworo, 2013), and Yemen (Alhkami & Alarussi, 2016:124) emphasise the importance of focusing on and improving the service quality that is offered. According to these research studies, mobile telecommunication customers are not receiving adequate quality and satisfactory customer service.

In South Africa, research regarding service quality expectations and experiences within the mobile telecommunication industry has been conducted by Van der Wal *et al*. (2002), also confirming that mobile telecommunication customers are not receiving adequate quality customer service. However, due to the date that the article was published and the fact that the current mobile telecommunication industry has changed significantly since 2002, the need for new research regarding service quality within this industry is accentuated. It is also necessary to note that customers' preferences change over time, and that customers can also differ from one another in terms of their preferences (De Beer, 2018:19; Van Noordwyk & Van Tonder, 2019:27). The following section provides an overview of the socio-demographic background of customers.

1.2.1 Socio-demographic background and hypotheses

Customers' preferences, needs, and demands differ in terms of demographic aspects (Kotler & Armstrong, 2018:195), such as age differences, cultural differences, gender preferences, social influence (Foulkes *et al*., 2018:1), and income levels (Govindaraj, 2019). These aspects are important for businesses to understand and adapt to, especially pertaining to the different population groups that influence the needs and preferences of the customers (De Beer, 2018:19; Van Noordwyk & Van Tonder, 2019:27). This is of prodigious importance for South African businesses as well, since there are 11 different official languages in the country, which signifies the unique diversity within the country (De Meyer-Heydenrych, 2017:44). Thus, due to the nature of and diversity between customers, the following alternative hypotheses are formulated to obtain additional insight into the different types of respondents regarding each of the constructs under investigation:

H_1: Respondents of different *genders* differ statistically significantly in terms of their service quality expectations, experiences, and satisfaction towards their mobile telecommunication provider.

H_2: Respondents with different types of *mobile subscriptions* differ statistically significantly in terms of their service quality expectations, experiences, and satisfaction towards their mobile telecommunication provider.

Based on the aforementioned discussion, the following factors pertaining to the South African mobile telecommunication industry can be concluded:

- The industry has increased exponentially in terms of growth and technological innovations (Abd-Elrahman, 2018:11; Dicey, 2018; Lioudis, 2018; MarketLine, 2018:7).
- New and exceedingly competitive rivals have entered the market, such as Cell C and Telkom, and account for more than 20% of the market share (Cell C, 2019; MarketLine, 2018:26; MTN, 2017a).
- Customers' preferences, needs, and demands have changed due to changes in socio-demographic aspects (Kotler & Armstrong, 2018:156), such as age differences, cultural differences, gender preferences, social influence (Foulkes *et al*., 2018:1), and income levels (Govindaraj, 2019).
- Limited available research, especially from a managerial perspective pertaining to the mobile telecommunication industry, have been conducted since 2002.
- No apparent relationships have been tested within the South African mobile telecommunication industry with regards to socio-demographic elements.
- Unsatisfactory quality of customer service (Alam *et al*., 2016:63; Alhkami & Alarussi, 2016:124; Ali, 2017:525; Arokiasamy & Abdullah, 2013:7; Kisworo, 2013).

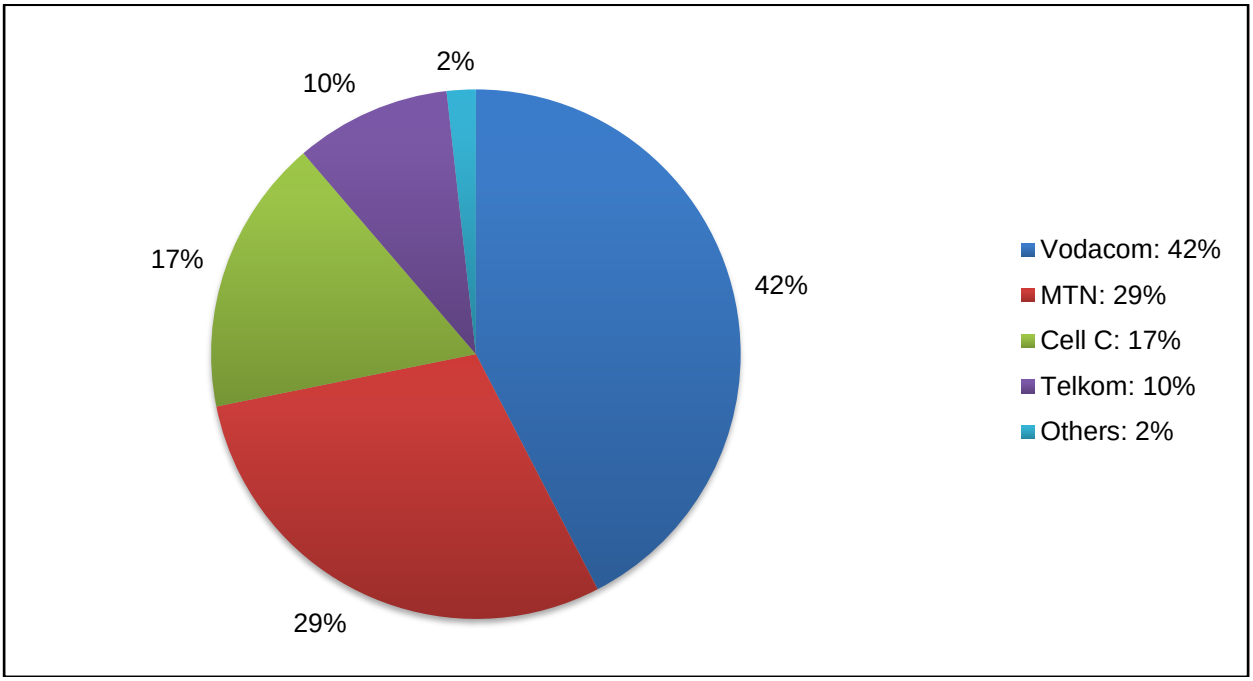
Based on the above discussion and summary, the following problem statement can be formulated:

South African customers are not satisfied with the service they receive from their mobile telecommunication providers. The South African mobile telecommunication industry is subject to continuous innovations and changes to the market-environment, with more competitors entering the market than before, changes in customers' exposure to information, and subsequently changes in their choices and preferences. Furthermore, limited research on the topic and the specific industry have been conducted, especially from a quality management perspective. Thus, the problem of unsatisfactory customer service arises, which requires recent research on service quality and satisfaction within the mobile telecommunication industry.

1.3 INDUSTRY OVERVIEW

The mobile telecommunication industry is defined as the industry where communication is made possible through the means of mobile or cellular devices (Lioudis, 2018; MarketLine, 2018:7). According to a MarketLine report (2018:11), the South African mobile telecommunication industry can be categorised into two segments, namely voice and internet. Specifically, the voice segment is creating increased competition amongst the major role players in the industry since it offers increased market share in a saturated industry (MarketLine, 2018:7). There are four main role players within the South African mobile telecommunication industry, namely Cell C, MTN, Telkom, and Vodacom. The market shares of these major role players (for 2019) are depicted in Figure 1-2.

Figure 1-2: South African mobile telecommunication industry market shares (2019)



Source: Adopted from BusinessTech (2019a).

The profiles of the four major telecommunication providers are subsequently discussed:

- **Cell C** is a subsidiary of 3C Telecommunications (Pty) Ltd. and also a private company (MarketLine, 2018:26). This is the third largest mobile telecommunication provider in South Africa, and commenced with operations in 2001 (Cell C, 2019). According to MarketLine (2018:26), Cell C's service offerings include international roaming, multimedia messaging, prepaid, and internet services. BusinessTech (2019a) postulates that the company has around 17.2 million subscribers and constitutes a market share of 17%.

- **MTN** started with operations in 1994 (Cell C, 2019; MTN, 2017a). According to a MarketLine report (2018:28), MTN provides a comprehensive offering of products that include voice, data, business services, mobile money, and digital services. According to MTN (2017a), the company has expanded its geographical offerings, and is operating within 22 countries in Africa as well as the Middle East. Furthermore, BusinessTech (2019a) states that the company's customer base decreased to 30 million subscribers and constitutes a market share of 29% (i.e. the second largest market share in the industry).

- **Telkom** is a subsidiary of Telkom SA – a State-Owned company (SOC) that commenced with operations in 2010 (Cell C, 2019). A report by MarketLine (2018:32) indicates that the mobile telecommunication provider offers mobile communications that include voice and data services. According to BusinessTech (2019a), the company has a customer base of 9.7 million subscribers and concurs with a market share of around 10%.

- **Vodacom** commenced with operations in 1994, the same year as its competitor MTN (Cell C, 2019). Vodacom is a subsidiary of the Vodafone group, operating within the African continent, offering a wide variety of services such as voice, messaging, data, financial, and convergent services (MarketLine, 2018:35; Vodacom, 2019b). According to Vodacom (2019b), the company expanded its operations across borders and are successfully operating within 32 African countries. BusinessTech (2019a) postulates that this telecommunication giant has the largest market share within the South African mobile telecommunication industry, with a customer base of 43.2 million subscribers, taking the market share of the company up to 42%.

The mobile telecommunication industry is furthermore challenged by declining revenues from the voice segment, immense competition including pricing, and high rates of inflation (MarketLine, 2018:7). However, amidst these challenges, various opportunities exist in the industry such as rising income levels, increasing digital literacy, rapid market penetration (i.e. increasing amount of smartphone and mobile internet users), increased data usage (due to higher mobile engagement), and the increasing internet segment (MarketLine, 2018:7-8). Furthermore, the focus in the industry has shifted towards a value-added service approach (Viriri & Phiri, 2017:104), whereby telecommunication providers differentiate themselves through offering distinct value to customers. Consequently, resulting in an innovation-driven industry with increasing competition (Abd-Elrahman, 2018:11; Dicey, 2018; Lioudis, 2018; MarketLine, 2018:7).

MarketLine (2018:7) and Plunkett (2014:7-9) state that the industry's complexity, which is constantly increasing, can be attributed to major advances in the technological environment, changing and fluctuating market dynamics, as well as reduced barriers of entry into the market

that allows more competitors to enter. Specifically, 5G – which utilises a new spectrum of radio frequency waves – increases the speed and bandwidth of the internet connectivity of a mobile telecommunication provider, and also reduces the latency (i.e. response time) (BusinessTech, 2019b; Vodacom, 2019a).

Van Niekerk (2019) asserts that the benefits of 5G include increased connectivity, increased network speed, instant internet connectivity, and better network quality. Pertaining to the major role players in the South African mobile telecommunication industry, both Vodacom and MTN have trailed the 5G network, prepared their networks for the conversion and launch of 5G, begun to roll out 5G capable sites, and plan to launch 5G in South Africa in 2019; whereas Cell C has only partly begun to prepare its network, and Telkom's status regarding 5G is unknown (MyBroadband, 2019). However, despite all the benefits associated with 5G, the safety and health concerns thereof have not been tested and may potentially be dangerous to human health, since there exists the possibility that the radiation emitted from the new spectrum of radio frequency, 5G, can be linked to carcinogenic (i.e. cancer causing) formation (Reardon, 2019).

1.4 LITERATURE OVERVIEW AND HYPOTHESES

Delivering quality services to customers is of pivotal importance for a business, since it increases profitability through ensuring that customers are satisfied (increasing their likelihood to return) (Hanaysha, 2016:679), and by allowing the business to differentiate itself from competitors. According to Iacobucci (2013:185), Levy *et al*. (2014:516), as well as Schiffman and Kanuk (2014:10), the quality of service delivered by the business will influence the evaluation process utilised by customers to determine whether the expectations they had before entering the store were matched with their actual experience (i.e. perceived quality) delivered by the business. Therefore, the following literature discussion will provide insight into the concept of customer service within the business management context, as well as a discussion of the constructs of the study (i.e. service quality and customer satisfaction). Since the point of view of this study is focused on business management, the next section provides a brief overview of business management as a discipline.

1.4.1 Business management

Businesses are created for the purpose of generating a profit through the means of transforming resources into finalised products or services that will be used by customers (Botha, 2017d:5; Strydom, 2015:3-4; Venter, 2019:3). In addition, businesses are managed through the process and activities required to ensure the most effective and efficient use of resources for the purpose of achieving objectives (Griffen & Van Fleet, 2014:8-9).

Business management can be defined as the management activities that are required to establish a business and ensure that it generates profit through the means of planning, organising, leading, motivating and controlling its resources efficiently and effectively (Hatten, 2017:17), which aim to satisfy the needs of customers through its product or service offerings (Botha, 2017d:4; Strydom, 2015:3). Business management is important for the profitability of a business, as it involves the management of scarce resources that will be used to produce the maximum possible output (Venter, 2019:30). To effectively manage a business, the environmental factors impacting on the business needs to be analysed. These environmental factors can be divided into three categories, namely micro, market, and macro-environment (Kiley, 2015b:25; Strydom, 2019:125-126).

- **Micro-environment**

  This refers to decisions made internally through management tasks, also referred to as management functions, over which the business has control (Strydom, 2019:125-126). These functions include the management of finance, human resources, marketing, production, operations, accounting, administration, purchasing, logistics, public relations, and general management (Botha, 2017d:18; Kiley, 2015b:26).

- **Market-environment**

  This refers to marketplace characteristics, and thus include factors such as the business' customers, competitors, intermediaries, labour force, and suppliers (Kiley, 2015b:28-29). Achadinha (2015:50) contends that customers form the core of the market environment. Therefore, understanding customer needs and how to satisfy these needs are of paramount importance for the sustainability of a business (Booysen, 2017:40). However, for a business to be able to satisfy the needs of its customers, the services offered by the business also need to be assessed. Therefore, since customers form the most vital part of the business, it is important to analyse the service quality offered by a business, as well as the level of customer satisfaction achieved through the use of the current customer service quality.

- **Macro-environment**

  The macro-environment refers to external factors that are impacting on the business and includes the PESTLE factors, which are political, economic, socio-cultural, technological, legal, and ecological forces (Achadinha, 2015:54; Kiley, 2015b:30; Strydom, 2019:136).

Considering the abovementioned, customers form an integral part of the business' market-environment. As such, it is essential to ensure that these customers are satisfied with the quality of services offered by the business. In addition, satisfied customers are more loyal, and when considering cost in the long run, it is better to retain customers than to continuously attract new

customers. Furthermore, the business should continuously monitor and improve the quality of the service offered to customers. Therefore, one of the methods that can be utilised by the business to monitor the quality of the services offered, is to examine the business' customer service. Thus, the following section provides insight into customer service.

1.4.2 Customer service

Existing literature identifies the customer as the most important part of the business, and as such, managing customer service effectively will allow a business to increase its customer satisfaction, which will ultimately increase its profitability (Achadinha, 2015:50; Booysen, 2017:40). Thus, the literature provides an investigation into customer service quality, especially for service providers, and how it can be improved to increase customer satisfaction, and ultimately profits.

Customer service can be defined as utilising the activities (i.e. supporting customers) within a business (i.e. mobile telecommunication company) to ensure that customers are satisfied (Investopedia, 2018). However, Levy *et al*. (2014:516) opine that customer service should not only be focusing on the aid provided to customers, but also on ensuring that their entire shopping experience is of quality. Delivering quality customer service will satisfy customer needs (Adamu, 2017:2; Amini *et al.,* 2012:202), serve as a future expectation source for customers (Khan & Fasih, 2014:332), and create the opportunity for customer retention (Wang *et al*., 2014:322).

1.4.3 Service quality

Parasuraman *et al.* (1988:17) define service quality as the variance or divergence (Ahmed *et al*., 2014:310) that exists between what customers expect from a service and the actual service experience (i.e. perception) delivered. Service quality is of fundamental importance for a business that seeks sustainable growth and a competitive advantage. Therefore, customer satisfaction through service quality offered should be a business' prime focus (Neupane, 2015:14). One of the most well-known methods of measuring service quality is the SERVQUAL model developed by Parasuraman *et al*. (1988:12), which identified service quality as the differentiator in satisfaction due to customers' comparison of their expectations against the experience that they were offered. The scale is comprised of five main dimensions, addressing various aspects of the service encounter, including tangibility, reliability, responsiveness, assurance, and empathy. A short description of each dimension follows (Neupane, 2015:14; Parasuraman *et al*., 1988:23):

- **Tangibility** refers to the physical elements observed by the customer.
- **Reliability** constitutes how accurate and dependable the business is in performing services as promised.

- **Responsiveness** denotes to the employees' willingness to provide customers with help, prompt service, the ease of disseminating information to customers, and handling customer requests.

- **Assurance** is the ability of the business' employees to be knowledgeable about products or services offered, and to act professionally and with confidence to assure an atmosphere of trust within the customer.

- **Empathy** is regarded as the personal connection offered to a customer, such as personalised attention and service, convenient operating hours and the differentiation of the business on different customer needs and adapting accordingly to provide the special attention expected.

Because the SERVQUAL measurement instrument focuses on measuring service quality to determine the satisfaction levels of customers pertaining to their expectations compared to the experience (Parasuraman *et al*., 1988:23), it is essential to understand customer satisfaction. Consequently, the following section discusses customer satisfaction.

1.4.4 Customer satisfaction

Oliver (1981:27) defines customer satisfaction as an evaluation made by a customer with regards to the relationship that exists between the customer's expectations and the actual perceptions (i.e. experience) of the customer about the products or services offered by a business. According to Alam *et al*. (2016:57), Bagram and Khan (2012:2), De Meyer-Heydenrych *et al.* (2017:6), as well as Iacobucci (2013:185), customer expectations and customer experiences will influence the level of satisfaction within the customer, and as a result the customer will be satisfied, dissatisfied or delighted by the experience. Hence, the definition of satisfaction arises when the customer's needs and expectations that they have regarding a service are fulfilled (De Meyer-Heydenrych *et al.*, 2017:6; Neupane, 2015:13).

Customer satisfaction can also be seen as an outcome based on customer expectations (Alam *et al*., 2016:57; De Meyer-Heydenrych *et al.*, 2017:6; Iacobucci, 2013:185; Schiffman & Kanuk, 2014:10). Customer experiences influence customer expectations as well as customer satisfaction, especially the satisfaction of customer needs (Srivastava & Kaul, 2014:1029) and also the perceived quality (Malik, 2012:68). Hence, if customer expectations and experiences do not match, it will result in customer dissatisfaction and the customer will also perceive the interaction to be of low quality (Iacobucci, 2013:185; Schiffman & Kanuk, 2014:10).

Customer satisfaction is important for a mobile telecommunication provider to ensure the business' survival and prosperity in the market (De Meyer-Heydenrych *et al.*, 2017:7) amidst

threats of increased competition (Alam *et al*., 2016:57) and globalisation (Alhkami & Alarussi, 2016:124). As stated by De Meyer-Heydenrych *et al.* (2017:7), satisfied customers are much more beneficial for a business than dissatisfied customers. The major benefits of customer satisfaction are depicted in Table 1-1 below.

Table 1-1: Benefits of satisfied customers

Benefit	Source(s)
More loyal customers	De Meyer-Heydenrych *et al.* (2017:7); Erasmus (2019:15); Fripp (2015)
Competitive advantage	Fripp (2015)
Increased sales	De Meyer-Heydenrych *et al.* (2017:7); Fripp (2015)
Higher word-of-mouth rates	De Meyer-Heydenrych *et al.* (2017:7); Fripp (2015)
Reduced marketing expenditure	Fripp (2015)
Higher selling rate for new products	Fripp (2015)
Less price sensitive customers	De Meyer-Heydenrych *et al.* (2017:7); Fripp (2015)
Reduced cost of recruiting customers	De Meyer-Heydenrych *et al.* (2017:7)

Source: Researcher's own compilation.

1.4.5 Interrelationships between service quality expectations, experiences, and customer satisfaction

For telecommunication providers in a highly competitive market, ensuring customer satisfaction is an essential element for prosperity within the market (De Meyer-Heydenrych *et al.*, 2017:7). However, achieving customer satisfaction is not an easy task, since customer expectations and experiences influence whether or not a customer will be satisfied with the service quality offered by a company (Alam *et al*., 2016:57; Bagram & Khan, 2012:2; De Meyer-Heydenrych *et al.*, 2017:6; Iacobucci, 2013:185). Various studies have found that customer service quality expectations do not match the customer's perceived experience (Adetunji *et al*., 2013; Alam *et al.,* 2016; Albarq, 2013; Arokiasamy & Abdullah, 2013; Arora & Saxena, 2013; Cerri, 2012; Khan & Jadoun, 2015; Mackay, 2012; Mbise & Tuninga, 2013; Meybodi, 2012; Roopchund & Boojhawon, 2014; Shanka, 2012; Van der Wal *et al.,* 2002). Therefore, based on this discussion (as well as the literature in Section 1.4), the following alternative hypothesis is proposed:

H_3: Respondents' service quality expectations differ statistically significantly from the service quality they experienced from their mobile telecommunication provider.

The effect of service quality on customer satisfaction has been confirmed by existing literature (Arslan *et al*., 2014:91; Selelo & Lekobane, 2017:220). Dissatisfaction arises when customer expectations about a service are not matched with the delivered (i.e. experienced) service quality (Alam *et al*., 2016:57; Bagram & Khan, 2012:2; De Meyer-Heydenrych *et al.*, 2017:6; Iacobucci, 2013:185; Schiffman & Kanuk, 2014:10). Therefore, customer expectations and experiences regarding service quality influence each other, as well as the level of customer satisfaction (Srivastava & Kaul, 2014:1029). Thus, based on this discussion, the following alternative hypothesis is proposed:

H_4: The dimensions of service quality have a statistically significant effect on respondents' satisfaction with their mobile telecommunication provider.

1.5 RESEARCH OBJECTIVES

The primary objective of this study was to investigate service quality (expectations and experiences) and customer satisfaction within the South African mobile telecommunication industry, and to determine whether the quality of service influences respondents' satisfaction.

The following secondary objectives were formulated to address the primary objective and the research problem:

(1) Compile a sample profile of the respondents.

(2) Measure respondents' service quality expectations of their mobile telecommunication provider.

(3) Measure respondents' service quality experiences received from their mobile telecommunication provider.

(4) Compare respondents' service quality expectations with their experience of the service quality offered by their mobile telecommunication provider.

(5) Measure respondents' satisfaction with their mobile telecommunication provider.

(6) Determine whether differences exist between different groups of respondents with regards to the two constructs of the study (i.e. service quality and customer satisfaction).

(7) Determine the influence of service quality on customer satisfaction.

1.6 RESEARCH METHODOLOGY

The research methodology utilised in this study is subsequently discussed in this section and includes an indication of how both the primary and secondary data were collected for this study.

1.6.1 Secondary data collection

Secondary data (i.e. literature investigation), as part of the exploratory research, was collected through consulting various existing sources. The keywords utilised to search effectively for information contained within appropriate articles were: business management, quality management, customer service, service quality, customer expectations and experiences (or perceptions), customer satisfaction, as well as mobile telecommunication industry. To ensure that the sources were relevant to this study, the date of publication was set between 2012 and 2020, with the exception of seminal authors. Furthermore, the secondary data was mainly collected from the following recognised and accredited sources:

- African Journals: a collection of full-text electronic South African scholarly journals.
- EBSCOhost: online research platforms, databases, and search features.
- Emerald Insight Journals: online access to international academic journals in the field of management information science and engineering.
- JSTOR: a collection of international academic journals and books in the fields of humanities, social sciences, and sciences.
- SACat: a database of publications in South African libraries, including journals, books, audio-visual items, and other information materials.
- ScienceDirect: an international collection of full-text scientific books, chapters, academic journals, and articles.
- ProQuest: an international database of dissertations and theses (full-text).
- Textbooks: from publishers such as Cengage, Pearson, South Western, and Wiley.
- Other internet sources: such as Google Scholar and related internet searches.

1.6.2 Primary data collection

The empirical investigation presents the primary data collection methods that were utilised in this study, and consists of the research design, measurement instrument, sample plan, data collection, and data analysis.

1.6.2.1 Research design

For this study, a combination of exploratory and descriptive research designs was used. The exploratory research design allowed for an investigation into the background of the industry (discussed in Section 1.2) as well as relevant existing literature. The use of a descriptive research design enabled this study to gain insight into the customers of the South African mobile telecommunication industry. Furthermore, the descriptive research design assisted this study in compiling a profile of the customers and their perceptions of service quality, provided insight pertaining to customer buying behaviour, and their experienced quality of services and whether their service quality expectations matched their service quality experiences (Babin & Zikmund, 2016:54; Burns *et al*., 2017:98).

1.6.2.2 Measurement instrument

A measurement instrument refers to the quantification of specific attributes or characteristics of an object that is sought by a researcher or research study (Burns *et al*., 2017:205). Due to the nature of this study, which followed a quantitative approach, a self-administered questionnaire (i.e. survey) was used to collect the primary data required for this study (see Appendix A).

For the purpose of this study, the questionnaire commenced with a brief description to include the purpose of the questionnaire, and ensuring respondents of their anonymity and confidentiality when participating. The introduction was followed by a screening question, which identified qualifying respondents (McDaniel & Gates, 2013:259). Before the final questionnaire was distributed for data collection, it was firstly pre-tested amongst 18 respondents that represented the target population. After receiving feedback from the pre-test, the necessary changes (such as changing question 2.4 from a ranking to a rating scale) were implemented, and the questionnaire was finalised. The questionnaire included the following sections (refer to Appendix A):

- Screening question: To ensure that respondents qualified to participate, they were required to be currently utilising the services of one of the main mobile telecommunication providers' services in South Africa.

- Section A: The aim of this section was to obtain background information (in the form of socio-demographic questions) on the respondents who participated in the research, to ultimately compile a sample profile (i.e. addressing secondary objectives 1 and 6).

- Section B: The purpose of this section was to measure respondents' service quality expectations and experiences with regards to their mobile telecommunication provider (addressing secondary objectives 2, 3, 4, 6 and 7).

- Section C: The purpose of this section was to measure respondents' satisfaction with their mobile telecommunication provider (addressing secondary objectives 5 and 7).

The questionnaire concluded with a postscript that thanked the respondent for their participation in the survey.

1.6.2.3 Sample plan

A sample plan consists of various components that identify how the sample elements will be selected from the target population (Burns *et al.*, 2017:73). The target population for this study is summarised in Table 1-2 below.

Table 1-2: Target population for this study

Component	Description
Elements	All individuals who have been making use of the services of one of the main mobile telecommunication providers (i.e. Vodacom, MTN, Cell C or Telkom) in South Africa.
Extent	South Africa.
Timeframe	15 July 2019 to 13 September 2019.

Source: Researcher's own compilation.

No sampling frame was available, due to the prohibition of the South African Protection of Personal Information (POPI) Act (4 of 2013), which ensures that private information of citizens is protected from public as well as private institutions. Therefore, since no sampling frame was used in this study, it constituted a non-probability sampling method which indicated whether there was an unknown or chance that a respondent was asked to participate in the research (Brown *et al*., 2018:207; Van Zyl & Pellissier, 2017b:135). The use of a non-probability sampling method resulted in the utilisation of a convenience sampling technique – where respondents were selected by a fieldworker based on convenience for the fieldworker as well as the respondent (i.e. mall-intercept) (Ghauri *et al*., 2020:166).

This study's sample size was determined by following the guidelines provided by Malhotra (2017:418) as well as Sekaran and Bougie (2016:265) for problem-solving research (see discussion in Chapter 4), and the minimum sample size for this study was set at 200 respondents. Notwithstanding that the proposed sample size was 200 respondents, a final sample size of 300 was realised after the data collection. Table 1-3 below summarises the sample plan that was followed in this study.

Table 1-3: Sample plan summary for this study

Component	Description
Target population	South African mobile telecommunication users.
Sampling elements	All individuals who have been making use of the services of one of the main mobile telecommunication providers (i.e. Vodacom, MTN, Cell C, or Telkom) in South Africa
Extent and timeframe	South Africa, 15 July 2019 to 13 September 2019.
Sampling frame	No available sampling frame.
Sampling method, technique	Non-probability, convenience sampling.
Realised sample size	300 respondents.

Source: Researcher's own compilation.

The following section explains how the data was collected from the sample to whom the questionnaires were distributed.

1.6.2.4 Data collection

Data was collected through the use of a structured, self-administered questionnaire, which was first distributed to respondents via mall-intercept by the fieldworkers and yielded 185 useable responses. However, due to factors such as cost and the timeliness of collecting data through fieldwork, online data collection was also used in conjunction with fieldwork through the means of Google forms and then distributing the link of the questionnaire on social media platforms where it could be completed by respondents. The online data collection yielded an additional 115 useable responses.

Pertaining to the fieldworkers, this study utilised four BCom Honours (Entrepreneurship and Marketing Management) students from the North-West University's Potchefstroom Campus, who were trained as fieldworkers. The criteria for the fieldworkers was to have had a research subject (i.e. marketing research) during their undergraduate degree as well as in their Honours degree at the time of data collection. Fieldwork was conducted from 15 July 2019 to 13 September 2019.

After the primary data had been collected, the data could be analysed, as elucidated in the following section.

1.6.2.5 Data analysis

The results from the data collection were edited, analysed, and calculated by means of the Statistical Package for Social Sciences (SPSS) programme (version 25) as developed by IBM Corporation. To ensure credibility, the data was analysed by the researcher as well as the North-West University's Statistical Consultation Services (Potchefstroom campus) as shown in Appendix C.

The data analysis process commenced with the calculation of the descriptive statistics, such as frequencies and valid percentages, to describe the sample profile, means ($\bar{x}$) and standard deviations (SD) to describe respondents' service quality expectations, experiences and satisfaction with their mobile telecommunication provider. Thereafter, the reliability of the constructs' scales was tested through calculating the Cronbach's alpha coefficient values (α). The validity of the scales was determined by means of testing the measure of sample adequacy. Finally, the formulated hypotheses were tested by means of inferential statistics, specifically utilising one-way analysis of variance (ANOVA), independent samples t-tests, paired samples t-test, and a standard multiple regression.

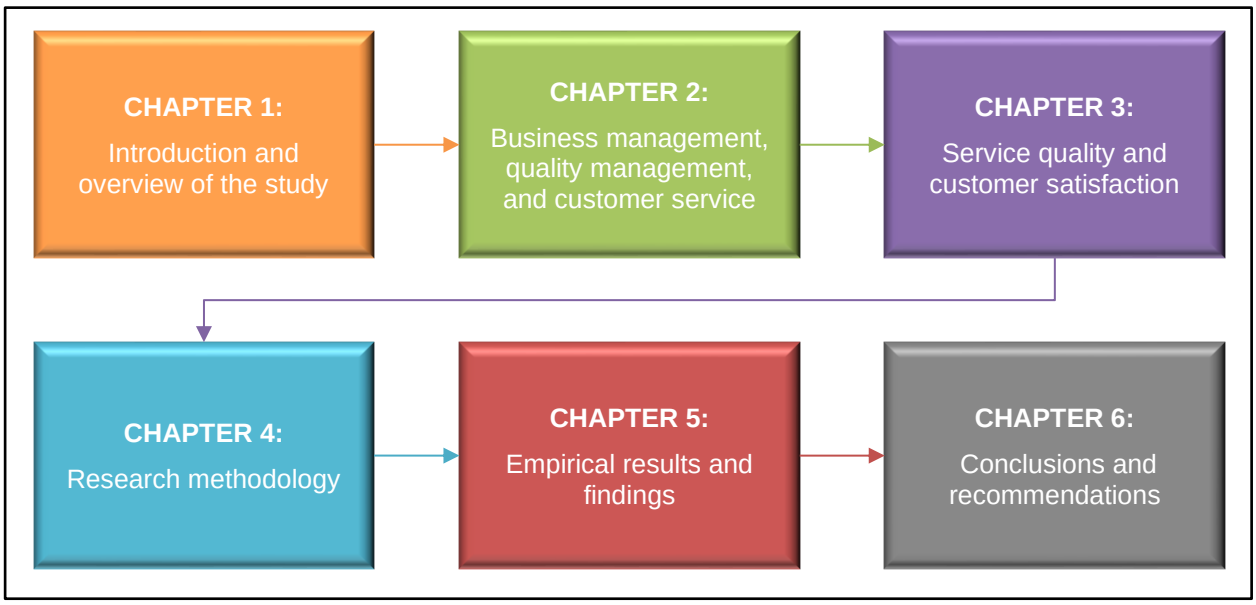
1.7 CONTRIBUTION OF THE STUDY

This study contributes to existing management literature through providing an in-depth investigation into the theoretical aspects pertaining to the study, namely business management, quality management, customer service, service quality, and customer satisfaction. Empirically, the study contributes by providing results, deductions, and conclusions from the data obtained and analysed pertaining to the South African mobile telecommunication industry. Practically, this study discusses the managerial implications and recommendations based on the literature overview (conducted in Chapters 1 to 3) as well as the empirical results and findings of this study, which can be applied to service businesses, especially mobile telecommunication providers in South Africa. This study's results also provided information for comparison in further studies on the fields of service quality and satisfaction in the international telecommunication industry.

1.8 OUTLINE OF CHAPTERS

The chapter classification of this study is illustrated in Figure 1-3. Subsequently, each chapter and its contents are briefly discussed.

Figure 1-3: Outline of this study's chapters



- **Chapter 1: Introduction and overview of the study**

  This chapter serves as an introduction to the study. The background and research problem are discussed, followed by a brief overview of the South African mobile telecommunication industry, an overview of the literature and subsequent hypotheses, and the research objectives. The research methodology implemented in the study is then outlined, followed by the contribution of the study. This chapter concluded with and outline of the chapters.

- **Chapter 2: Business management, quality management, and customer service**

  This chapter commences with a literature investigation into business management by discussing its conceptualisation, importance and the business environment. Successively, the various tasks and roles of mangers are described. The managerial skills and competencies are posited, followed by an overview of the various business functions. Strategic management is explained, followed by an explanation of quality management. Customer service and its importance are discussed, and the chapter concludes with an overview of customer service within the South African mobile telecommunication industry.

- **Chapter 3: Service quality and customer satisfaction**

  Chapter 3 presents an overview of the constructs under investigation in this study, namely service quality and customer satisfaction. Firstly, an overview is provided regarding quality and how it affects customers. Thereafter, service quality is discussed through the conceptualisation of it, by distinguishing between goods and services, defining the term, and providing its importance. The dimensions of service quality are then reviewed, followed by an overview of the service quality gaps, its measurement and management, after which service quality is explored as an antecedent of customer satisfaction. Thereafter, customer satisfaction is examined and commences with its conceptualisation by defining the term, highlighting its importance and benefits, discussing the types and determinants, and describing the measurement methods thereof. The chapter concludes with an overview of customer satisfaction within the South African mobile telecommunication industry.

- **Chapter 4: Research methodology**

  This chapter presents the research process and applied research methodology based on the business research process and available methodology, which were implemented and sufficiently motivated according to this study's specific requirements and objectives. It includes a discussion and application of the appropriate data collection method, the description and application of the research design, the sample plan (i.e. target population, sample method, sample technique, and sample size), measurement instrument (i.e. questionnaire design), data collection (i.e. fieldwork), and data analysis.

- **Chapter 5: Empirical results and findings**

  Chapter 5 provides the empirical results and findings of the study as derived from the primary data. This chapter commences with the sample realisation rate. The sample profile is subsequently provided, and the remaining data is analysed and reported based on the layout and sequence of the questionnaire's questions. The formulated hypotheses are tested, and the chapter concludes with the main findings of the empirical investigation.

- **Chapter 6: Conclusions and recommendations**

  The final chapter provides a summary of the results wherefrom conclusions are presented. Recommendations and implications are subsequently made pertaining to the literature and empirical results, followed by the limitations of the study. Suggestions for future research are proposed and the chapter concludes with the contribution of the study.

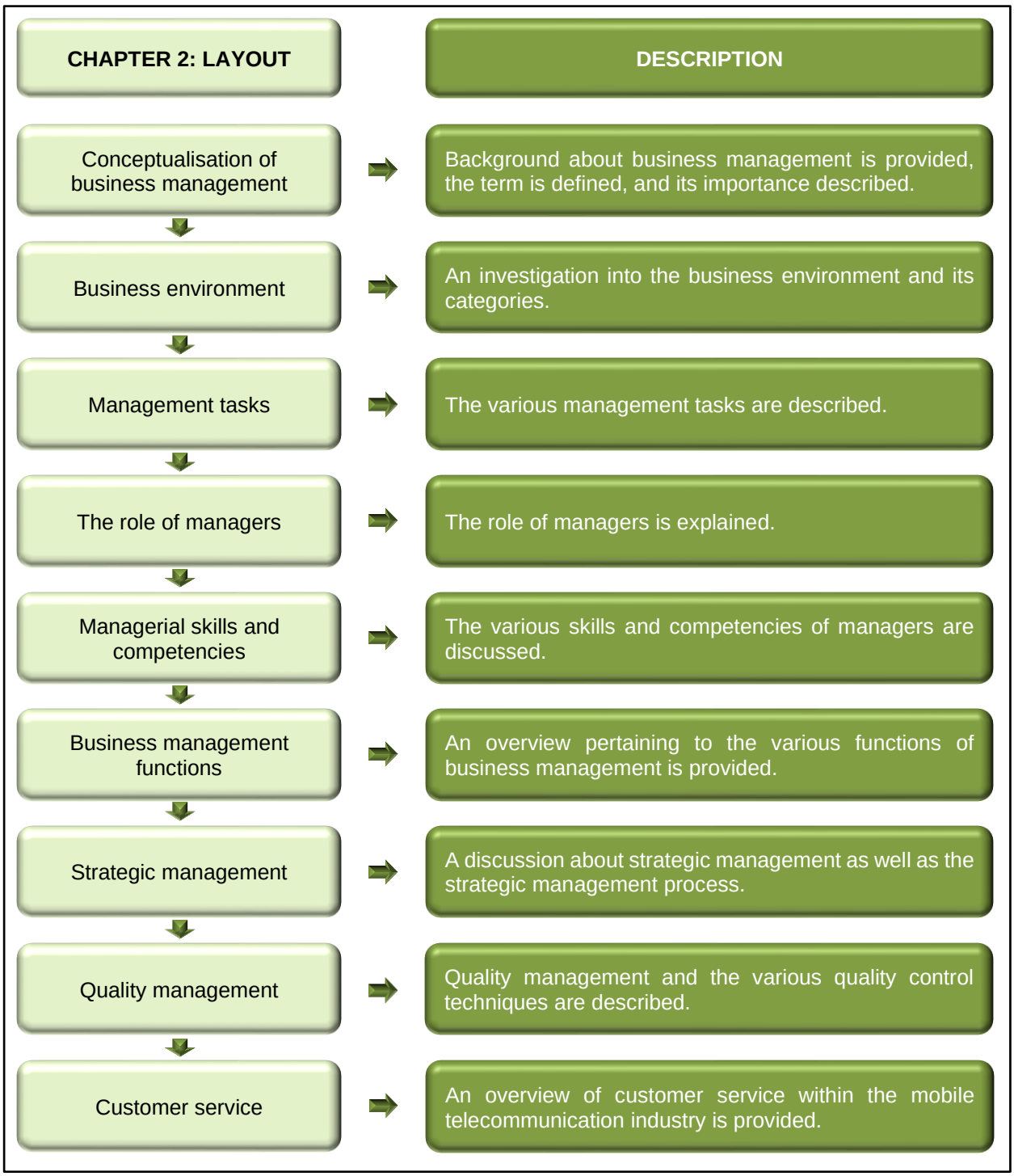
CHAPTER 2

BUSINESS MANAGEMENT, QUALITY MANAGEMENT, AND CUSTOMER SERVICE

2.1 INTRODUCTION

This chapter provides a discussion of the literature pertaining to the discipline of business management, with a specific focus on quality management and customer service. The chapter commences with the conceptualisation of the concept of business management. Next, an overview of the business environment is provided, followed by a discussion of the management tasks. This is followed by an investigation into the different managerial roles, skills, and competencies. Thereafter the business management functions are discussed, and subsequently strategic management is described. An overview of quality management is then provided. The chapter concludes with a discussion on customer service, as well as an investigation into customer service within the South African mobile telecommunication industry. The chronological structure of Chapter 2 is illustrated in Figure 2-1 below.

Figure 2-1: Chapter 2 chronological structure



Source: Researcher's own compilation.

2.2 CONCEPTUALISATION OF BUSINESS MANAGEMENT

Before the aspect of the discipline of business management is discussed, the terms business and management need to be clarified. Businesses are established and managed in order to generate a profit by utilising the economic principle (i.e. satisfying unlimited consumer wants with limited resources) and the four factors of production (i.e. natural, human, and capital resources, as well as entrepreneurship) to transform resources (Venter, 2019:3-4) into products or services that can be offered to customers (Botha, 2017d:5; Strydom, 2015:3-4). Management, on the other hand, refers to the activities performed to ensure that the factors of production, such as natural and human resources, capital and entrepreneurship, are used in such an effective (i.e. implementing the best possible decision) and efficient (i.e. intelligent and cost-effective use of resources) method to allow the business to achieve its goals (Griffen & Van Fleet, 2014:8-9). Following the above description of the terms business and management, the following section aims to define the term business management as a concept.

2.2.1 Business management defined

Various definitions of the term business management exist within the current literature. The following definitions are the most prominent throughout the literature, and as such the characterising elements of each are highlighted:

- According to Venter (2019:30), business management can be defined as the *study* of *businesses* or institutions within a dynamic market, which exist in order to *satisfy* the *needs* of *customers* within the market.

- Business management, according to Hatten (2017:17), can be defined as the *management activities* that are required to *establish* a business and ensure that the business generates *profit* by *effectively* and *efficiently planning*, *organising*, *leading*, *motivating*, and *controlling* the business' resources.

- Botha (2017d:5) describes business management as the *coordinated* and *integrated* management of all business types through the employment of certain *activities* that assist the business in *achieving its goals and objectives*.

- De Beer (2018:2) defines business management as the *field of science* concerned with understanding what constitutes a business, how it is *established*, and how *effective* and *efficient* management thereof ensures *profit*.

Based on these definitions, certain elements are prominent. Thus, based on these definitions, the following definition of business management can be summarised within the context of this study:

> *The field of science concerned with studying or investigating what a business is, how it is established, and how it can be managed in the most effective and efficient way possible, by coordinating and integrating the activities of planning, organising, leading, motivating, and controlling to ensure that profits are generated through satisfying customer needs and achieving business goals and objectives.*

With this definition in mind, it is essential to understand the importance of business management. Therefore, the next section describes the importance of business management and how it affects the quality of the services that are delivered to customers.

2.2.2 Importance of business management

Businesses exist in order to satisfy customers' needs (De Beer, 2018:1; Venter, 2019:31). It is therefore important to ensure that customers are satisfied with the product offerings of a business, as it ensures the business' longevity. As a result, effective and efficient management assist businesses in attaining satisfied customers. Business management is also important for the profitability of a business, since it involves the management of scarce resources that will be used to produce the maximum possible output, which will ultimately realise higher profit margins (Venter, 2019:31). Lazenby (2015:1) accentuates the importance of effective business management, noting that it advances employee training, resulting in motivated and committed employees. The increase in employee motivation in turn ensures customer satisfaction, since motivated employees are more likely to deliver quality services to customers.

Robbins and Coulter (2016:36) state that qualified managers are critical for successful business management, as they develop and implement appropriate responses to neutralise the impact of potential threats and issues. Daft (2016:11) states that the responsibility of ensuring effective and efficient usage of resources is at the core of business management. Hence, business managers should integrate the utilisation of resources to achieve business goals (Griffen & Van Fleet, 2014:9). Considering this, it is important to understand how managers ensure that resources are optimally utilised within the business. Jones and George (2016:7) posit that managers can ensure optimal utilisation of resources by performing specific tasks (management tasks). However, managers cannot control all the aspects of a business, due to various uncontrollable factors within the business environment that influence the business' growth, survival and the attainment of objectives (De Beer, 2018:9). Therefore, the next section provides an overview of the business environment.

2.3 BUSINESS ENVIRONMENT

Businesses operate within a constantly changing environment subsumed within complex and interrelated sub-environments (Kiley, 2015b:23), which create an unstable business environment. However, this unstable business environment can also provide a business with a competitive advantage, since new opportunities within the market are created (Achadinha, 2015:3).

The business environment includes those changes that occur within (i.e. internal), as well as outside of the business (i.e. external) that affect current as well as future business operations, activities and objectives (De Beer, 2018:9). Hence, the understanding of these internal and external changes is of paramount importance for a manager, since it enables the business to compete successfully within its environment by adapting to these changes (Van Noordwyk & Van Tonder, 2019:16). Achadinha (2015:3) categorises the business environment into three categories, namely the micro, market and macro-environments. The micro-environment is found within the business' decision-making area, whereas the market- and macro-environments are found outside the business and are therefore subject to external factors (Booysen, 2017:32). As such, a business can control the aspects and changes within its micro-environment but not within the market- or macro-environments. Therefore, the micro-environment, which a manager can control in a way by their decision making, is discussed next.

2.3.1 Micro-environment

This environment includes aspects that affect a business from within; hence, referred to as the internal environment (Achadinha, 2015:46). This environment is distinguished from the other environments (i.e. market and macro) due to the internal managerial control over its aspects and changes (Booysen, 2017:32). Some of the most noteworthy aspects of the micro-environment which can be controlled by managers are described below.

- **Vision and mission**

  Booysen (2017:34) describes the vision is an aspirational statement of what the business wants to be, whereas a mission statement (see Section 2.8.3.1) is concerned with how the vision will be realised. According to Hitt *et al*. (2017:18), the vision statement is of prodigious importance to a business' stakeholders since it provides a description of the ultimate goals of the business. From a quality management perspective, a vision and mission statement indicate the level of quality to be maintained throughout the business' operations and will provide employees with an indication of the quality required from them to ensure that customers are satisfied with the goods or services delivered (Botha, 2019:300; Rothaermel, 2017:34-35).

- **Goals and objectives**

  Goals are the general targets that a business wants to achieve in the long-term, whereas objectives are the specific short-term targets that must be achieved to assist the business in reaching the set goals (Booysen, 2017:35). Aspects of quality management, also called improvement objectives, also form part of the overall goals and objectives of the business (Schermerhorn *et al*., 2017:83).

- **Business functions**

  These are the various functional areas within a business concerned with performing specific activities that are required in that area, such as marketing related activities in the marketing function (Griffen & Van Fleet, 2014:14). It is important to touch on the different business functions because, out of a quality management perspective, quality should be managed throughout all these business functions.

- **Resources**

  Resources refer to the required materials needed for the production process as well as for the effective functioning of the business (Booysen, 2015:115-116). According to Van Noordwyk and Van Tonder (2019:2), four types of resources can be distinguished, namely human, informational, financial, and physical resources. Pertaining to a quality management perspective, these resources should be managed as effectively and efficiently as possible to ensure optimal integration of the available resources (Griffen & Van Fleet, 2014:8).

The next environment is the market-environment, which management has limited to no direct control over the aspects within (Strydom, 2019:126).

2.3.2 Market-environment

The market-environment (also known as the task-environment) relates to various aspects – such as the business' customers, competitors, suppliers, and labour force – that are all directly related to the business and its operations (Daft, 2016:77). These aspects affect decision-making in the short-term as a result of the influence exerted on management to obtain the required resources necessary for the transformation process through which daily, weekly, and monthly outputs will be produced (Jones & George, 2016:159). Some of the aspects influencing the market environment are discussed next.

- **Customers**

  Customers are the individuals who purchase the products or services produced by the business with a particular buying behaviour and power associated with them (Strydom, 2019:126). Cant and Machado (2019:500) maintain that customers are responsible for the survival of any business. Booysen (2017:40) concurs that customers are of utmost importance for a business' survival, since customers represent the individuals that will purchase or utilise the business' products or services. As such, customers expect quality products and services from a business (Schermerhorn *et al*., 2017:583).

- **Competitors**

  These are other (rival) businesses that are similar in nature to the current business in the sense that they produce and deliver more or less the same products or services. They compete against one another for market share as well as for limited resources (Booysen, 2017:40). Since competitors also adhere to the set international quality standards, a certain level of quality is maintained throughout the industry (Schermerhorn *et al*., 2017:583).

- **Suppliers**

  Suppliers are businesses who supply a specific business with the raw materials, products, services, or finances that will be used by the business for the purpose of producing goods or delivering services (Strydom, 2019:126). Therefore, appropriate suppliers should be selected by the business to ensure that the right quality of raw materials are sourced (Badenhorst-Weiss, 2018:363; Eichhorn & Towers, 2018:141). The quality of the raw materials from suppliers have a direct influence on the quality of the final product bought by the customers.

- **Intermediaries or distributors**

  Distributors are the businesses with whom a business makes specific agreements concerning delivering (i.e. transporting) products between the business and the customer, or between the business and a supplier (Booysen, 2017:41). Intermediaries or distributors involved with distributing the business' products should provide quality and reliable services, such as using a reliable distribution channel to deliver the products to customers (Doole *et al*., 2016:359).

- **Labour market**

  The labour market refers to the skilled workforce from which a business can source employees (Strydom, 2019:126). Daft (2016:78) states that the influential factors within the labour market that are affecting businesses include (a) workers that are computer literate, (b) requirements that ensure continual investment within the human resource function such as

recruitment, education and training of employees, and (c) unutilised and shortages of labour as a result of limitations on trading, automation, outsourcing, and labour dislocations. From a quality management perspective, it is important to ensure that employees are skilled and qualified, since it will affect the quality of the work they deliver (Eichhorn & Towers, 2018:130).

2.3.3 Macro-environment

The next environment is the macro-environment. In this environment, managers have no significant control over national or international factors (Kiley, 2015b:26). Hence, this environment is also referred to as external, since it focuses on external factors that provide an opportunity or threat to the business, its operations, and specifically quality management (Strydom, 2019:128).

Businesses are not autonomously governed within an economy; as such, various external factors influence the decision-making process within the business and determine how the operations will be conducted (Van Noordwyk & Van Tonder, 2019:24). Moreover, due to the limited control that management has over the macro-environment, managers are required to forecast the effects and consequences of the various factors within the macro-environment (Booysen, 2017:44). These factors' aspects included in the macro environment are explained below.

- **Demographic factors**

  Demographic factors refer to the changes occurring within a population, specifically the customers of the business, with regards to elements such as age, gender and ethnicity (Jones & George, 2016:167). These elements are closely related to the customer as part of the population and needs to be monitored by the managers.

- **Socio-cultural factors**

  This refers to the social and cultural behaviour of customers within the market served by the business (Lazenby, 2015:57). Williams (2017:51) posits that elements such as attitudes, beliefs, demographical trends, and the behaviour of the population that is served by the business can be included in this factor. Therefore, management should increase their understanding of the socio-cultural factors affecting the business' customers.

- **Economic factors**

  Economic factors refer to the health of a country's economy in which the business conducts its operations (Daft, 2016:82). Some examples mentioned by Booysen (2017:42) include interest rates, foreign exchange rates, wages, and inflation. All elements within the economic factor should be monitored by managers, since it influences various financial decisions for the business.

- **Political or legal factors**

  This macro-environmental factor is concerned with the influence or control exerted by the government of a country, and consists of elements such as legislation, economic policies, state-owned enterprises, and international policies of a government (Hellriegel *et al*., 2012:181-182). This is important to managers, since their businesses must adhere to current legislation within the country that the business operates in.

- **Technological factors**

  Strydom (2019:128) states that this factor is concerned with the technological change and innovation within the business world. Similarly, Van Noordwyk and Van Tonder (2019:29) posit that the technological environment includes the elements that will assist the business in the creation of new products, markets, or opportunities. Managers should increase their knowledge about technological innovations, since it enables the business to produce or deliver new and unique products or services.

- **Natural or physical factors**

  Natural factors include all the resources provided by earth. However, due to the limited availability of these resources, natural resources are becoming scarcer as they are diminishing due to the constant demand required (De Beer, 2018:21). Therefore, management should ensure that resources are used responsibly.

- **International factors**

  This factor refers to the global market where nations from all over the world are participating in the exchange of raw materials or finalised products to and from other countries (Lazenby, 2015:63). Therefore, managers should understand the various international factors that can influence their businesses if they are competing within a global market.

Managers operating businesses within the business environment should ensure that resources are optimally integrated so that the business' goals can be achieved (Botha, 2019:249). Therefore, in order to ensure optimal resource utilisation, managers are required to perform specific tasks within the business (Jones & George, 2016:7). Consequently, the following section describes these tasks performed by managers to ensure optimal allocation of resources so that customer's needs can be satisfied in such a manner that business goals are achieved.

2.4 MANAGEMENT TASKS

Business managers are required to assist the business in achieving its goals and objectives through the means of utilising resources as effectively and efficiently as possible (Botha, 2018:31). Therefore, to accomplish this objective, managers need to perform various tasks (Jones & George, 2016:7), including planning, organising, leading, motivating, and controlling (Oosthuizen, 2015b:49-51), which are subsequently discussed.

- **Planning**

  According to Botha (2017c:127), planning can be defined as the activities involved with the development of a plan regarding the outcomes (i.e. business goals) to be achieved. Planning can be conducted to provide direction to management (Vrba, 2019b:222), to reduce uncertainty, to ensure waste and redundancy is kept at a minimum, and to determine the goals that will be utilised in the controlling task (Robbins & Coulter, 2016:248). In addition, strategies for managing the quality within the business should be included within the business' planning task (Robbins *et al*., 2017:488).

- **Organising**

  After the plan for achieving outcomes (i.e. business goals formulated within the planning task) has been developed, organising can commence (Henrico, 2017:149). Griffen and Van Fleet (2014:15) state that organising is concerned with the allocation and coordination of the business' resources and associated activities. Hence, organising is a pivotal task in allocating and distributing resources effectively and efficiently for the purpose of maintaining and managing quality (Botha, 2018:54). However, organising does not warrant the effective implementation of these organised resources, and as such leadership or the leading task is required to ensure that resources, especially human resources, are correctly allocated and implemented in the required business operation (Van Noordwyk & Van Tonder, 2019:5).

- **Leading**

  Osborne (2015:66) posits that the leadership (or leading) task is involved with ensuring, motivating, and communicating to the employees to ensure that all the employees understand the specific objectives of the team. Henrico and Visser (2017:176-177) assert that power (i.e. the ability to promote or demote certain behavioural characteristics of others) is at the core of leadership and consists of two main types, namely personal and positional power. According to Vrba (2019a:271), power can further be classified into five sources of power, namely coercive (utilises fear appeal to promote compliance), reward (a reward system is used to influence employees), legitimate (authoritative power bestowed by a business),

referent (charismatic attribute of manager), and expert (skills, knowledge and abilities of managers). Regarding quality management, the leading task can be utilised to ensure an overall business culture, based on the orientation of quality throughout all work activities, is created and maintained throughout the business (Schermerhorn *et al*., 2017:48).

- **Motivating**

Motivation can be defined as the influence (whether positive or negative) that is exerted by managers to encourage and drive employees to be more productive in an effort to achieve the business' goals (Henrico & Visser, 2017:170). One such method of enhancing employee motivation is to ensure better workplace quality (Robbins *et al*., 2017:508). Griffen and Van Fleet (2014:108) state that employee motivation can be attributed to two perspectives, namely content and process perspectives. With regards to this study's quality management approach, it is essential to understand these two perspectives which ensure that employees maintain the desired level of quality throughout their work activities in the pursuit of providing quality services that will satisfy customer needs.

Content perspectives focus specifically on those needs that employees require for motivation to be effective and successful (Daft, 2016:555). *Process perspectives*, on the other hand, is concerned with the activities involved in selecting and evaluating behavioural actions in order to reach the desired outcome (such as quality assurance) or need successfully (Daft, 2016:562). Within these perspectives are certain types of needs that describe how employees are motivated in the pursuit of enhancing their productivity. Therefore, mobile telecommunication providers can use this information to understand what motivates their employees with regards to the needs they require so that their productivity is maximised. Thus, these different types of needs are subsequently indicated in Table 2-1 below.

Table 2-1: Types of needs within perspectives of motivation

Perspective	Type of need	Description	Source(s)
Content	Hierarchy of needs	Needs are placed on a hierarchical continuum, and to achieve a higher level of needs the lower-level needs must first be satisfied. This hierarchy consists of five levels: • Self-actualisation (Motivated by the potential within oneself). • Esteem (Motivated through own capabilities and respect, recognition, and appreciation from others). • Belongingness (Require elements such as social interaction, friendship, affection, and love). • Safety (Security requirements). • Physiological (Essentials such as food and shelter).	Jones and George (2016:390); Kiley (2015a:118); Maslow (1943:372-382)

Table 2-1: Types of needs within perspectives of motivation (continues)

Perspective	Type of need	Description	Source(s)
Content	Existence, relatedness, and growth (ERG) theory	This theory, as originated from the work of Alderfer (1972), is a modification of Maslow's hierarchy of needs, and categorises needs into three categories, namely existence (i.e. physiological requirements), relatedness (i.e. the incessant need for relationships with others), and growth (i.e. the needs that accentuate human potential and personal growth).	Daft (2016:557)
	Two-factor	This content perspective is concerned with motivational factors that will motivate employees and lead to job satisfaction and hygiene factors (i.e. poor working conditions) that cause job dissatisfaction.	Henrico and Visser (2017:171)
	Acquired needs	McClelland's (1985) trio of needs theory proposes that needs can be divided into three groups, namely the need for achievement (motivation to succeed), power, and affiliation (i.e. relationships).	McClelland (1985); Robbins and Coulter (2016:497); Schiffmann and Kanuk (2014:88)
Process	Expectancy	Expectancy theory assumes that the level of motivation will be high when employees perceive an increase in effort, to result in an increase of performance, which in turn results in the achievement of the desired outcome.	Jones and George (2016:384)
	Equity	This motivational theory is concerned with the fairness as perceived by the employee regarding the work outcomes relative to the input ratio. Therefore, if an employee perceives an equitable ratio between their input and output it is fair, and if he/she perceives an inequitable ratio then they are either under- or over rewarded.	Jones and George (2016:392); Robbins and Coulter (2016:503)
	Goal-setting	The goal setting theory requires a manager to provide employees or subordinates with goals which must be achieved to motivate the employees. Goals should be (a) specific in terms of the desired outcome, (b) measurable to determine success, (c) achievable by the employees, (d) realistic with regards to the capability of employees to achieve goals with the provided resources, and (e) time-bounded with specific deadlines that employees must meet in order to reach the goal promptly.	Griffen and Van Fleet (2014:114); Kiley (2015a:122-123)

As indicated in Table 2-1 above, motivating employees is not an easy task and neither is understanding the types of needs that employees require to ensure optimal performance. However, a business can utilise the last task (i.e. control) to ensure that employees' needs are also satisfied and that their performance is optimal (Daft, 2016:9).

- **Controlling**

  This managerial task involves, according to Botha (2017a:200), the process whereby goals developed in the planning phase are congruent with the individual or departmental performance delivered, thus ensuring a certain performance level or standard with regards to quality that is maintained in the business. Furthermore, the controlling task should be used to continuously monitor the quality within the business' operations to ensure that quality products and services are ultimately delivered (Robbins *et al*., 2017:489).

According to Lazenby (2015:5) and Rudansky-Kloppers (2019:209), managers are required to perform specific roles to ensure the fulfilment of all the activities, as well as the managerial tasks expected from them, throughout the business' operations. Therefore, the various managerial roles are discussed accordingly.

2.5 THE ROLE OF MANAGERS

Daft (2016:25) and Robbins and Coulter (2016:42) define the role of managers as the required actions and behaviours that are expected from the person within a managerial position (i.e. the manager). The role of managers can further be classified into three categories, namely decisional, interpersonal and informational roles (Mintzberg, 1973:92-93; Rudansky-Kloppers, 2019:210). The different roles of managers are discussed below, since it assists managers in ensuring that quality products or services are delivered by the business.

- **Decisional roles**

  Decisional roles are concerned with the key decisions (Robbins & Coulter, 2016:42) that are made by management with regards to the strategies (such as quality management) and potential opportunities (Oosthuizen, 2015b:56) or outlook, such as quality i(e)nsurance of the business in the future (Carpenter & Sanders, 2014:35). Decisional roles can be further divided into four sub-roles, namely entrepreneur, disturbance handler, negotiator, and resource allocator (Schermerhorn *et al*., 2017:186). The *entrepreneur* entails that a manager promotes the use of creative and innovative means of fulfilling work activities (Musengi-Ajulu, 2017:85). The *disturbance handler* encompasses managers to control and solve any problems that might arise in the business during commencement of operations, and as such requires urgent corrective action (Williams, 2017:13). The *negotiator* requires managers to work effectively with others outside of the business, especially with suppliers (Musengi-Ajulu, 2017:85). The *resource allocator* refers to when the manager decides how resources, as well as the employees that will be involved, will be distributed (Griffen & Van Fleet, 2014:18).

From the preceding discussion, it is evident that quality management strategies will be formulated by managers within their decisional role.

- **Interpersonal roles**

  Oosthuizen (2015b:57) explains that interpersonal roles are concerned with the interaction, coordination, and supervision between managers and employees, for the purpose of overall business guidance. Roles inherent in interpersonal roles include figurehead, leader, and liaison person (or officer) (Williams, 2017:10). The *figurehead* role requires a manager to perform a symbolic activity for the purpose of representing the business at a social event or function (Musengi-Ajulu, 2017:85). The *leader* role, according to Daft (2016:26), is concerned with the relationship between the manager and employees, which includes motivation and communication between the two parties, as well as the influence exerted by the manager onto the employees. The *liaison person* role is concerned with the manager acting as a coordinator between employees, work teams, as well as other businesses (Griffen & Van Fleet, 2014:16). Due to the interaction between managers and employees, quality objectives and standards can be communicated throughout all functional areas to employees (Schermerhorn *et al*., 2017:83).

- **Informational roles**

  The types of informational roles consist of gathering information of interest to the business and then disseminating the information to the relevant person (Robbins & Coulter, 2016:42; Rudansky-Kloppers, 2019:210). The sub-roles within the information roles include monitor, disseminator, and spokesperson (Daft, 2016:26). The *monitor* sub-role requires the manager to constantly seek information that will add value to the business and its operations (Musengi-Ajulu, 2017:85). The *disseminator* focuses on the exchange of information from the manager to other employees within the business (Williams, 2017:12). The *spokesperson* differs from the disseminator role in the sense that the manager communicates information primarily to members outside of the business (Griffen & Van Fleet, 2014:17). Pertaining to quality management, informational roles are used by managers to inform employees of changes regarding quality objectives.

According to Lazenby (2015:6), in order to perform the abovementioned roles, managers should possess certain skills and competencies that will enable them to ensure effectiveness and efficiency within their specific functions whilst maintaining a certain level of quality throughout.

2.6 MANAGERIAL SKILLS AND COMPETENCIES

Managers differ from one another due to the various operational requirements of the business (Robbins & Coulter, 2016:40). Hence, some managers will require certain skills and competencies that others do not necessarily require in order to be effective in their department. Managers are required to make decisions, implement, and control business strategies in an attempt to increase the efficiency of the business processes, operations and systems (Anzengruber *et al*., 2017:134). Thus, to be able to make the best possible decisions that will allow the business to achieve its goals and objectives, managers, regardless of their managerial level (Lazenby, 2015:6), are required to possess certain skills and competencies to guide their decision-making (Verle *et al*., 2014:922). Managers should also possess the necessary self-management competencies (Hellriegel *et al*., 2012:43) to assist them within as well as outside the workplace environment. This will grow managers' abilities to lead and motivate (themselves and others) in the business (Ross, 2014:300). The general skills and competencies required by managers are discussed next.

2.6.1 Managerial skills

Botha (2018:33) and Oosthuizen (2015b:53) state that managers require a set of managerial skills to effectively fulfil their managerial tasks (i.e. planning, organising, leading, motivating, and controlling). Oosthuizen (2015b:53) maintains that these skills can be categorised into three groups, namely conceptual, human and technical skills. These three skills are of utmost importance to managers who aim to be effective in their businesses, since managers utilise all three these skills to formulate and implement strategies (Musengi-Ajulu, 2017:89). Thus, these skills are also important from a quality management perspective if the manager is required to maintain a specific level of quality service that will satisfy customers (Steenkamp, 2018:240). The following is a discussion of the different managerial skills.

- **Conceptual skills**

  Conceptual skills, as Oosthuizen (2015b:53) describes it, are utilised to obtain a better understanding of abstract ideas, and by doing so it allows a manager to take into consideration all the possible solutions regarding a potential opportunity or problem before deciding on a course of action. Furthermore, Musengi-Ajulu (2017:89) is of the opinion that cognitive skills form the foundation of the learning and performance ability of a manager within his/her work environment, and as such reflect factors such as perception and the ability to reason. From a quality management perspective, conceptual skills will be used by a manager to understand the reason behind the importance of managing quality within the business, since it can provide management with specific solutions or assist in the formulation of a quality culture (Schermerhorn *et al*., 2017:48).

- **Interpersonal skills**

  Rudansky-Kloppers (2019:208) defines interpersonal (or human) skills as the ability to work and communicate with people by means of leading and motivating others to boost coherence within teams. As stated by Oosthuizen (2015b:54), interpersonal skills are a necessity for the management of change and conflict within the business environment, since managers need to communicate with employees and other managers about these changes as well as how conflict will be handled. With regards to quality management, interpersonal skills will be utilised by managers for the purpose of maximising the available human potential so that employees can complete their assigned tasks more effectively and as a result maintain a specific level of quality produced (Musengi-Ajulu, 2017:90).

- **Technical skills**

  The use of job-specific knowledge constitutes the manager's ability to understand the techniques and methods of the business (Musengi-Ajulu, 2017:90; Oosthuizen, 2015b:54). Lazenby (2015:7) accentuates that managers, specifically low-level managers, use technical skills to demonstrate how operational tasks should be completed. Hence, these skills are used for the actual implementation where quality will be ensured within the various business functions relevant to day-to-day activities or work-related problems (Botha, 2018:33).

Hellriegel *et al*. (2012:30), however, emphasise that managers should not only encompass the abovementioned managerial skills, but should also be able to successfully deploy these skills to ensure effective and efficient quality offerings. Hence, managerial competencies encompass the management skills that support the manager in performing effectively within the business. Therefore, managerial competencies enable managers to ensure that quality services are provided, which will ultimately satisfy customers' needs. The following section will concentrate on the different managerial competencies which managers must possessed in order to make effective decisions, especially related to quality management.

2.6.2 Managerial competencies

Managerial competencies can be described as the combination of characteristics (i.e. knowledge, skills, behaviours, and attitudes) that a manager should possess in order to execute effective decision-making in a managerial position (Hellriegel *et al*., 2012:30; Musengi-Ajulu, 2017:91; Oosthuizen, 2015b:55). Being a competent manager, therefore, means that the manager should possess the ability and capability to perform managerial tasks and activities (Musengi-Ajulu, 2017:91). Cunningham and De Kock (2012:113) accentuate that various business cultures exist, and thus different competencies coexist to assist managers operating in different business

cultures. Due to transformation, increased competition, and environmental changes in the business environment, managerial competencies are of paramount importance for a business' effectiveness and efficiency (Musengi-Ajulu, 2017:93). As a result, a recruitment method (known as competency-based recruitment) that aims to match the competence of a manager with the business' specific needs is proposed by Cunningham and De Kock (2012:113). Therefore, since every manager possesses different competencies as required by the specific needs of the business, Hellriegel *et al*. (2012:30) identified six key managerial competencies that are in accordance with most business situations, namely communication, planning and administration, strategic action, emotional intelligence and self-management, global awareness, and teamwork.

- **Communication competency**

  Hellriegel *et al*. (2012:32) state that in order to achieve effectiveness and efficiency within a business, effective communication is required, since it consists of disseminating and exchanging information needed to motivate employees. Botes and Henrico (2016:149) concur that increasing the effectiveness of communication within a business could result in an increase of the business' performance culture. Therefore, the ability to communicate effectively (whether through oral or written methods) is a necessity for managers, since managers communicate on a daily basis with various stakeholders of the business, and as such managers are representatives of the business (Brunton *et al*., 2019:152; Merhaut *et al*., 2017:45; Van Noordwyk, 2015:264). Dančišinová *et al*. (2017:38), as well as Van Noordwyk (2015:264), state that being effective and competent in communicating is a prerequisite for managers to increase the performance of the business' employees, since managers will have to motivate employees. Osborne (2015:74) states that when communicating, managers should be confident in themselves through developing plans, and anticipate possible threats and challenges. Furthermore, the lack of effective communication influences the quality of work produced by employees (Henrico & Visser, 2017:193).

- **Planning and administration competency**

  According to Steyn and Van Staden (2017:679), the planning and administration competency consists of the arrangement of employees into effective teams to efficiently reach the goals and objectives of the business. Hellriegel *et al*. (2012:35) describe this competency as the decisions undertaken to establish the required tasks that need to be completed, to determine how these tasks should be completed with the available resources, and to monitor and control the progress to ensure the tasks are completed effectively. Furthermore, the quality of planning and the relevant implementation thereof enhances the probability of achieving the desired outcome (Robbins *et al*., 2017:157).

- **Strategic action competency**

  This competency involves the confirmation that all the actions or activities undertaken by employees concur with the business' mission and values (Hellriegel *et al*., 2012:38). Therefore, Mkhize (2017:4) propounds that a manager should understand the overall mission and values of the business, as to ensure that their actions, as well as the actions of their subordinates, are aligned. This will ensure that quality and customer service can be used for a competitive advantage (Robbins *et al*., 2017:160). This competency is closely linked to the strategic management section (see Section 2.8).

- **Emotional intelligence and self-management competency**

  Emotional intelligence can be described as the ability of a manager to manage his/her own emotions as well as those of others (Musengi-Ajulu, 2017:80) in a manner that is positive and constructive in nature (Henrico & Visser, 2017:185).

  Self-management or *self-awareness*, according to Hellriegel *et al*. (2012:43), involves the responsibility of a manager to manage and be responsible within his/her work and personal life. Griffen and Van Fleet (2014:35) propound that for a manager to improve their self-awareness, they will have to understand their personality. The authors further assert that understanding personalities assists a manager in understanding others. As stated by Osborne (2015:12), improving self-awareness is a prerequisite for effective leadership and allows for the attentiveness of the effect asserted onto other employees.

- **Global awareness competency**

  The global awareness competency refers to the ability of managers to fulfil their managerial tasks through the utilisation of all available and required resources in the countries served by the multinational business (Hellriegel *et al*., 2012:39). Pertaining to quality management, a global awareness competency includes the adherence of the different international quality standards (Schermerhorn *et al*., 2017:583).

- **Teamwork competency**

  Osborne (2015:66) states that a team can only exist when a common and collective goal (e.g. quality management) for success is set instead of individual aims. Due to the increasing usage of teamwork within the business settings, it is of paramount importance to comprehend the role that a manager or leader needs to fulfil within a team, to ensure that team members are motivated and receive the essential guidance sought from the team leader (Robbins & Coulter, 2016:534).

It is essential for an effective manager to ensure that they can continuously adapt to the changes presented by the business environment through the utilisation of their skills and competencies to ensure that stakeholders, especially customers, are satisfied (Daft, 2016:14). Furthermore, for managers to make the best possible managerial decisions, they require sufficient and accurate information pertaining to the business environment (Hitt *et al*., 2017:132). Thus, from a quality management perspective, it is necessary for managers to adapt to the changes present within the business environment by utilising their skills and competencies to ensure that customers are satisfied with the quality of services provided. The next section provides insight into the areas where managers use their skills and competencies, namely the business management functions.

2.7 BUSINESS MANAGEMENT FUNCTIONS

Managers work within various areas in a business, irrespective of their position held within the business (Griffen & Van Fleet, 2014:14). These areas are hereafter referred to as the functions, functional areas, or departments within the concept of business management. Due to the variance that exists between businesses and their requirements, several areas will concomitantly exist as determined by the type and nature of each business (e.g., an auditing firm have functions primarily aimed at accountancy and financial management as compared to a manufacturing business which focuses more on an operations function). Thus, the functional areas that coincides between most businesses or are present at the foundation of every business are subsequently discussed.

- **Administrative management function**

  Administrative management is concerned with the coordination of all of the various activities that are performed by the other functions of the business (Oosthuizen, 2015b:53). According to Van Noordwyk and Van Tonder (2019:274), one specific objective of the administrative function is to maintain quality standards throughout.

- **Human resource management function**

  The human resource function is defined as the function that consists of the activities used by a manager to ensure that the business' goals and objectives are met by attracting, retaining, and managing employees, as well as managing their productivity (Jones & George, 2016:347). Similarly, Holtzhausen (2015:224) posits that human resource management encompasses the tasks of planning, organising, leading, motivating, and controlling the business' human resources (i.e. employees). Erasmus (2019:360) maintains that human resource management is important due to its focus on the employees that will be performing daily activities within the business. In addition, the recruitment, appointment and training of the most appropriate and qualified employees for a position allows the business to excel at

optimal levels (Botha, 2018:35). Therefore, managing the quality of the employees of a business increases the quality of the business' operations (Eichhorn & Towers, 2018:130; Robbins *et al*., 2017:221).

- **Marketing management function**

  Due to rapid changes influencing the market environment of a business, an increased focus on the marketing function is highlighted to ensure that a business can continue satisfying the needs of customers with relevant market offerings (Cant, 2018:280-281). Marketing can, therefore, be described as the process of creating, delivering, and communicating exceptional value to the business' customers, by focusing on a desired target market, and then attracting, retaining, and expanding their customer bases (Kotler & Keller, 2016:27). Hence, quality can be managed throughout the marketing function by ensuring that customers receive value such as quality customer service (Boshoff, 2017:300-301).

- **Financial management function**

  Marx and Mpofu (2019:513) assert that financial management is concerned with acquiring the necessary funds of a business, investing for a larger return, and by continuously managing factors such as profitability, liquidity and solvency. With regards to quality management, the financial function can implement a budget control to ensure that the business' finances are used appropriately (Mabasa & Weitsz, 2018:91).

- **Operations management function**

  Krüger and Steenkamp (2019:310) define operations management as the process whereby inputs are transformed into outputs to produce the products and services of the business. Similarly, Bosch (2017:336) propounds that operations management includes the effective and efficient management of the business' resources that will be utilised in the transformation process to ensure that the business can match or exceed customers' expectations. Quality can be managed throughout the operations function through the implementation of performance objectives (Steenkamp, 2018:217).

- **Logistics management function**

  Maritz (2015:177) describes logistics management as the management of all the activities associated with sourcing raw materials (i.e. resources) from suppliers and then distributing the transformed and finalised product of the business to the intended customer. Thus, from a quality management perspective, the task of logistics management is to ensure that quality raw materials are sourced (Eichhorn & Towers, 2018:141).

- **Information technology (IT) management function**

  This function manages all the business' information systems used for effective decision-making, and includes technologies such as computer hardware and software, telecommunication systems, database management, as well as other related technologies that can be utilised to produce the required information (Daft, 2016:708). Thus, this functional area is also of importance to a business since it requires the newest technologies to accurately produce or generate the required information so that quality can be increased or effectively managed (Ferreira, 2018:159).

- **Public relations management function**

  Kotler and Armstrong (2014:472) describe this functional area as the activities concerned with building strong and positive relationships with the business' stakeholders in an effort to promote the business and its products or services. Furthermore, by building a positive relationship with stakeholders, a respectable image about the business is created which promotes a sense of quality, efficiency and reliability of the business' products and services (Tshabalala, 2018:187).

Since all the abovementioned functions differ in terms of work-related activities and goals, it is essential to combine and integrate these functions to ensure that the overall business goals and objectives are met and aimed at satisfying the business' customers (Botha, 2017b:227). Hence, David and David (2017:33) explain that strategic management aims to achieve business success through integrating information sought from all of the business functions. Thus, strategic management is discussed successively since it allows the integration of information generated within all of the different functional areas into a cohesive unit.

2.8 STRATEGIC MANAGEMENT

Due to the various business functions, different goals exist concomitantly, since they are developed for the specific functional area. Therefore, management should combine all the relevant information generated (i.e. specific goals and objectives of each business function) from these functions to ensure that the overall business goals and objectives are achieved (Van Noordwyk & Van Tonder, 2019:268-269). This is done by coordinating and managing all the managers within the different functional areas of a business in a process called strategic management, for the purpose of implementing strategies that create a competitive advantage for the business. Thus, from a quality management perspective, strategic management can be utilised to ensure that quality standards or objectives are formulated and that the entire business is committed to ensure quality throughout all activities (Schermerhorn *et al*., 2017:83).

2.8.1 Strategic management defined

Various definitions of strategic management exist in current literature. However, the following definitions highlight the characterising elements pertaining to strategic management:

- Pearce and Robinson (2013:3) describe strategic management as the *achievement* of *business objectives* through the *formulation* and *implementation* of specific plans as a result of decision-making, as well as certain actions taken by management.

- Carpenter and Sanders (2014:8) describe strategic management as the management of an identified *strategy* through a process that consists of *formulation* and *implementation*.

- Strategic management, according to David and David (2017:33), involves the *formulation*, *implementation*, and *evaluation* of various decisions aimed at attaining the business' *objectives*.

- Rothaermel (2017:6) defines strategic management as the field within business management concerned with pursuing a *competitive advantage* through *analysis*, *formulation*, and *implementation*.

- Ehlers and Lazenby (2019:4) define strategic management as the process used to ensure that a *competitive advantage* is created from the *integration* and *coordination* of all the *business functions* and relevant *resources* for the purpose of achieving the *long-term goals* of the business.

Based on the above definitions, strategic management for this study can be defined as follows:

Strategic management is the process of strategy formulation, implementation, and evaluation through integrating and coordinating the various functional areas and resources of a business for the purpose of generating a competitive advantage that will ensure that long-term goals and objectives are met.

With this definition in mind, it is necessary to note the importance of strategic management, since it allows a business to gain and maintain a competitive advantage over competitors through the means of ensuring that business goals and objectives are met. The next section therefore describes the importance of strategic management.

2.8.2 Importance of strategic management

According to Robbins and Coulter (2016:269), strategic management is important due to its impact on the business' performance. It assists managers in making effective decisions, and also assists managers in integrating and coordinating the functional areas to achieve the business' goals. Rothaermel (2017:34) further maintains that the basis for a competitive advantage is grounded on the effectiveness of the strategic management process. Hill *et al*. (2015:6) emphasise that the formulation and implementation of management strategies create a competitive advantage for the business which can be used to outperform its competitors. Quality management can therefore also be regarded as a strategic objective to ensure a competitive advantage (Schermerhorn *et al*., 2017:83). With this in mind, it is evident that strategic management is not a simple task. Therefore, in order to guide managers when seeking to establish a competitive advantage, the strategic management process exists to simplify the activities that need to be performed (Ehlers & Lazenby, 2019:7). Consequently, the strategic management process is discussed next.

2.8.3 Strategic management process

According to Barney and Hesterly (2015:26), the process through which a competitive advantage is engendered, as a result of the specific and sequential analysis involved in decision-making, constitutes the strategic management process. Robbins and Coulter (2016:270) propose a six-step strategic management process, as illustrated in Figure 2-2 and consequently discussed.

Figure 2-2: The strategic management process

Source: Adopted from Robbins and Coulter (2016:270).

2.8.3.1 Step 1: Identify the mission, goals, and strategy

A mission statement of a business can be described as the fundamental purpose for which a business exists, and it serves as a differentiator for a business with regards to the products and customers compared to the business' competitors (Jones & George, 2016:217; Vrba, 2019b:233). Therefore, mobile telecommunication providers can assess whether their mission statements reflect their commitment to provide quality services to their customers. As indicated in Table 2-2, there are essential components that should be included in a business' mission statement.

Table 2-2: Components of a mission statement

Component	Description
Customers	This component of the mission statement includes identifying customer groups and their needs, as well as the skills and competencies that will be required to satisfy these needs.
Product offering (goods or services)	This component includes a description of the product offerings (i.e. tangible or intangible) of the business.
Markets	The market component refers to the geographical areas in which the business has operations.
Technology	Refers to the technology that will be employed by the business to produce products, as well as how the finalised products will be distributed to customers.
Survival, growth, profitability	The business' commitment to growth and financial security.
Philosophy	The fundamental characteristics of beliefs, values, aspirations, and priorities of a philosophical nature constitutes the commitment inherent in the business' management team.
Self-concept	The business' distinctive competitive advantage.
Public image	The corporate social responsibility of the business.
Employees	The value that employees add to the business and its operations.

Source: Adopted from David and David (2017:166), Ehlers and Lazenby (2019:69-70), and Pearce and Robinson (2013:26-27).

2.8.3.2 Step 2: Conducting an external environmental analysis

Hill and Jones (2013:17) posit that an external environmental analysis or external audit is conducted to aid management in identifying relevant opportunities and threats that will affect the effectiveness of the business in the quest of pursuing its mission (identified in the first step). Hill *et al*. (2015:44-45) propound that the main difference between an external environmental opportunity and a threat is that the opportunity enables the business to capitalise on the environmental condition to ensure increased profitability, whereas a threat discourages profitability due to the current environmental conditions that exist. The threats and opportunities

are identified in the external environment, specifically the macro-environment of a business (discussed in Section 2.3.3), through a continuous process of (a) scanning for or detecting environmental changes or trends, (b) monitoring or observing the identified changes or trends, (c) forecasting projections about the changes or trends, and (d) assessing the importance emanating from the changes or trends on the business' strategies (Hitt *et al*., 2017:43).

Rothaermel (2017:66) proposes that after the business' macro-environment has been analysed, the framework for assessing the external environment continues with examining the forces present within the industry, as well as the changes affecting the industry, should be assessed, followed by the consideration of performance differences. The forces inherent in the industry that influence the profitability of all the businesses operating within an industry, include the five forces of competition model, also referred to as Porter's five forces (David & David, 2017:230; Hitt *et al*., 2017:55; Porter, 1979:137). The forces of the competition model are described in Table 2-3.

Table 2-3: Porter's five forces of competition model

Force	Description
Threat of new entrants	The possibility that exist for a potential competitor to enter the industry.
Bargaining power of suppliers	The ability of a business' supplier(s) to increase the prices of the resources they supply to the business.
Bargaining power of buyers	Buyers' ability to either decrease the selling price of a product, or to increase business costs as a result of requesting improved quality of products.
Threat of substitute products	The availability of similar (i.e. substitute) products in the market that customers can purchase from the business' competitors.
Industry rivalry	The competition between businesses for increased market share within the industry.

Source: Adopted from Hill *et al*. (2015:48-58) and Rothaermel (2017:75-82).

The External Factor Evaluation (EFE) matrix offers a summary and evaluation of the opportunities and threats applicable to the business and is therefore dependent on the external analysis (David, 2013:235). According to David and David (2017:204), an EFE-matrix is constructed through a series of steps, namely (a) list the most prominent external opportunities and threats, (b) distribute a total weight of 1 amongst all factors where 0 signifies unimportant and 1 represents the very important factor, (c) allocate an appropriate rating representative of the business' response to the external factors, (d) multiply the weight with the corresponding rating, and (e) sum all the scores to determine the total weighted score. The rationale of the EFE-matrix is that the higher the total weighted score, the better the capitalisation on opportunities and avoidance of threats facing the business (Ehlers & Lazenby, 2019:133).

2.8.3.3 Step 3: Conducting an internal environmental analysis

After the factors inherent in the external environmental analysis have been assessed, management can commence with the internal environmental analysis, since the external environmental factors influence the goals, resources, and competencies extant in the internal environment (Parnell, 2014:2). Various techniques exist for assessing the internal environment, including resource-based view, value chain analysis, functions approach, and the Internal Factor Evaluation (IFE) matrix (Ehlers & Lazenby, 2019:141-142). These techniques are subsequently discussed.

- **Resource-based view**

  According to Pearce and Robinson (2013:163), this method involves the utilisation of elements such as assets, skills, capabilities, and intangible resources of the business to assist in the identification of strategic advantages that are applicable to the business and its resources. To determine which of the elements will be used, a framework titled VRIO (i.e., valuable, rare, imitability, and organisation) for analysing resources and their competitive potential exists (Barney & Hesterly, 2015:88). To ensure that a resource is valuable to a business, it should add value to business operations, have limited availability, prove difficult to imitate, and enable the business to exploit the resource (Ehlers & Lazenby, 2019:148). Since resources are scarce, they should be managed as effectively and efficiently as possible to ensure optimal integration and quality of usage (Griffen & Van Fleet, 2014:8).

- **Value chain analysis**

  Value chain analysis includes primary and secondary activities that will be used in the process of transforming raw materials into products that will satisfy customers' needs (Hill & Jones, 2013:91). *Primary activities* are the activities directly involved with the transformation of inputs into outputs, and include the management of the supply chain, operations, distribution (i.e. logistics), marketing, sales, and after sales services (i.e. customer service) (Rothaermel, 2017:128). *Secondary (support) activities*, according to Hitt *et al*. (2017:94), consist of the activities performed by a business in support of the production, distribution, sales, and servicing required to manufacture products. These activities indirectly add value to the transformation process, and include research and development, human resources, information technology, accounting, finance, as well as the processes, policies or procedures of the business (Rothaermel, 2017:129). All of the above ensure that quality services and goods are delivered to customers.

- **Functional approach**

  According to Ehlers and Lazenby (2019:148), the functional approach is concerned with the analysis of the different business functions, as well as the effectiveness of each function. Hence, the analysis of how quality can effectively be implemented within each functional area.

- **Internal Factor Evaluation matrix**

  The most popular method, albeit pivotal, in conducting an internal environmental analysis is the IFE-matrix, which provides a summary as well as an evaluation of the strengths and weaknesses within the various business functions (David, 2013:204). The IFE-matrix is constructed by a series of steps (David & David, 2017:204), namely (a) list the most prominent internal strengths and weaknesses, (b) distribute a total weight of 1 amongst all factors where 0 signifies unimportant and 1 represents the very important factor, (c) allocate an appropriate rating of 1 (major weakness), 2 (minor weakness), 3 (minor strength), and 4 (major strength), (d) multiply the weight with the corresponding rating, and (e) sum all the scores to determine the total weighted score. This matrix can be used to determine the strengths and weaknesses quality assurance in the business.

2.8.3.4 Step 4: Formulate the strategy

Hill *et al*. (2015:44) and Parnell (2014:2) posit that during this step of the strategic management process, the focus is on coordinating the internal strengths and weaknesses with the opportunities and threats present in the external environment, in order to create a sustainable competitive advantage for the business. Hence, this step involves the creation or determination of which strategies the business should implement (Griffen & Van Fleet, 2014:156). Daft (2016:255), Pearce and Robinson (2013:6), as well as Robbins and Coulter (2016:273) posit that three levels of strategies exist to assist management in formulating strategies, namely corporate, business or competitive, and functional-levels of strategy.

Corporate-level strategies are concerned with the overall decision-making of a business. These strategies are thus aimed at the business as a whole (Schermerhorn *et al*., 2017:237). Carpenter and Sanders (2014:11) accentuate that corporate-level strategies are not only focused on how a group of businesses (i.e. portfolio) are managed by a parent business but also on how value will be created by means of diversification. *Business or competitive-level strategies* consist of transforming the overall corporate strategies into strategies relevant to a specific business unit (i.e. a division of the business that is mostly autonomous with own functions) within the business or industry (Carpenter & Sanders, 2014:11; Hill & Jones, 2013:11). *Functional-level strategies*

focus on a particular strategy for a specific functional area within a business or a division thereof (Gamble *et al*., 2013:27; Hill & Jones, 2013:11). Within each of these levels are different types of strategies that can be implemented, namely (a) long-term goals, (b) generic strategies, (c) grand strategies, and (d) functional tactics (Ehlers & Lazenby, 2019:164). These types of strategies are subsequently discussed:

(a) **Long-term goals:** General and overarching goals that serve as a guideline of what the business wants to achieve in the long-term (Booysen, 2017:35).

(b) **Generic strategies:** Barney and Hesterly (2015:124) maintain that generic strategies are mostly applicable to the business-level (i.e. relating to the overall business model). These strategies are also referred to as Porter's generic strategies and include cost leadership, differentiation, cost focus, and focused differentiation (Carpenter & Sanders, 2014:185; Hitt *et al*., 2017:117). Table 2-4 provides a summary of the advantages and disadvantages associated with each of the generic strategies.

- *Cost leadership* is concerned with minimising the costs within the business to ensure that costs are the lowest in comparison with competitors' costs (Barney & Hesterly, 2015:124; Parnell, 2014:184). Moreover, West *et al*. (2015:120) argue that a cost leadership strategy does not concur with lower retail prices of products.
- *Differentiation* is a strategy aimed at attaining a competitive advantage, which focuses on differentiating the products or services of a business in such a way that the customers perceive it to be of more value than the products or services offered by competitors (Barney & Hesterly, 2015:152; Parnell, 2014:184).
- *Cost focus* is a strategy that utilises a low-cost internal business model to serve a target market, specifically a niche market, to establish a cost advantage over competitors (West *et al*., 2015:121).
- *Focused differentiation* is concerned with targeting unique products to a specific segment of the market (Carpenter & Sanders, 2014:189).

Table 2-4: Advantages and disadvantages of each generic strategy

Generic strategy	Advantages	Disadvantages
Cost leadership	Enables the business to secure profits during times of increased competition. Serves as defence mechanism against competitors. Profit is possible even at lower prices.	Often confused with having low prices.
Differentiation	Customers' price sensitivity is reduced. Protects the business from new competitors. Increased profits due to premium pricing.	Premium pricing may not be attractive to customers on a budget.
Cost focus	Customers are served more efficiently.	A trade-off is created between profitability and market share.
Focused differentiation	Customers are served more effectively.	Requires a target market with unique needs.

Source: Adopted from West *et al*. (2015:120-121).

By implementing a generic strategy, the business can distinguish its product and service offerings from that of competitors. However, to increase a business' performance through the effective utilisation of resources, grand strategies can be implemented. Consequently, grand strategies are subsequently described next.

(c) **Grand strategies:** Grand strategies can be classified into three main strategies, namely growth, decline, and corporate combinations (Ehlers & Lazenby, 2019:195). Within each of these grand strategies are underlying or sub-strategies, which are briefly described in Table 2-5 below, since it could assist mobile telecommunication providers in deciding on a possible course of action to increase their performance.

Table 2-5: Types of grand strategies

Grand strategy		Sub-strategy	Description	Source(s)
Growth	Internal	Market development	Current products of the business are introduced into new markets.	David (2013:167); Vrba (2019b:238)
		Market penetration	Marketing functions and activities are used to increase the market share for current offerings in an existing market.	David (2013:167); Ehlers and Lazenby (2019:195)
		Product development	Current product ranges are expanded within an existing market.	Ehlers and Lazenby (2019:197); Vrba (2019b:238)
		Innovation	New products are created and offered to the same or new market.	Pearce and Robinson (2013:207)

Table 2-5: Types of grand strategies (continues)

Grand strategy		Sub-strategy	Description	Source(s)
Growth	External	Vertical forward integration	The business acquires the phase of the value chain concerned with engaging with the customers of the business.	Barney and Hesterly (2015:184); Gamble *et al*. (2013:123)
		Vertical backward integration	The business acquires the phase of the value chain concerned with the supply of raw materials to the business.	Barney and Hesterly (2015:184); Gamble *et al*. (2013:123)
		Horizontal integration	The business acquires one of its competitors.	Pearce and Robinson (2013:207); Vrba (2019b:238)
		Related diversification	Business operations are expanded into an industry that the current operations compliment or are familiar with.	Ehlers and Lazenby (2019:199); Jones and George (2016:234)
		Unrelated diversification	Business operations are expanded into an industry that is unfamiliar to the business to penetrate new markets.	Ehlers and Lazenby (2019:200); Jones and George (2016:236)
Decline strategy		Retrenchment or turnaround	Reducing assets and costs through a regrouping process.	David (2013:167); Pearce and Robinson (2013:213)
		Divestiture	The sale of a division within a business.	David (2013:167); Vrba (2019b:239)
		Liquidation	Selling the business' assets to generate money for creditors and shareholders.	David (2013:167); Pearce and Robinson (2013:217)
Corporate combinations		Strategic alliance	A minimum of two independent businesses collaborate in developing, producing, and selling products, and also contribute in terms of resources and risks.	Barney and Hesterly (2015:270); Jones and George (2016:239); Pearce and Robinson (2013:224)
		Joint venture	An independent business is established through investments. Ownership and profits are divided equally.	Barney and Hesterly (2015:271); Jones and George (2016:239)
		Consortia	Businesses that form mutually beneficial interrelationships.	Ehlers and Lazenby (2019:206)

All of the aforementioned grand strategies can be used by mobile telecommunication providers to increase their service offerings. For example, South African mobile telecommunication providers can implement an innovation strategy whereby the business produces and sells 5G capable devices to its customers for the purpose of providing them with increased network quality.

(d) **Functional tactics:** Pearce and Robinson (2013:291) assert that functional tactics consist of the fundamental activities that will be employed to ensure that the short-term objectives – derived from the grand strategies – are achieved, in order to establish a competitive advantage. Thus, strategies will be developed according to the specific functional area of the business, for example, strategies within the marketing function include pricing, promotion, product, and distribution strategies (Parnell, 2014:221).

Ehlers and Lazenby (2019:247) maintain that the strategies identified should promptly be analysed to ensure that the best possible strategy is chosen for the current business situation and requirements. Various methods, referred to as matrixes, are available to analyse and provide the best possible strategies that can be selected, as it provides managers with an indication of the tactics and strategies available to improve the quality of services offered. Therefore, with regards to a mobile telecommunication provider, these methods can be utilised to identify factors influencing the performance of the business and whether it can be converted into a competitive advantage for the business. For instance, South African mobile telecommunication providers can utilise these methods to assess whether an opportunity exists to capitalise on a 5G network implementation (described in Section 1.3). Thus, the various methods, also referred to as the strategic analysis matrixes (Ehlers & Lazenby, 2019:250) are subsequently described:

- A *SWOT matrix* is constructed to assist management with a model that can be used in strategic analysis (Štěrbová *et al*., 2016:5). Ehlers and Lazenby (2019:250-252) as well as Mugo *et al*. (2017:8-11) state that the SWOT matrix involves a four-cell matrix, analysing the strengths and weaknesses (derived from the IFE) at the horizontal axis, and the opportunities and threats (derived from EFE) on the vertical axis, and then matching applicable strategies from opposing ends in the matrix.

- A *SPACE* (or strategic position and action evaluation) *matrix* involves the use of a Cartesian plane where financial strength is placed on the positive Y-axis, environmental stability placed on the negative Y-axis, industry strength is on the positive X-axis, and competitive advantage is on the negative X-axis. Thus, four quadrants exist, namely aggressive (positive x and y-axis), conservative (negative x-axis and positive y-axis), defensive (negative x and y-axis), and competitive (positive x-axis and negative y-axis) (Ehlers & Lazenby, 2019:254).

- A *grand strategy matrix* entails the selection of grand strategies (discussed in Table 2-6) from a constructed four-cell guide that indicates the strengths or weaknesses combined with the internal or external resources that will be required for deciding on the best possible strategy to pursue (Pearce & Robinson, 2013:251).

- The *quantitative strategic planning matrix* involves the utilisation of all the information obtained by the previous matrixes to assign weights (the same as in IFE and EFE), to allocate scores of attractiveness where, if “yes” is chosen, a scale where 1 represents not attractive and 4 signifying highly attractive is used, and if “no” is answered then hashes are applied, followed by multiplying attractiveness with weights and then summing the total weighted scores (Ehlers & Lazenby, 2019:258-261).

2.8.3.5 Step 5: Implement the strategy

Griffen and Van Fleet (2014:156) propound that strategy implementation is concerned with the specific methods utilised by the business to execute the formulated strategies. However, the authors further state that the business should also take into consideration that employees are not always acceptant of change, and thus managing change is an important part of this step.

2.8.3.6 Step 6: Evaluate strategy results

Botha (2017b:239) maintains that during this final step of the strategic management process, management should assess whether the implemented strategy is performing as expected in comparison to the anticipated results.

Robbins and Coulter (2016:609) state that all of the abovementioned steps should be utilised to ensure that quality is managed throughout the business and its operations. As evident from the previous sections, quality management can be applied or implemented throughout the entire business for the purpose of ensuring effectiveness and efficiency of business operations. As a result, quality management is subsequently discussed.

2.9 QUALITY MANAGEMENT

The preceding sections indicated that quality can be applied throughout the entire business and the various aspects related with a business. It is also evident throughout the previous sections that quality and the effective and efficient management thereof influences the profitability as well as the survival of any business. Thus, the purpose of this section is to provide an overview of quality management and the related quality management techniques that can be utilised by businesses. Musengi-Ajulu (2017:97) states that due to the constantly changing needs of customers, businesses should continuously monitor and improve their performance to ensure that the business can maintain a competitive advantage. One such method aimed at improving competitiveness is quality management, and thus businesses should be concerned with how quality is managed within their business (Daft, 2016:672). As a result, various businesses implement a Total Quality Management (TQM) approach (see Section 2.9.1) to manage the quality within their business (Musengi-Ajulu & Cunningham, 2017:116).

Increasing the quality of a business' products and/or services can result in two outcomes, namely increased reliability (i.e. higher product/service quality) and increased productivity (i.e. lower operational costs), which could both attribute to the main objective of increased profits (Jones & George, 2016:256).

Bosch (2017:356) also emphasises the importance of managing quality and posits that it influences customers' satisfaction with the product or service offering (i.e. high product or service quality increases satisfaction) and reduces costs through minimising errors and the associated time to correct those errors. Therefore, for the purpose of improving and managing quality, businesses utilise various quality control techniques, which are subsequently discussed.

2.9.1 Quality control techniques

Oosthuizen (2015a:144) propounds that a business can use quality control techniques to ensure that a consistent and continuous improvement of performance is maintained within the business' operations. The same can be applied to mobile telecommunication providers, where they can implement quality control techniques to ensure that the overall performance of the business increases. Table 2-6 describes some of the generally available quality control techniques.

Table 2-6: Quality control techniques

Technique	Description	Source(s)
ISO 9000	Quality standards aimed at the improvement of the total quality inherent within businesses, processes that will be offered to customers who purchase or make use of the products or services delivered by those businesses. These quality standards are developed by a committee present within the International Organisation for Standardisation, which comprises institutions of more than 150 countries. The ISO 9000 also utilises the quality management principles (as discussed in the QMS section below).	Bateman and Snell (2013:171); ISO (2019)
Six Sigma	Minimal defects (especially concerning quality) and maximum customer satisfaction levels is at the core of the Six Sigma approach. If the Six Sigma technique is implemented, it translates to 3.4 or lower defects per million within a process, thus correlating with an accuracy rate of 99.99966%.	Bateman and Snell (2013:333); Daft (2016:674); Kenyon and Sen (2015:134); Romdhane *et al*. (2017:4319)
Total quality management (TQM)	Providing customers with good quality products that will satisfy their needs by means of ensuring continuous and consistent quality throughout the business' operations process and through all departments of the business.	Krüger and Steenkamp (2019:348)
Continuous improvement	The daily improvement of anything within a business, by all the employees currently employed by that business.	Benedict (2015:38)
Benchmarking	The practice whereby a business emulates competitors within the same industry, or compares the business with practices and processes with businesses elsewhere in the world to ensure that the tools, methods, operations, and quality are on par with industry standards. Furthermore, benchmarking allows a business to learn and adapt from the methods and tools used by other businesses instead of relying on the business' own experience.	Oosthuizen (2015a:145); Van Biljon and Ambe (2017:91); Wisner *et al*. (2016:123)

Table 2-6: Quality control techniques (continues)

Technique	Description	Source(s)
Reduced cycle time	The reduction in the time spent on completing a series of steps involved in a process ensures that simplicity, lower costs, and increased quality can be achieved.	Oosthuizen (2015a:145)
Quality management system (QMS)	The QMS approach is focused on the management of quality in the pursuit of continuous performance through the guidance of certain principles. These principles are: • Customer focus: The business is oriented towards understanding the needs of customers, meeting their requirements, and exceeding their expectations. • Leadership: The provision of a quality environment that is positive in nature, as well as direction for the improvement of quality initiatives. • Process approach: The business should be focused on managing all the inherent processes that contribute toward quality. • Systems approach of management: All processes and activities should be managed as an interrelated process to increase efficiency within the business' operations. • Continuous improvement: The overarching management approach should emphasise continuous improvement in the long run. • Factual approach for decision-making: Decision-making must be concentrated towards factual information that was obtained through an information system. • Beneficial supplier relationships: The nature of the relationship between the business and supplier should be on the level of a partnership.	Hugo and Badenhorst (2017:168)
Quality circles	This approach is concerned with obtaining information relevant towards an area of problem solving, through requiring employees to make recommendations and suggestions pertaining to the improvement of their work area affected by the problem through utilising a group discussion and a moderator.	Kenyon and Sen (2015:138); Oosthuizen (2015a:144)
Quality partnering	The assignment of employees within the various functional areas that work in conjunction with one another between the different areas, to identify where quality can be improved in the transformation process.	Daft (2016:675)

These quality control techniques can be implemented by mobile telecommunication providers to ensure that quality services are offered to customers whilst the business' performance is maximised (Doole *et al*., 2016:215). As a result, these techniques should ensure that the best possible customer service is offered by a mobile telecommunication provider to ensure that customers are satisfied with the quality of services delivered. Furthermore, as previously mentioned (in Section 2.3.2), customers are of paramount importance for any business, since they ensure the survival, and ultimately the profitability, of the business. Consequently, the following section focuses on customer service.

2.10 CUSTOMER SERVICE

Achadinha (2015:50) and Booysen (2017:40) accentuate that the customer of a business can be regarded as the most important asset of the business, and if managed effectively (by means of customer service), will result in customer satisfaction and ultimately increased profits. Therefore, delivering quality customer service will satisfy customers' needs (Adamu, 2017:2; Amini *et al*., 2012:202), serve as a future expectation source for customers (Khan & Fasih, 2014:332), and create the opportunity for customer retention (Wang *et al*., 2014:322). Levy *et al*. (2014:516) emphasise that the customer service offered by a business should not only concentrate on assisting or supporting customers, but also ensure that the customers' entire shopping experience is of high a quality. Therefore, Lucas (2015:31) asserts that six components can be attributed to the customer service environment, namely the customer, the inherent culture within the business to maintain a customer-centric approach, the available human resources (i.e. motivated and competent employees), the finalised product, the systems utilised to deliver the finalised product, and the service encounter provided to customers. Following this overview, the next section aims to define customer service.

2.10.1 Customer service defined

Customer service, as defined by Colón-Aguirre (2017:171), refers to the activities, in particular the support and assistance, provided by a business to the customers who purchase or utilise its products or services. However, customer service can also be regarded as the process whereby products and services are created and delivered to customers through a combination of activities (Setia *et al*., 2013:567). Lucas (2015:6) defines customer service as the delivery of products and services through the ability of the business' employees to be knowledgeable, capable, and enthusiastic in the pursuit of satisfying customers' needs. Cant and Machado (2019:435) assert that customer service encompasses any means employed by a business to ensure that value is added to the business' products and/or services. Zeithaml *et al*. (2018:5) state that this service provided to the business' customers are not priced, and as a result, customers do not incur any cost implication.

The customer's first encounter with a service delivery serves as an expectation for future interactions between the customer and the business (Evenson, 2018:21). Consequently, the importance of customer service is highlighted in the next section.

2.10.2 Importance of customer service

The importance of customer service is emphasised by Booysen (2015:180), who propounds that customer service of exceptional quality and standard can serve as a differentiator for a business when compared to competitors. However, West *et al*. (2015:314-315) opine that customer service should not be a business' sole differentiator, due to the lack of real differentiation inherent in customer service. Knapp (2015:2) proposes that businesses that assert to be customer-oriented should direct all actions with regards to the recruitment of service desk consultants towards more technologically skilled employees who will be able to provide the best customer service possible. Dixon *et al*. (2013:13-20) maintain, however, that if the business is unable to provide quality customer service that satisfy customers' needs, it will encourage negative word-of-mouth communication, which is promulgated faster than positive word-of-mouth circulation.

In addition, the inability to provide quality customer service will threaten the survival and profitability of a business (Cant & Machado, 2019:500). Satisfactory customer service, according to Chinunda (2013:19) and Shaw and Hamilton (2016:195), will result in increased customer retention as a result of the positive customer experiences provided by the business.

Cant and Machado (2019:501) emphasise that due to changing customer needs and expectations, businesses should continuously aim to improve their service offerings. Customer service can be utilised to ensure that added quality is offered to customers (Bateman & Snell, 2013:21). Thus, to ensure that this added quality is offered to customers of the mobile telecommunication industry, the next section provides an overview of the customer service offered in the South African mobile telecommunication industry.

2.10.3 Customer service in the South African mobile telecommunication industry

According to a report by BrandsEye (2019:1), customer service accounted for more than 47% of complaints within the South African mobile telecommunication industry. Moreover, the report maintains that more than 44% of the complaints made by customers on a social media platform were left unanswered by the mobile telecommunication provider. As established from the literature discussion above, customer service ultimately influences customers' satisfaction, since customers will compare their expectations regarding the quality of services to be delivered by the actual quality of services delivered (Booysen, 2015:238). Thus, emphasising the importance for the South African mobile telecommunication industry to examine and address any possible shortcomings pertaining to their customer service.

2.11 CONCLUSION

This chapter provided an in-depth literature investigation into the concepts of business management and customer service. The chapter followed the outline illustrated in Figure 2-1, and commenced with the conceptualisation of business management. An overview of the environment in which a business operates was provided, followed by a description of the various tasks of business management. Additionally, a discussion of the various managerial roles, skills, and competencies required to perform these tasks were provided. Next, the general business functions were discussed, and evidently, strategic management was identified as the process to integrate and combine all the functions within a business to ensure that a common goal is pursued throughout the business in order to maintain quality all round. Furthermore, for managers to be effective in maintaining quality services, quality management and the various quality control techniques were discussed.

The investigation into business management and quality management indicated that customers are the main focus of any business. Hence, a literature review into customer service was conducted with specific reference to the importance thereof, as well as the customer service provided by South African mobile telecommunication businesses. The next chapter provides a literature discussion on the constructs of this study, including service quality and customer satisfaction.

CHAPTER 3

SERVICE QUALITY AND CUSTOMER SATISFACTION

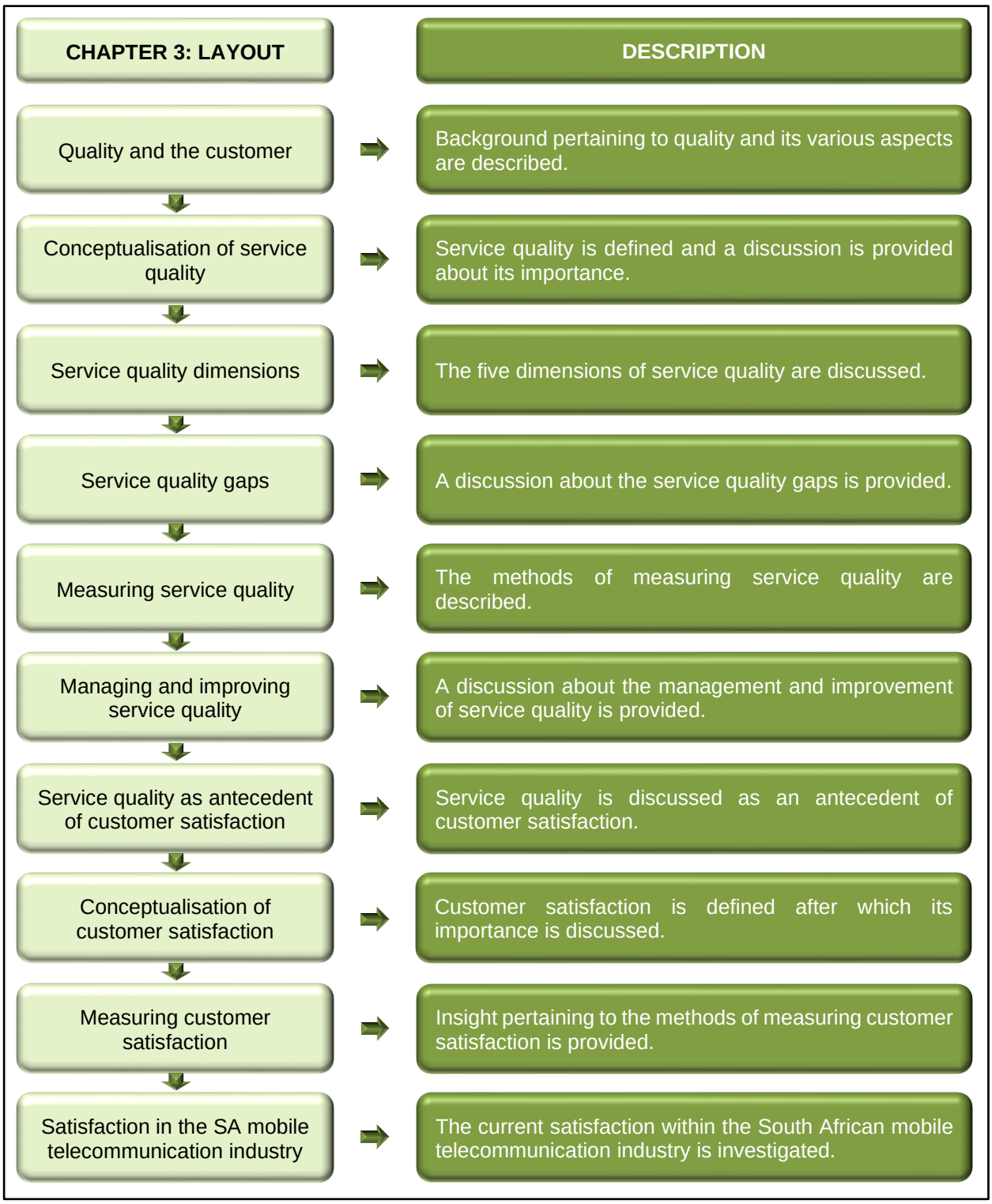
3.1 INTRODUCTION

The previous chapter investigated business management, quality management, and customer service. As such, it was noted that customer service reflects the quality of the services offered by a business, which ultimately influence the satisfaction of customers. This is because customers compare the actual quality of services delivered by a business with their expectations about the service, even before the service is delivered. Chapter 3, therefore, continues in this vein, by providing an in-depth literature investigation into the constructs pertaining to this study, namely service quality and customer satisfaction.

Before service quality is discussed, an overview is provided regarding quality and how it affects customers. Thereafter, service quality is conceptualised by defining the concept and highlighting the importance thereof. The dimensions and gaps of service quality are then discussed, followed by an overview of the measurement and management thereof. Service quality is finally explored as an antecedent of customer satisfaction, which provides the foundation for the customer satisfaction section.

The concept of customer satisfaction is conceptualised by defining the construct and explaining its importance and highlighting the benefits thereof. The two types of satisfaction are described, after which the determinants of customer satisfaction are discussed. Following the determinants, an overview pertaining to the measurement of customer satisfaction is provided. In conclusion, a discussion is provided pertaining to customer satisfaction in the South African mobile telecommunication industry. The layout and flow of this chapter is illustrated in Figure 3-1 below.

Figure 3-1: Layout and flow of Chapter 3



Source: Researcher's own compilation.

3.2 QUALITY AND THE CUSTOMER

There are various aspects that may affect the quality of the interaction between the customer and the business. These aspects are referred to as the five aspects of quality (i.e. supply chain, transformational process, organisational, product, and service quality) and is divided into two segments, namely *quality management* and *quality results* (Kenyon & Sen, 2015:56-57). The following sections provide an overview of the five aspects of quality as pertaining to these two quality segments.

3.2.1 Aspects of quality in quality management

As stated by Kenyon and Sen (2015:56-57) the following three aspects of quality pertains to quality management within a service provider:

- **Supply chain quality**

  According to Badenhorst-Weiss (2019:593), quality can be ensured by implementing high quality standards or requirements, since it only represents a selected number of suppliers that can deliver the precise quality as required. Hence, this refers to the quality of the suppliers within the South African mobile telecommunication industry which can provide optimal quality to the few mobile service providers.

- **Transformational process quality**

  This aspect refers to the quality involved with transforming raw materials into finalised products or services (Kenyon & Sen, 2015:101). Quality can be managed with the transformation process by setting specific performance objectives (Steenkamp, 2018:217). Moreover, the desired quality of raw materials can also be ensured through a comprehensive screening and selection process to identify adequate suppliers (Badenhorst-Weiss, 2018:363; Eichhorn & Towers, 2018:141).

- **Organisational quality**

  This aspect of quality encompasses a business-wide approach to quality, and as such, quality is managed and controlled throughout every function within the business (Musengi-Ajulu & Cunnigham, 2017:116). This business-wide approach to quality results in the establishment of a quality culture within the business (Schermerhorn *et al*., 2017:83).

3.2.2 Aspects of quality in quality results

As mentioned in Section 3.2.1 above, the outcome of the transformation process results into products or services. Therefore, the final aspects regarding quality can be attributed to the products or services delivered by a business, which include the quality of the product (i.e. product quality) and the quality of the service (i.e. service quality) (Kenyon & Sen, 2015:57).

- **Product quality**

  The quality of the product represents the compliance of the purchase and the correctness of its intended application which will satisfy customers' needs by matching their expectations (Steenkamp, 2018:240; Van Noordwyk & Van Tonder, 2019:255).

- **Service quality**

  Service quality refers to the quality of the service provided to a customer by a service provider, and whether the service will satisfy the customer's needs and meet their expectations (Wirtz & Lovelock, 2018:450).

Considering the abovementioned, it is essential to understand the different aspects of quality and how it affects customers' satisfaction. Since this study is focused on the mobile telecommunication provider industry, the following sections will provide more specific insight into the concept of service quality and the resulting customer satisfaction.

3.3 CONCEPTUALISATION OF SERVICE QUALITY

Lau *et al*. (2013:265) maintain that service quality can serve as a differentiator for businesses to distinguish them from competitors. Service quality, as described by Adil (2013:44), does not only affect customers' satisfaction, but also their trust and behavioural intentions, specifically in the long-term. Therefore, Yarimoglu (2014:80) proposes that businesses should utilise and enhance their service quality for the purpose of gaining a competitive advantage over their competitors. However, enhancing service quality is not an easy task, since various factors influence the effectiveness thereof, including (a) an increase in the demand for unique and high-quality services (Pina *et al*., 2014:4), (b) the customer is required to participate in the service delivery process (Hoffman & Bateson, 2017:317), and (c) the intangibility inherent within services that impedes the evaluation of quality (Hult *et al*., 2014:294). Mmutle and Shonhe (2017:4) also emphasise the difficulty of this task, and note that service quality is a subjective outcome based on customers' perceptions of the service in comparison with their expectations. The nature of services is discussed in the following section, which distinguishes between goods and services.

3.3.1 Goods versus services

Kotler and Armstrong (2014:260) as well as Lamb *et al*. (2017:205) identified four fundamentally different characteristics that distinguish services from goods, namely intangibility, inseparability, heterogeneity (i.e. variability), and perishability. These characteristics are subsequently described:

- **Intangibility**

  Hoffman and Bateson (2017:63) as well as Zeithaml *et al*. (2018:20) state that services are different from goods due to the fact that services do not possess the same sensory elements as tangible goods, since services refer to performance or actions. Hence, McDaniel *et al*. (2013:418) refer to a service as an intangible performance.

- **Inseparability**

  Inseparability is concerned with the concomitant manufacturing and consumption of services (Hult *et al*., 2014:384) as opposed to tangible goods that can be produced, sold, and consumed separately (Zeithaml *et al*., 2018:21). Therefore, Hoffman and Bateson (2017:69) describe inseparability as the interconnectedness between the provider of the service, the customer utilising the service, and additional customers engaging in the same experience (Kotler & Armstrong, 2014:260).

- **Heterogeneity**

  The heterogeneity of services arises from the variety of different variables that are involved within the service delivery process, and as a result services are less standardised when compared to tangible goods (Lamb *et al*., 2017:206).

- **Perishability**

  This characteristic distinguishes services from goods in the sense that goods can be inventoried or warehoused, whereas services lack the ability to be stored by the business (Lamb *et al*., 2017:206).

It is evident from the above characteristics that services and goods differ from one another. As such, defining service quality is also different from defining the quality of goods (Kotler & Armstrong, 2014:264; Lamb *et al*., 2017:206). Therefore, the next section serves the purpose of defining service quality.

3.3.2 Service quality defined

Various definitions of service quality exist in the literature. Some of the most prominent definitions of service quality from selected authors are provided in Table 3-1.

Table 3-1: Definitions of service quality

Definition	Source
The assessment conducted by customers based on the *comparison* between their *expectations* and the *perceived service* delivered to them.	Grönroos (1984:38)
The *variance* between the *expected service* and the *actual service* delivered to the *customer*.	Parasuraman *et al*. (1988:17)
The *evaluation* of the extent to which the *service provided matches* the *customer's expectations* before the service encounter.	Aydin and Yildirim (2012:220)
The *evaluation* of *customers' expectations* in *comparison* with the delivered *performance* of the *service* pertaining to the factors of tangibles, reliability, responsiveness, assurance, and empathy.	Chitty *et al*. (2012:225)
The attitude resulting from the *evaluation* of the *business' overall performance* over a long-term period.	Hoffman and Bateson (2017:316)
The matching or exceeding of a *customer's expectations* through a consistent and high-level *performanc*e standard.	Wirtz and Lovelock (2018:450)

From the above definitions, the following definition of service quality can be formulated for the purpose of this study:

> *The provision of services from a service provider to a customer that will match the customer's expectations when evaluating and comparing the variance between the actual service performance and the customer's expectations.*

As evident from the definition used for the purpose of this study, certain aspects or elements affect service quality. Therefore, since customers will assess the business' performance based on these aspects or elements, it is essential to understand the importance of service quality to ensure that the business' performance is optimal.

3.3.3 Importance of service quality

Service quality is of prodigious importance for businesses that deliver services, since the quality of the service that is offered to customers will determine the success or failure of a business (Rajaguru, 2016:116). This is due to the fact that the quality of the service offered by a business can serve as strategic value (Adil *et al*., 2013:66) in the sense that businesses are competing in an exceedingly competitive market (Aftab *et al*., 2016:161) and are continuously searching for a

competitive advantage through providing unique and quality services (Afroz, 2019:145; Namin, 2017:70; Paposa *et al*., 2019:3767). Thus, the quality of the service offered to customers can offer a business a competitive advantage (Voon, 2017:68), which is essential for service providers' success, since customers are more critical about the quality of services as a result of their knowledge about substitute services (Vennila, 2014:44). For this reason, Arslan *et al*. (2014:80) state that understanding the strengths and weaknesses associated with the business' service delivery is of utmost importance, since it enables the business to employ new methods to eradicate the weaknesses of the service delivery. In the same vein, investigating and understanding customers' perceptions is just as important, since it enables the service provider to implement a recovery mechanism (Mmutle & Shonhe, 2017:3). Furthermore, Cant (2018:39) accentuates the importance of service quality and posits that it is a prerequisite for satisfied customers. Therefore, the better the quality of the service, the higher the level of customer satisfaction (Khan & Jadoun, 2015:3541); and more satisfied customers could result in loyal customers (Baines *et al*., 2014:593; Iacobucci, 2013:185), increased customer retention and sales, and ultimately increased profits (Pakurár *et al*., 2019:3; Qadri & Khan, 2014:3).

As evident from the above discussion, it is important for service providers to ensure that quality services are delivered to customers, as it will not only result in satisfaction, but also in increased profits. However, since services are heterogeneous in nature, service encounters differ from one interaction to the next. Therefore, the following section provides insight into the dimensions that influence service quality.

3.4 SERVICE QUALITY DIMENSIONS

Grönroos (1984:38) separated the dimensions that affect service quality into two dimensions, namely technical quality (i.e. the end product a customer receives in the service delivery process) and functional quality (i.e. how the service is delivered). Parasuraman *et al*. (1985) elaborated on this, and initially proposed ten dimensions of service quality, including tangibles, reliability, responsiveness, competence, courtesy, communication, access, credibility, security, and customer knowledge. Cant (2018:40) and Parasuraman *et al*. (1988:12) later established that these dimensions can be further reduced to five dimensions, which are subsequently discussed.

3.4.1 Tangibles

According to Adetunji *et al*. (2013:30), Khan and Jadoun (2015:3451), as well as Yunus *et al*. (2013:334), tangibles refer to the appearance of physical attributes such as facilities and buildings, equipment, employees, and the materials or equipment associated with communicating to customers (Neupane, 2015:14).

- **Facilities and buildings.** This attribute is concerned with the physical premises of the service provider (i.e. the place where the service provider conducts business) (Neupane, 2015:14; Zeithaml *et al*., 2018:91).

- **Equipment.** The equipment attribute refers to any tools or machines utilised by the service provider to deliver the service to customers (Pakurár *et al*., 2019:5).

- **Employees.** This attribute pertains specifically to the personnel that are involved with the service delivery interaction between the service provider and the customer (Kenyon & Sen, 2015:220).

- **Communication materials and equipment.** According to Hernon *et al*. (2015:156), this attribute pertains to any signage or handouts that the service provider utilises to communicate with customers.

The tangibles dimension is specifically important for mobile telecommunication providers, since it enables them to attract more customers to their premises. The appearance of these physical attributes will therefore influence customers' expectations and experiences, and ultimately their satisfaction with the service provider (Mpwanya & Letsoalo, 2019:72; Nimako, 2012:4). Pertaining to this study (i.e. mobile telecommunication providers), the tangibles dimension encompasses the representation of the provider's physical attributes. Furthermore, this dimension is measured through the utilisation of the four items used in the 22-item SERVQUAL model (see Appendix A) as developed by Parasuraman *et al*. (1988:12).

3.4.2 Reliability

The reliability dimension is concerned with the consistency and dependability inherent within the business, which ensures that the business delivers the promised services accurately (Cant, 2018:40; Hoffman & Bateson, 2017:325; Lamb *et al*., 2017:206; Zeithaml *et al*., 2018:87). Kenyon and Sen (2015:216) contend that the attributes of reliability include accuracy (i.e. completing tasks correctly the first time) and repeatability (i.e. achieving the same and consistent results whenever the task is repeated).

- **Accuracy.** According to Hernon *et al*. (2015:46), the accuracy attribute of reliability is concerned with the capability inherent within the service provider to deliver the service as assured to customers. Therefore, it refers to the capability of mobile telecommunication providers to accurately deliver the services to customers as promised.

- **Repeatability.** This attribute encompasses the level of consistency offered by a service provider in the sense that the service delivered will not differ from future interactions, even with different employees (Hernon *et al*., 2015:46). This refers to mobile telecommunication providers' ability to ensure that services offered throughout South Africa are consistent.

In addition, service businesses that ensure that customers receive the service correctly at the first service interaction between the customer and the business, can be considered reliable (McDaniel *et al*., 2013:420). In this study, the reliability dimension encompasses the ability of the mobile telecommunication provider to deliver consistent and dependable services to its customers. Furthermore, this dimension is measured through the utilisation of the five items used in the 22-item SERVQUAL model (see Appendix A) as developed by Parasuraman *et al*. (1988:12).

3.4.3 Responsiveness

This dimension is concerned with the service provider's willingness to assist customers throughout the service delivery process by ensuring prompt service delivery (Neupane, 2015:14; Zeithaml *et al*., 2018:90). Yunus *et al*. (2013:334) explain that this dimension translates into the service provider's ability to respond to the individual requirements of a customer's needs and display authentic attentiveness in solving problems. Hence, willingness, readiness, timeliness, and flexibility are the attributes of this dimension (Kenyon & Sen, 2015:217):

- **Willingness.** The inclination of the service provider's employees to assist customers unconditionally with the service delivery (Adetunji *et al*., 2013:30; Neupane, 2015:14; Zeithaml *et al*., 2018:90). Therefore, relevant to a mobile telecommunication provider, this refers to the employees' willingness to assist customers throughout the service delivery process, for example setting up a contract to receive the telecommunication device.

- **Readiness.** According to Kenyon and Sen (2015:217), the readiness attribute is concerned with the service provider's ability to be prepared for delivering the service when required. Therefore, relevant towards this study, this refers to the ability of the mobile telecommunication provider to deliver the services as and when required, for example providing customers with an internet connection when needed.

- **Timeliness.** Timeliness refers to the ability of a service provider to deliver customer service in a prompt manner, by ensuring apt delivery response as well as the immediate resolution of problems relating to the service delivery (Hernon *et al*., 2015:139). Therefore, pertaining to this study, timeliness involves the prompt manner in which customers are assisted should problems arise within the service delivery process, for example correcting billing issues.

- **Flexibility.** Flexibility refers to the ability inherent within a business to adapt to changes (Bosch, 2017:339). Therefore, relevant to a mobile telecommunication provider, this refers to the ability to adapt swiftly to changes or occurrences that disrupt the service delivery such as load shedding or theft at towers that influences their ability to deliver the required services.

With regard to this study, the responsiveness dimension encompasses the willingness of the mobile telecommunication provider's employees to provide assistance to customers. Furthermore, this dimension is measured through the utilisation of the four items used in the 22-item SERVQUAL model (see Appendix A) as developed by Parasuraman *et al*. (1988:12).

3.4.4 Assurance

The assurance dimension of service quality includes the utilisation of knowledge, skills, and courteousness in such a manner that employees working at the business can instil confidence and trust (Adetunji *et al*., 2013:30; Lamb *et al*., 2017:207; Neupane, 2015:14; Saghier & Nathan, 2013:4) when attending to customers' requests (Cant, 2018:40). The five main attributes of this dimension encompass credibility, competence, communication, follow-ups (i.e. ensuring customers are satisfied), and the security associated with the service transaction (Kenyon & Sen, 2015:218).

- **Credibility.** This attribute of the assurance dimension is concerned with elements such as trust between the customer and the service provider, as well as the associated level of authenticity and honesty involved in the service provision (Wirtz & Lovelock, 2018:56). Therefore, this reflects how customers perceive their mobile telecommunication provider's trustworthiness and associated amount of credibility inherent within the service offering.

- **Competence.** According to Wirtz and Lovelock (2018:56), competence denotes the necessary skills and knowledge required by the mobile telecommunication provider's employees to perform their tasks effectively. Employees must, therefore, have sufficient knowledge about the service offerings available, as well as the necessary skills to assist the customer.

- **Communication.** The communication attribute of the assurance dimension is concerned with the ability of the service provider's employees to effectively communicate to customers in such a manner that displays a high level of confidence and trust (Lamb *et al*., 2017:207; Saghier & Nathan, 2013:4). For instance, employees working at the call centres of mobile telecommunication providers, who are able to effectively assist customers with their queries.

- **Follow-ups.** This attribute of assurance relates to the service provider's verification of the customer's satisfaction with the service by informing them of any other related services that might be of interest to them (Kenyon & Sen, 2015:218). For example, mobile telecommunication providers must be able to identify the immediate needs of the customer so that they can advise them on all products that can satisfy the specific need.

- **Security.** The security attribute encompasses the extent to which customers of the service provider are free form any risk, threat, or uncertainty that might arise during the service delivery (Wirtz & Lovelock, 2018:56). For example, the mobile telecommunication provider's network must limit the risks or threats that may affect the service delivered to the customer.

All of the above attributes can be secured in the service delivery process if the service business employ skilled and knowledgeable employees (McDaniel *et al*., 2013:420). Relevant to this study, the assurance dimension encompasses the knowledge of the mobile telecommunication provider's employees to instil confidence and trust in customers. Furthermore, this dimension is measured through the utilisation of the four items used in the 22-item SERVQUAL model (see Appendix A) as developed by Parasuraman *et al*. (1988:12).

3.4.5 Empathy

Hoffman and Bateson (2017:328) assert that the empathy dimension refers to providing individual attention and a caring atmosphere to customers, as well as convenient trading or operating hours, in an attempt to perceive the customers' feelings and emotions as synonymous with the business' feelings (Lamb *et al*., 2017:207). Kenyon and Sen (2015:219) state that understanding, courtesy, and convenience form the core attributes of the empathy dimension.

- **Understanding.** According to Wirtz and Lovelock (2018:56), the understanding attribute of the empathy dimension refers to the effort made by the service provider to fully understand the specific needs of the customers that will be served. Therefore, this reflects the current level of interest undertaken by mobile telecommunication providers to understand the needs of the customers within the market.

- **Courtesy.** Hernon *et al*. (2015:140) posit that courtesy encompasses the level of the service and politeness that will be delivered from the service provider's employees to customers during the service delivery encounter. From a mobile telecommunication perspective, courtesy includes high quality of services to be delivered by the mobile telecommunication provider's employees such as being polite when handling customer complaints.

- **Convenience.** This attribute of the empathy dimension reflects the manner in which the service provider has convenient (i.e. appropriate) operating hours, as well as a suitable location that do not have substantial cost implications for customers when visiting the service provider (Zeithaml *et al*., 2018:452). This refers to a convenient location as well as convenient operating hours that a mobile telecommunication provider has for its customers.

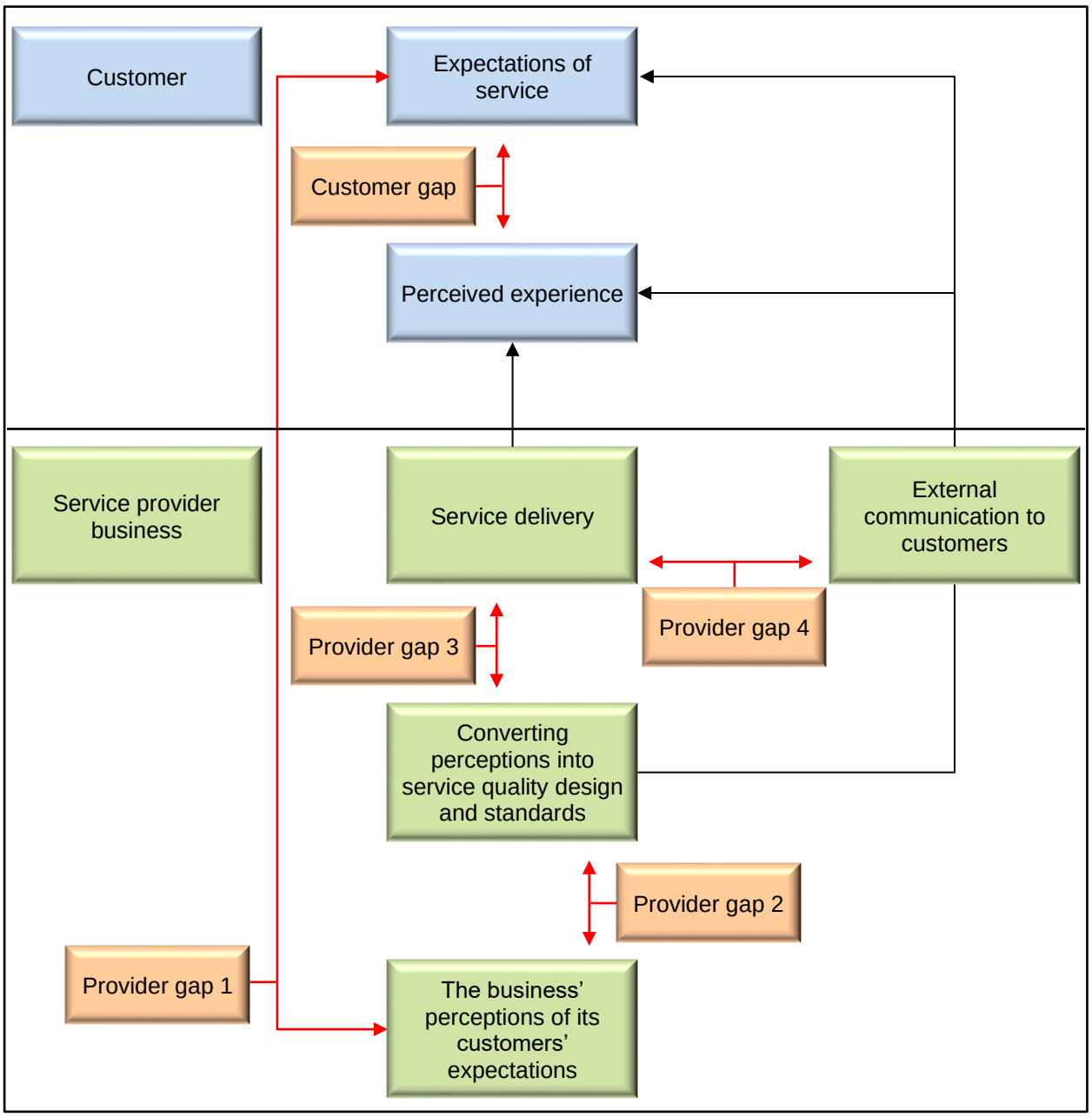
Additionally, the empathy dimension reflects the attitude received by customers from the business' employees (Arslan *et al*., 2014:82). Pertaining to this study, the empathy dimension encompasses the care and individual attention that is provided by mobile telecommunication providers to their customers. Furthermore, this dimension is measured through the utilisation of the five items used in the 22-item SERVQUAL model (see Appendix A) as developed by Parasuraman *et al*. (1988:12).

McDaniel *et al*. (2013:421) state that all five of these dimensions of service quality are combined to evaluate the overall service quality offered to customers, and as a result the opportunity for non-delivery of service (Adetunji *et al*., 2013:31) where the dimensions and their influence cannot be controlled, and as a result service quality gaps are created. Consequently, the gaps pertaining to the service quality delivered to customers are discussed next.

3.5 SERVICE QUALITY GAPS

Parasuraman *et al*. (1985:44) proposed five gaps or key discrepancies that exist between a service provider, customer, and the quality of the service delivery. Adetunji *et al*. (2013:31) and Zeithaml *et al*. (2018:35-36) explain that the gaps can be categorised into one customer gap (i.e. gap 5) and four provider gaps (i.e. gaps 1 to 4) (see Figure 3-2). Moreover, Khan and Jadoun (2015:3452) as well as Wirtz and Lovelock (2018:451) state that the four provider gaps are responsible for filling and closing the fifth and final gap (i.e. gap 5) (Zeithaml *et al*., 2018:36). The gaps model is illustrated in Figure 3-2 below and is subsequently discussed.

Figure 3-2: Gaps model of service quality



Source: Adopted from Cant (2018:53), Parasuraman *et al*. (1985:44), as well as Zeithaml *et al*. (2018:45).

- **Provider gap 1: The knowledge or listening gap**

  Hoffman and Bateson (2017:316) assert that by understanding customer needs and the underlying constraints, the business will provide satisfying experiences on a consistent basis. As such it is important for a business to gain insight and knowledge into the essential desires, needs, and expectations of its customers for the purpose of improving the customer service offered. Therefore, the knowledge gap refers to the variation between what businesses perceive their customers' expectations to be, compared to the actual expectations of these

customers (Levy *et al*., 2014:525). As a result, this gap is enlarged due to the inability of management to understand the needs of customers (Lamb *et al*., 2017:207). Hoffman and Bateson (2017:321) propose three factors that could affect the size of this gap, including the research orientation (i.e. approach towards conducting customer research), upward communication (i.e. dissemination of information from front-line employees upwards in the management hierarchy), and the number of levels within management.

- **Provider gap 2: The standards gap**

  This gap emanates from the difference that develops when service standards are set based on the business' perception of what customers expect from the service (Cant, 2018:52). Thus, this gap reflects the inability of a business to accurately translate the essential customer needs into appropriate service standards based on the service delivery capability (i.e. resources) (Lamb *et al*., 2017:207). Mauri *et al*. (2013:137) argue that this gap results from management's inability to implement the desired standards as indicated by customers' expectations pertaining to service satisfaction levels.

- **Provider gap 3: The performance gap**

  According to Wirtz and Lovelock (2018:451), the performance (or delivery) gap represents the contrast between the service standards set by the business as compared to the actual execution of these standards. Verma (2012:419) states that this gap emerges when management set standards but are unable to conform to these standards. Adetunji *et al*. (2013:31) concur and maintain that this gap signifies that the service provider is unable to effectively implement a process that will fulfil the service specification standards.

- **Provider gap 4: The communication gap**

  The communication gap results from the dissimilarity between the business' communication efforts to its customers and how customers then translate, understand, and perceive the communicated message (Wirtz & Lovelock, 2018:454). As a result of this dissimilarity, the business is unable to convey an accurate value proposition to its customers (Adetunji *et al*., 2013:31).

- **Customer gap 5: The service gap**

  The service gap is the final gap, which results from the difference between what customers expect from a service and the actual service that is delivered by the business (Cant, 2018:52). Therefore, this gap determines whether customers will perceive the service performance as positive or negative (Lamb *et al*., 2017:208).

The preceding section discussed the service quality gaps that emanate from the discrepancy between the service quality provided from a service provider to customers. Closing these gaps are of utmost importance for mobile telecommunication providers, since it will enable them to meet customers' expectations about a service with the actual service delivered. Therefore, in order to close these gaps, service providers, especially mobile telecommunication providers, can continuously measure and evaluate the quality of the service offered to customers. Thus, the following section describes the measurement of service quality.

3.6 MEASURING SERVICE QUALITY

Wirtz and Lovelock (2016:556) accentuate that by measuring service quality, management is aided in the identification of service quality gaps, as well as how to take corrective actions to address these gaps. The authors further contend that service quality can be measured through soft or hard measures, as subsequently discussed.

3.6.1 Soft measures

Wirtz and Lovelock (2018:454) explain that soft measures are conducted through the verbal engagement between the business and its customers. The most notable soft measures instrument is the SERVQUAL model developed by Parasuraman *et al*. (1988:12), which measures customers' expectations of a service as well as their experiences (i.e. perceptions) of the actual service delivered. Although SERVQUAL is a standard measurement instrument for measuring service quality, it has been adapted for various industries and focuses as well. Table 3-2 below provides a depiction of some of the adaptations of the SERVQUAL measurement instrument and the focus of the adapted scale.

Table 3-2: Adaptations of the SERVQUAL measurement instrument

Adaptation	Focus	Source
SERVPERF	Performance	Cronin and Taylor (1992)
FAIRSERV	Fairness	Carr (2007)
SERVDIV	Divinity of the guest or customer	Kelkar (2010)
DINESERV	Food and beverage	Stevens *et al*. (1995)
LODGSERV	Hotels	Knutson *et al*. (1990)
SERV-PERVAL	Airlines	Petrick (2002)
SITEQUAL	Internet (i.e. online) shopping	Yoo and Donthu (2001)
E-S-QUAL	Electronic services	Parasuraman *et al*. (2005)

Table 3-2: Adaptations of the SERVQUAL measurement instrument (continues)

Adaptation	Focus	Source
SELEB	Educational services	Toncar *et al*. (2006)
HEdPERF	Higher education	Abdullah (2006)
SYSTRSQ	Bank services	Aldlaigan and Buttle (2002)
ESQ	Employee service quality	Gandhi *et al*. (2018)

Source: Researcher's own compilation.

In this study, the SERVQUAL model has been adapted to fit within the focus of the study. As such, the items within the measurement instrument (see Appendix A) were changed from "business" to "mobile provider". Following the aforementioned discussion on soft measures, where service quality is mainly assessed between the customer and business, the next section focuses on measuring service quality as a process (i.e. hard measures).

3.6.2 Hard measures

Hard measures of service quality are concerned with the operational processes used to evaluate the quality of a service, and include factors such as service response time or failure to provide the service (Wirtz & Lovelock, 2018:463). It is therefore important to manage service quality as a process to ensure that exceptional service is delivered that satisfy customer needs.

As indicated in the preceding discussion of the importance of service quality (see Section 3.3.3), service providers are continuously searching for a competitive advantage within a competitive industry, and one such advantage is ensuring that quality services are delivered to customers. Hence, managing and improving service quality can provide mobile telecommunication providers with a competitive advantage (Afroz, 2019:145; Namin, 2017:70; Paposa *et al*., 2019:3767). Thus, the management of service quality and how it can be improved is subsequently explained.

3.7 MANAGING AND IMPROVING SERVICE QUALITY

Businesses, and specifically managers, should comprehend the service encounter that will be offered to customers to ensure that the service quality offered is effectively managed. Managers and management can implement quality control techniques (see Section 2.9.1) to ensure that high quality services are delivered. Furthermore, management can also implement a Total Quality Management approach (Musengi-Ajulu & Cunnigham, 2017:116) to ensure that all employees understand and deliver quality services. In addition, management can also formulate service quality objectives as part of their strategies or develop a quality culture throughout the business

(Schermerhorn *et al*., 2017:83). However, since employees represent the part of the service provider that will be interacting with customers, it is essential to ensure that they undergo service quality training and development, since the service they will provide will influence customers' experiences (Cant, 2018:56). These experiences that will be delivered to the customers will be evaluated in comparison with their expectations to determine whether or not they are satisfied with the service provided (Alam *et al*., 2016:57; De Meyer-Heydenrych *et al*., 2017:6). Consequently, service quality expectations and service quality experiences are examined next.

3.7.1 Service quality expectations

Since customers compare their experience with their expectations, and because this is the primary focus of this study, understanding expectations are important for businesses (Alam *et al*., 2016:57; Iacobucci, 2013:186). Verma (2012:266) and Zeithaml *et al*. (2018:51) define expectations as the beliefs that customers have with regards to the expected reception of performances or services provided by a business. Various scholars differ on the sources of expectations. Personal experience, friends, marketing information, and third-party sources are seen as sources by Iacobucci (2013:186) and Levy *et al*. (2014:523). Factors such as quality, performance, personal expression, and a positive impact on the environment are seen as sources by Ferrell and Hartline (2014:22) as well as Mason *et al*. (2015:8), whereas radio advertising, website promotion, and marketing strategies are seen as sources by Samuel (2018:11).

It is evident from the above discussion that customers differ in terms of their expectations of a service. As such, Table 3-3 presents the sources that influence the expectations customers have pertaining to services.

Table 3-3: Sources of customer expectations

Factor	Definition	Possible implementation
Personal needs	The factor that influence service quality expectations due to physical or psychological needs required.	The service provider can inform customers as to how the service will satisfy their personal needs.
Personal service philosophy	The customer's personal attitude pertaining to service quality.	Use research to gain insight into the personal service philosophies of customers. The information gathered from the research can be utilised to customise services.
Derived service expectations	Customers' expectations are due to the influence of other people (e.g. family).	Utilise research to gain insight into customers' sources of derived expectations. Promotional strategies can be based on the information yielded from the research.

Table 3-3: Sources of customer expectations (continues)

Factor	Definition	Possible implementation
Perceived service alternatives	Competitors or alternatives which a customer perceives to offer the same service.	Service providers should be aware of the service offerings delivered by competitors.
Situational factors	Factors that influence the quality of the service that cannot be controlled by the service provider (i.e. disasters).	The service provider can ensure that sufficient capacity is available during peak hours, as well as offer guarantees in the event that a situational factor occurs.
Predicted service	Customers' perception of the quality of service they will receive.	The service provider can inform customers about the normal level of service to expect.
Explicit service promises	A promise made by a service provider about the quality of the services delivered.	The actual service standard can be promised instead of an idealised service. Customers' feedback about the service can be obtained. Employees of the service provider should be able to deliver on the promised service.
Implicit service promises	Refer to inferences about the service quality's tangible delivery.	The tangible part of a service should be consistent. In the case where the service provider implements premium pricing, the service delivered should provide justification.
Word-of-mouth communication	Communication that is not spread by the service provider.	The service provider can provide incentives to customers that spread positive word-of-mouth.
Past experience	Customers' previous encounters with the service provider.	Research can be utilised to gain more insight into customers' previous experiences.

Source: Adopted from Zeithaml *et al*. (2018:57-66).

Although customers differ in terms of their expectations, they will all compare their individual expectations to the service delivered by a service provider. As such, it is important to understand the experience of the actual service quality delivered by mobile telecommunication providers. Thus, the following section provides an overview of customers' service quality experiences.

3.7.2 Service quality experience

Customer experience was first introduced by Holbrook and Hirschman (1982:132), whereby experience was attributed as an aspect impacting on customer decision-making. Alam *et al*. (2016:57) define customer experience or customer perceptions as the feeling a customer will have relating to the performance of a product or service received when compared to their expectations. According to Kranzbuhler *et al*. (2018:434), an experience can be seen as a journey, and customers will evaluate this journey through cognitive, affective, and sensory responses. As such, managing customer experience is of great importance for businesses since it will result in the increase of customer satisfaction (Rawson *et al*., 2013:91). To manage customer experiences, the concept of text mining combined with other technologies and customer

commitment is proposed (Keiningham *et al*., 2017:28; Ordenes *et al*., 2014:4). By managing customer experience, businesses can achieve a competitive advantage and ensure customer satisfaction as well as loyalty (Bolton *et al*., 2014:258; Verhoef *et al*., 2009:38).

According to McColl-Kennedy *et al*. (2019:10), customer experience consists of the following elements, namely value creation, customer discrete emotions, customer cognitive responses, and touchpoints. These elements of customer experience are discussed next:

- **Value creation.** Value creation elements consist of activities, resources and context (Ordenes *et al*., 2014:21). However, McColl-Kennedy *et al*. (2012:371) and McColl-Kennedy *et al*. (2019:10) extend the elements of value creation to include interactions between the customer and the service provider, and the role of the customer. Service providers should also take into consideration that the service will affect all stakeholders involved, and as such value should be provided to all stakeholders (Sangiorgi *et al*., 2019:168).

- **Customer discrete emotions.** Customer discrete emotions are based on affective responses that focus on the feelings of a customer whilst receiving the service quality experience (Verhoef *et al*., 2009:32). Thus, this element of customer experience is concerned with subjective emotional responses (Persigehl & Vermeer, 2019:55).

- **Customer cognitive responses.** This is the cognitive evaluation performed by a customer to evaluate the service received in terms of the expected service delivery, and as such allow the service provider to identify specific problems as well as opportunities or unique solutions to solve the problems (McColl-Kennedy, 2019:13).

- **Touchpoint.** A touchpoint is the interaction (direct or indirect contact) between a customer and a business (Lemon & Verhoef, 2016:74). Touchpoints are becoming more important due to the fact that the number of touchpoints are increasing as a result of technological advances, as well as the increasing usage of platforms, whether digitally or through social media (Bolton, 2019:14). With regards to mobile telecommunication providers, this refers to physical stores that customers can visit as well as call centres and online platforms.

As from the preceding discussion, every customer's experience will differ, since various individual factors such as emotions and cognitive responses contribute to the customer's evaluation of the experience (De Keyser *et al*., 2015:10). Thus, since every customer has a unique experience, there will be a unique tolerance, referred to as the zone of tolerance, of the expected variation of the service delivered in comparison with the customer's expectations (Hoffman & Bateson, 2017:306; Zeithaml *et al*., 2018:54). As such, the next section describes this unique tolerance.

3.7.3 Zone of tolerance

Customers envisage that a certain variation can be expected with regards to service delivery due to the heterogeneity of services which cause service delivery to differ from day-to-day as well as between locations (i.e. branches) (Cant, 2018:39; Hoffman & Bateson, 2017:306). Therefore, the zone of tolerance indicates the level to which customers will tolerate the difference between their desired expectations and the minimum level which they will accept (Zeithaml *et al*., 2018:54).

3.7.4 Improving service quality

According to Kumar *et al*. (2018:941), management cannot control the expectations that customers have. Therefore, service providers should focus on managing and improving the quality of the service that will be delivered to customers. The improvement of the quality of services can be classified into three categories, namely (a) understanding customer needs, (b) improving performance, and (c) prompt communication to customers (Stejerean, 2016). The quality control techniques (mentioned in Section 2.9.1), can also be used as techniques to improve the quality of services offered to customers within the mobile telecommunication industry.

With the preceding section taken into consideration, it is important to manage and improve the quality of the services offered to customers, since it not only ensures that customers are satisfied with the services received, but can also be used as a competitive advantage for a mobile telecommunication provider (Afroz, 2019:145; Lau *et al*., 2013:265; Namin, 2017:70; Paposa *et al*., 2019:3767). Therefore, since the quality of the service influences customers' satisfaction, the following section describes service quality as an antecedent of customer satisfaction.

3.8 SERVICE QUALITY AS ANTECEDENT OF CUSTOMER SATISFACTION

As previously discussed (see Section 3.3.2), various definitions of service quality exist in current literature. As such, some of the definitions of service quality and customer satisfaction are synonymous with each other. However, in contrast to this, other researchers or scholars differ and maintain that service quality and customer satisfaction are not equivalent to one another, and are therefore different concepts (Ramamoorthy *et al*., 2018:837; Tan *et al*., 2014:35). Several researchers established that service quality influences the customer satisfaction level when the customer's expectations are compared to the customer's experience of the service, which could result in customer satisfaction, dissatisfaction, or delight (Alam *et al*., 2016:57; Bagram & Khan, 2012:2; De Meyer-Heydenrych *et al*., 2017:6; Iacobucci, 2013:185). Therefore, when customers perceive the service delivered to be of value and their needs as well as their expectations pertaining to the service are fulfilled, customer satisfaction will occur (Neupane, 2015:13). Hence,

service quality serves as an antecedent of customer satisfaction since customers' expectations regarding the service must be met with the actual experience of the service, and as a result higher levels of service quality results in higher customer satisfaction levels (Ahrholdt *et al*., 2017:439; Ngo & Nguyen, 2016:111). Considering the abovementioned, it is essential to ensure that mobile telecommunication providers offer quality services to customers, since it is a prerequisite for customers' satisfaction.

3.9 CONCEPTUALISATION OF CUSTOMER SATISFACTION

Businesses and customers are involved in an exchange transaction, whereby businesses produce products and deliver services that will satisfy customers' needs in exchange for a profit (Iacobucci, 2013:3). Therefore, the more satisfied customers are with the business' products or services the more profit the business will generate, since satisfied customers result in customer loyalty, positive word-of-mouth, and ultimately customer retention (Kotler & Armstrong, 2014:34-35). However, this notion of satisfying customers is not an easy task and poses a challenge to businesses operating within a competitive environment (Yap, 2012:154). With this in mind, it is essential to define customer satisfaction so that the concept can be better understood.

3.9.1 Defining customer satisfaction

There is no agreed-upon definition of customer satisfaction within the literature, therefore, the various definitions of customer satisfaction are summarised in Table 3-4.

Table 3-4: Definitions of customer satisfaction

Definition	Source(s)
The *evaluation* of the relationship between the *performance* (i.e. experience) of a product or *service* in relation to *customers' expectations*.	Kotler and Armstrong (2014:35); Lamb *et al*. (2017:7); Oliver (1981:27)
The response of a *customer* based on the *perception* of whether or not the consumption *performance matches* their *expectations*.	De Meyer-Heydenrych (2017:6)
A *customer's* attitude towards the procurement of products or *services* relevant to the customer's *expectations* and *perception*.	Tao (2014:259)
The *obtained result derived* from the *customer's assessment* of his/her *expectations* prior to a purchase relative to his/her *experiences* after the purchase.	Wu and Tseng (2015:105)
A *customer's* individual *expectations* pertaining to a business' products or *services* relative to their *perceived performance* of the products or *services*.	Schiffman and Kanuk (2014:10)

Source: Researcher's own compilation.

Based on the above definitions, the following definition of customer satisfaction can be formulated for the purpose of this study:

The obtained result derived from the customer's evaluation of the perceived performance of the service delivered by a service provider when comparing whether the actual service matches the customer's expectations.

Considering the above definition, it is necessary to note the importance of customer satisfaction, since it will be used by customers to assess the performance of the business' services relative to their expectations. Therefore, the next section elaborates on the importance of customer satisfaction.

3.9.2 Importance of customer satisfaction

Businesses serve no purpose without customers, who constitute the primary buyers and users of the business' products or services (Hoffman & Bateson, 2017:287). Therefore, to ensure that customers purchase products and services, customer satisfaction should be maximised in an effort to respond to possible threats posed by increased competition (Alam *et al*., 2016:57) and globalisation (Alhkami & Alarussi, 2016:124), since these challenges impede the business' survival and prosperity (De Meyer-Heydenrych *et al*., 2017:7).

This maximisation of customer satisfaction results in customer retention, since satisfied customers are more likely to purchase from the business again in the future (Baines *et al*., 2014:593). Hence, customer loyalty is established between the business and the customer (Iacobucci, 2013:185). Customer satisfaction also improves the organisational culture within a business due to a centralised approach of optimising customer satisfaction, which is shared amongst all employees of the business (Lamb *et al*., 2017:7-8). Furthermore, customer satisfaction is also an indication to service providers on how the business and its offerings can be improved (Gaurav *et al*., 2018:32). The ultimate objective of customer satisfaction can therefore be attributed to the increased economic benefit for the business (i.e. increased profits) (Qadri & Khan, 2014:3). This increase in profit can be attributed to the number of increased sales as a result of the positive word-of-mouth that is communicated to others from the service provider's customers (De Meyer-Heydenrych *et al*., 2017:7).

As evident from the above discussion, it is important to ensure that customers are satisfied with the quality of services that is provided to them. Thus, this is also applicable within the mobile telecommunication industry. In addition, this assurance of customer satisfaction may yield potential benefits. Thus, the following section provides an overview of the benefits of customer satisfaction.

3.9.3 Benefits of customer satisfaction

Customers that are satisfied with a business and its products or services are exceedingly advantageous for a business, and as a result various benefits can be attributed to customer satisfaction. However, the costs involved in maintaining satisfied customers should always be compared to the expected benefits to ensure that the benefits outweigh the associated costs (Davis & Farrell, 2016:61). The following are some of the benefits of customer satisfaction:

- **Loyal customers and increased profits**

  Customers that are satisfied with a business' product or a service offering increase the long-term profitability of the business, since satisfied customers are more likely to be loyal towards the business (Erasmus, 2019:15; Fripp, 2015; Rahman, 2014:90).

- **Reduced marketing expenditure**

  Increasing customer satisfaction results in lower acquisition and customer retention costs, since the business will indirectly increase the number of loyal customers, thus expanding the loyal customer base (De Meyer-Heydenrych *et al*., 2017:8). Aremu *et al*. (2017:166), Khan and Jadoun (2015:3453) as well as Klopper (2018:79) state that satisfied, loyal, and retentive customers are much more cost-effective as compared to the attraction of new customers.

- **Increased revenue**

  Customers tend to notice other offerings of a business while they are shopping. Thus, if a customer is satisfied with the business and its products or services and notices that the business sells other or new products as well (Fripp, 2015), the customer will be more likely to purchase those products from the business (De Meyer-Heydenrych *et al*., 2017:8).

- **Positive referrals through word-of-mouth**

  Customers that are satisfied with a business increases the probability that they will recommend the business and its products to others (Kotler & Armstrong, 2014:35) through positive word-of-mouth (Klopper, 2018:80), resulting in the increase of sales and profits as well as reducing advertising and marketing expenditure (Al-Msallam, 2015:2).

- **Premium pricing**

  Satisfied customers tend to be more loyal, which increases the probability that these customers would be less price sensitive (Fripp, 2015). This allows the business to increase the price of its products since their loyal customers will be more willing to pay those prices (De Meyer-Heydenrych *et al*., 2017:8).

The preceding section provided an overview of some of the benefits associated with customer satisfaction. However, it is important to understand that customer satisfaction and the benefits thereof will differ from customer to customer, since customers have different expectations (as mentioned in Section 3.7.1). Therefore, the following section describes the types of customer satisfaction.

3.9.4 Types of customer satisfaction

Ganiyu *et al*. (2012:16) and Matos *et al*. (2013:527) posit that transaction-specific and cumulative (i.e. overall) satisfaction are the two most popular types of customer satisfaction. The main difference between these two types, according to Kaura *et al*. (2015:405), is that transaction-specific satisfaction focuses on a single service delivery, whilst cumulative satisfaction involves the accumulation of all the service encounters to date. Understanding the types of customer satisfaction will assist mobile telecommunication providers in ensuring that quality services are offered to customers. Therefore, the two types of customer satisfaction are subsequently discussed:

- **Transaction-specific satisfaction**

  This type of satisfaction is based on a specific event where the service will be delivered to a customer, and includes the individual assessment made by a customer pertaining to the specific service delivered at the particular occasion (Paposa *et al*., 2019:3769; Su & Tong, 2016:430; Ullah *et al*., 2017:2). Eid (2015:252) posits that the satisfaction pertaining to a specific transaction will differ from each service delivery and thus from each associated experience as well.

- **Cumulative satisfaction**

  Su and Tong (2016:430) as well as Ullah *et al*. (2017:2) assert that this type of satisfaction encompasses the customer's overall satisfaction with regards to all the service encounters delivered by a particular business to date. Zhao *et al*. (2012:646) contend that cumulative satisfaction can also be attributed to all of the customer's transaction-specific satisfaction combined over a period of time. Eid (2015:252) propounds that cumulative satisfaction is more stable than transaction specific satisfaction, in the sense that it provides a customer with an overall average of the business' performance, and therefore an overall attitude is vested within the customer.

The abovementioned described the types of satisfaction. However, it is important to understand what influences customer satisfaction. Therefore, the following section provides insight into the factors or determinants that influence customer satisfaction.

3.9.5 Determinants of customer satisfaction

The research of Viriri and Phiri (2017:104) – within the Zimbabwean telecommunication industry – identified five determinants of customer satisfaction, including effectiveness of the network coverage, reasonable pricing tariffs, established loyalty programmes, value added services, and an improvement of the quality of services offered. Relevant towards the mobile telecommunication industry, Rahman (2014:79-80) identified the following determinants that could influence customer satisfaction:

- **Service innovativeness.** The rate at which service innovations are formulated and implemented to ensure that customers are satisfied whilst the service provider concomitantly improves the value of the service at an acceptable level of associated risk (Dotzel *et al*., 2013:259).

- **Service reliability.** The trust associated with the completion of the expected service needs, which signifies the level of confidence the customer has pertaining to the service provider (Rahman, 2014:90).

- **Service competitiveness.** The benefit(s) the customer receives for utilising the business' services (Viriri & Phiri, 2017:104). As mentioned in Chapter 1 (see Section 1.3), the South African mobile telecommunication industry is highly competitive since there are four mobile telecommunication providers. As such, it is important that customers perceive their provider to offer them with distinct benefits (i.e. value).

- **Network/signal coverage.** The network coverage of the service provider is of utmost importance, since it provides the basis for which the customer will utilise the service. Therefore, the network quality should continuously be improved (Viriri & Phiri, 2017:104). Thus, this is essential for mobile telecommunication providers since their service offerings are dependent on the signal or network coverage available.

- **Pricing.** The price of a product or service generally signifies the quality associated with the product or service, and thus increased expectations pertaining to the business and its products or services are formed (Narteh, 2018:75). Therefore, pricing of services should be consistent with the value that will be received by the customer (Rahman, 2014:91; Viriri & Phiri, 2017:104). Ahsan (2016:192) posits that price can be regarded as the most important determinant of customer satisfaction, since customers will be debited according to the mobile telecommunication provider's call rate as well additional service offerings utilised.

- **Quality of offering.** The service offered to customers should meet their expectations continuously and consistently (Rahman, 2014:80). Thus, the quality of offering indicates the customer's overall satisfaction (i.e. cumulative satisfaction, see Section 3.9.4) with the service provider's services.

- **Customer demand.** The service delivered to customers by the service provider should be synonymous with the customers' demands (i.e. needs). The specific needs of customers provide the service provider with information pertaining to their performance in satisfying customer needs (Kruger & Steenkamp, 2019:346). Hence, customers of mobile telecommunication providers will determine the extent of their satisfaction with the service provider's services based on how effective and efficient the provider can satisfy their needs.

- **Value added services.** The service provider should ensure that additional services, which add value to the transaction between the provider and its customers, are offered to the customers (Viriri & Phiri, 2017:104). Therefore, services that are customised and convenient for the customers within the mobile telecommunication industry will provide added value to these customers, and serve as a determinant of their satisfaction with the provider's services (Rahman, 2014:80).

- **Contribution to society.** The service provider's social responsiveness will contribute to the customer's perception of the service provider and ultimately the level of satisfaction as well. As a result, customers of mobile telecommunication providers will use this determinant that influences their level of satisfaction based on the social responsiveness of their mobile telecommunication provider (Rahman, 2014:91; Viriri & Phiri, 2017:104).

- **Brand value.** The brand value or image of the business influences customer expectations, satisfaction, and ultimately loyalty (Rahman, 2014:80). Thus, the higher the value of the mobile telecommunication provider's brand, the higher the level of expectations customers will have for its brand, and as a result better quality of services should also be delivered.

Considering the abovementioned, it is essential to understand the determinants of customer satisfaction as it can yield positive results for a service provider. As such, these determinants indicate what will satisfy the needs of the service provider's customers and can therefore be used to measure how the service provider will ensure continuous customer satisfaction. Thus, the following section pertains to the measurement of customer satisfaction.

3.10 MEASURING CUSTOMER SATISFACTION

According to De Meyer-Heydenrych *et al*. (2017:7), measuring customer satisfaction should be a continuous and permanent process. Various methods to measure customer satisfaction exist. Some of the most notable methods are described next.

- **Comparative evaluation process**

  This method of measuring customer satisfaction is concerned with the evaluations made by a customer to determine which factors are involved with the formation of customer expectation to be used when assessing service quality (Iacobucci, 2013:185-186). The process results in three outcomes, namely delight (i.e. customer's expectations are surpassed by the experience received), satisfaction (i.e. expectations are met with the experience delivered by the business), or dissatisfaction (i.e. the expectations customers have are higher than the experience delivered by the business) (Iacobucci, 2018:240).

- **Expectancy disconfirmation paradigm**

  Customer satisfaction measurement can be based on the Expectancy Disconfirmation Paradigm (EDP), whereby the satisfaction of the customer is evaluated on the variation between the expectations a customer has for a particular product or service and the perceived performance of that product or service (Oliver, 1980:460). Furthermore, Prasadh (2018:178) accentuates that a disparity will exist between one customer and another in terms of their satisfaction with products (i.e. tangible and intangible) since some products also differ from one another. Therefore, customer satisfaction will vary from person to person based on the different perceptions of perceived performance. According to De Meyer-Heydenrych *et al*. (2017:6) as well as Hoffman and Bateson (2017:288), three relationships or outcomes exist pertaining to the expectancy disconfirmation model, namely positive disconfirmation (i.e. customers that are so delighted with the performance of the service delivered, that their expectations are exceeded), confirmation (i.e. the customer's expectations are matched with the experience delivered, hence, creating satisfied customers), or negative disconfirmation (i.e. customer expectations not being matched by the service delivered, thus creating dissatisfied customers).

- **The scale of 100 approach**

  This measurement method involves the customers of a business to assign a rating between 1 and 100 pertaining to the assessment of the business' performance. However, this approach is not suitable for obtaining suggestions that can improve the overall satisfaction of customers, since it specifically assesses performance only (Hoffman & Bateson, 2017:293).

- **The very dissatisfied/very satisfied approach**

  Hoffman and Bateson (2017:293) explain that this approach utilises a five-point Likert scale which can be used by a business to measure customers' satisfaction by allowing customers to choose from five options (ranging from 1 to 5, where 1 = very dissatisfied and 5 = very satisfied).

- **The combined approach**

  The combined approach utilises both quantitative (i.e. scores from the very dissatisfied/very satisfied approach) and qualitative (i.e. enabling customers to provide feedback) properties to measure the performance and recommend suggestions to the business from a customer's perspective (Hoffman & Bateson, 2017:294).

- **RECOVSAT**

  This method of measuring customer satisfaction is based on the service recovery of a business, specifically what customers expect of the business recovering from a service failure incident (Boshoff, 2018:356). The RECOVSAT model was proposed by Boshoff (1999:244) for the purpose of recovering from transaction-specific service failures, and as a result measures the customer's satisfaction with the service recovery of the service provider.

- **Customer satisfaction index (CSI)**

  According to Genroe (2019), a CSI indicates how satisfied customers are with a business and its product or service offerings. The first national index was the Swedish Customer Satisfaction Barometer (Fornell, 1992), which provided the foundation for the American version, named the American Customer Satisfaction Index (ACSI) (ACSI, 2019; Fornell *et al*., 1996:17). The South African Customer Satisfaction Index (SAcsi) provides a benchmark for customer satisfaction relevant towards South African consumers based on the American Customer Satisfaction Index (ACSI) model (Consulta, 2018:1).

3.11 CUSTOMER SATISFACTION IN THE SOUTH AFRICAN MOBILE TELECOMMUNICATION INDUSTRY

The SAcsi (described in Section 3.10), which measures customer satisfaction, is used in various industries in South Africa to assess customers' satisfaction with a business or product offering. Pertaining to the mobile telecommunication industry in South Africa, the index – as conducted by Consulta (2019) – indicated that overall customer satisfaction scores have declined, and that the following results were evident from the study:

- Less than half of the respondents (46.0%) were loyal to their mobile telecommunication provider.
- More than a third (38.0%) of the respondents considered switching to other mobile telecommunication providers.
- The industry average (73.3%) is the lowest since the commencement of the index in 2012.
- Both MTN and Cell C satisfaction scores (71.8% and 71.4% respectively) are lower than the industry average (73.3%), whilst Vodacom are above the industry average (with 74.8%).
- Telkom was not included in the study.

With the abovementioned taken into consideration, it is evident that customer satisfaction as well as customer loyalty have declined within the industry, and that some customers are considering switching providers. Therefore, it is important to investigate the satisfaction within the South African mobile telecommunication industry so that measures can be implemented to increase the satisfaction within the industry.

3.12 CONCLUSION

This chapter provided an in-depth investigation and discussion pertaining to the two constructs of this study, namely service quality and customer satisfaction. Quality and the effect thereof on customers were investigated. Service quality was defined, its importance, dimensions, contributions, measurement, and management were consequently discussed. Specific emphasis was placed on the dimensions of service quality, the service quality gaps, and the SERVQUAL model as developed by Parasuraman *et al*. (1988:17), since these elements are pertinent to this study. The service quality section ended with a discussion of service quality as an antecedent of customer satisfaction. Customer satisfaction was defined, the importance highlighted, the benefits, types, determinants, and measurement were also discussed. The literature investigation of this chapter concluded with an investigation of customer satisfaction within the mobile telecommunication industry within South Africa. However, before the empirical results and findings can be conveyed, the chosen research methodology must first be discussed. Consequently, the next chapter focuses on the research methodology employed to assist this study in designing and implementing a suitable measurement instrument which enabled this study to gather the relevant primary data required to test the hypotheses.

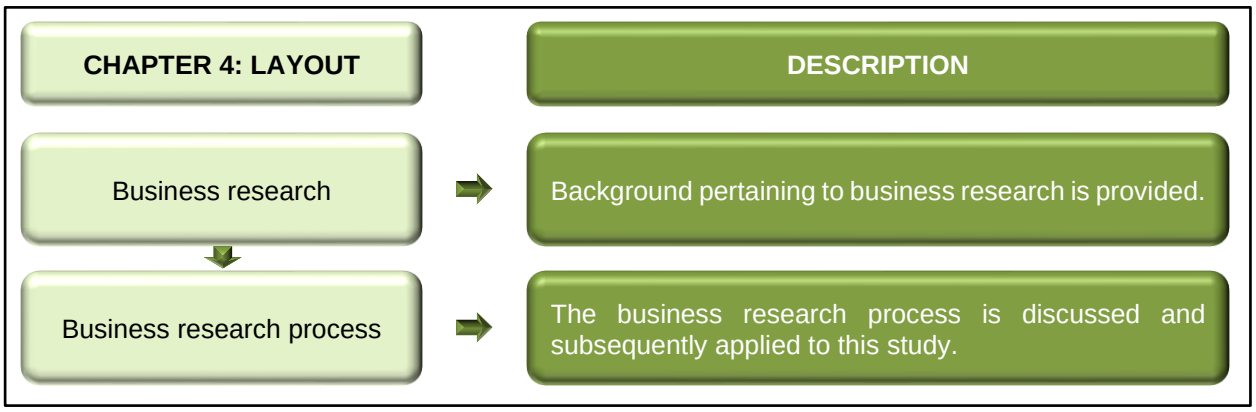
CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

The aim of this chapter is to provide an overview of the available research methods and the methods that are utilised in this study, with specific reference to the business research process. Therefore, this chapter commences with a demarcation of the concept of business research by defining business research, indicating the importance thereof, describing its determinants, and distinguishing between the different business research types and approaches. Thereafter, the business research process and its respective steps are discussed and implemented to the focus of this study. The chronological structure of Chapter 4 is illustrated in Figure 4-1 below.

Figure 4-1: Chapter 4 structure and flow



Source: Researcher's own compilation.

4.2 BUSINESS RESEARCH

Zikmund *et al*. (2013:4) explain that business research is a fundamental decision-making tool that can be used by management, since it can provide managers with knowledge pertaining to specific problems or questions within the various business functions. As such, business research can be employed within a business with any function in mind. Business research can provide management with important information about the business' stakeholders, which can also identify strategies and tactics that can be implemented to increase the business' return on investment (Cooper & Schindler, 2014:6). Babin and Zikmund (2016:4) state that management can effectively reduce the risk of uncertainty and increase the focus on business decision-making using business research.

Before business research can be applied to this study, specifically the business research process, the term must first be defined, after which the factors determining when to conduct research will be investigated. Therefore, the following section defines business research.

4.2.1 Business research defined

Various definitions of business research exist, of which some are listed below.

- Cooper and Schindler (2014:4) define business research as the process whereby information is generated through the means of planning, obtaining, analysing, and disseminating data which will be used as an aid to managerial decision-making for the purpose of maximising business performance.

- Sreejesh *et al*. (2014:3) define business research as the provision of information relevant to decision-makers through systematically and objectively collecting, recording, and analysing data.

- Bryman and Bell (2015:5) define business research as the investigation of areas or topics that are relevant to the business or a management problem.

- Quinlan *et al*. (2015:4) define business research as the investigation of particular business phenomena or problems through the utilisation of scientific research methods.

- Business research is the investigation of problems emanating from within a workplace environment through the systematic and organised effort to find an appropriate solution (Sekaran & Bougie, 2016:2).

- Cooper (2019:9) defines business research as the process of collecting information systematically and objectively, to assist in problem-solving and decision-making within all functional areas of management through the collection, documentation, analysis, and interpretation of data.

As is evident from the above definitions, certain elements are highlighted throughout the various definitions. Thus, the following definition can be summarised from the abovementioned definitions and will be used for the purpose of this study:

Business research is a strategic and organised process, used to investigate specific business or management-related phenomena through the application of scientific research methods in the pursuit of finding appropriate solutions and subsequently guide managerial decisions.

4.2.2 Importance of business research

Sreejesh *et al*. (2014:3) state that operational and planning problems within a business can be solved through the means of conducting business research. Therefore, business research is critical for managerial decision-making, since it assists with solving problems in all functions of the business such as general management, financial management, marketing management, and human resources management (Quinlan *et al*., 2015:4; Zikmund *et al*., 2013:5). Business research also allows a business to increase and maximise its performance which ultimately result in increased profits for the business (Cooper & Schindler, 2014:4). Bryman and Bell (2015:5) explain that by conducting business research, any functional area of the business that is not fully understood can be investigated to improve decision-making within that specific functional area, and ultimately the business. Cooper and Schindler (2014:10) state that business research can also be conducted for other purposes, such as assisting a business or researcher with the identification of opportunities or problems, monitoring business strategies and tactics, to improve these if necessary, and to assist the business or researcher to better understand business phenomena that occur within the various managerial areas.

As is evident from the above discussion, business research is important for a variety of reasons. However, certain factors determine the effectiveness of the research and necessitate whether to conduct business research or not. Therefore, the following section subsequently describes the determinants that affect the decision to conduct business research.

4.2.3 Determinants of business research

Cooper and Schindler (2014:6) propound that business research provides a disciplined process to conduct research and addresses a specific business or management problem. As such, the following aspects have been found to influence researchers' decision whether to conduct research:

- **Ethics:** According to Cooper and Schindler (2014:28), ethical behaviour is of utmost importance, and by conducting research, the rights of participants should always be protected. As such, ethical restrictions prohibit businesses or researchers to conduct research without obtaining consent from participants or regulatory authorities. Therefore, ethics can prohibit a business from conducting research if the necessary consent is not obtained in advance.

- **Timing:** Conducting research requires time, which could present a problem if a managerial decision should be made instantaneously (Sreejesh *et al*., 2014:7; Zikmund *et al*., 2013:11).

- **Availability:** The availability of data necessitates the need for research if additional information is required for managerial decisions (Burns *et al*., 2017:70). However, if a manager possesses the experience and knowledge the need for new research is unnecessary. Sreejesh *et al*. (2014:8) state that the availability of resources not only refer to financial allocations, but also to the human resources required.

- **Nature of decision:** Decisions that are made on a regular and routine basis do not generally merit the need for extensive research. However, decisions concerning tactical and strategic objectives generally warrant the more extensive research (Zikmund *et al*., 2013:12).

- **Costs:** Zikmund *et al*. (2013:12) note that the benefits should be considered to determine whether it is a viable investment opportunity for the business, before conducting research.

4.2.4 Types of business research

According to Sekaran and Bougie (2016:5), two types of business research exist, namely basic and applied research. *Basic research* is conducted to gather more knowledge and information about common problems occurring within a business and generates possible solutions to address these problems. *Applied research* is conducted to solve problems relevant to a specific situation, usually within the working environment, which requires prompt solutions. **This study** constitutes basic research, since the main focus of the study is to investigate service quality (expectations and experiences) and customer satisfaction within the South African mobile telecommunication industry, and to determine whether the quality of service influences respondents' satisfaction.

Business research can be conducted based on a specific approach that guides the researcher and provides them with a point of view which serves as a basis for reasoning and argumentation. Consequently, the following section describes the business research approaches and indicates the approach utilised in this study.

4.2.5 Business research approaches

According to Cooper and Schindler (2014:64), Sekaran and Bougie (2016:26), as well as Zikmund *et al*. (2013:44), the following two business research approaches (often referred to as reasoning theories) can be distinguished:

- **Deductive reasoning:** In this approach, theory is started from a general point of view and shifts towards a more specific view through developing hypotheses from the literature and then observing or collecting results to test the hypotheses. Hence, deductive reasoning focuses on quantitative research (Saunders *et al*., 2016:146).

- **Inductive reasoning:** This approach starts with a specific point of view through which facts are observed and analysed to formulate a general theory that is new in nature. As such, inductive reasoning focuses on qualitative research, as well as an exploratory research design to gather information about a new phenomenon (Saunders *et al*., 2016:147).

For the purpose of this study, deductive reasoning is used, since the hypotheses developed through the literature are tested through quantitative results.

4.3 BUSINESS RESEARCH PROCESS

Due to all the abovementioned elements that need to be taken into consideration, the business research process exists and serves as a guideline for researchers or management and provides assistance throughout the business research process. Therefore, the business research process utilised in this study is subsequently discussed.

Since business research encompasses a broad range of methods and techniques to address problems, business research processes will differ from manager to manager based on the knowledge sought within that specific area of uncertainty (Zikmund *et al*., 2013:4). The business research processes are presented by various authors as follows:

- Zikmund *et al*. (2013:61) suggest the following six stages: (a) Defining the research objectives; (b) Planning the research design; (c) Planning the sample; (d) Collecting the data; (e) Analysing the data; and (f) Formulating conclusions and preparing the report.

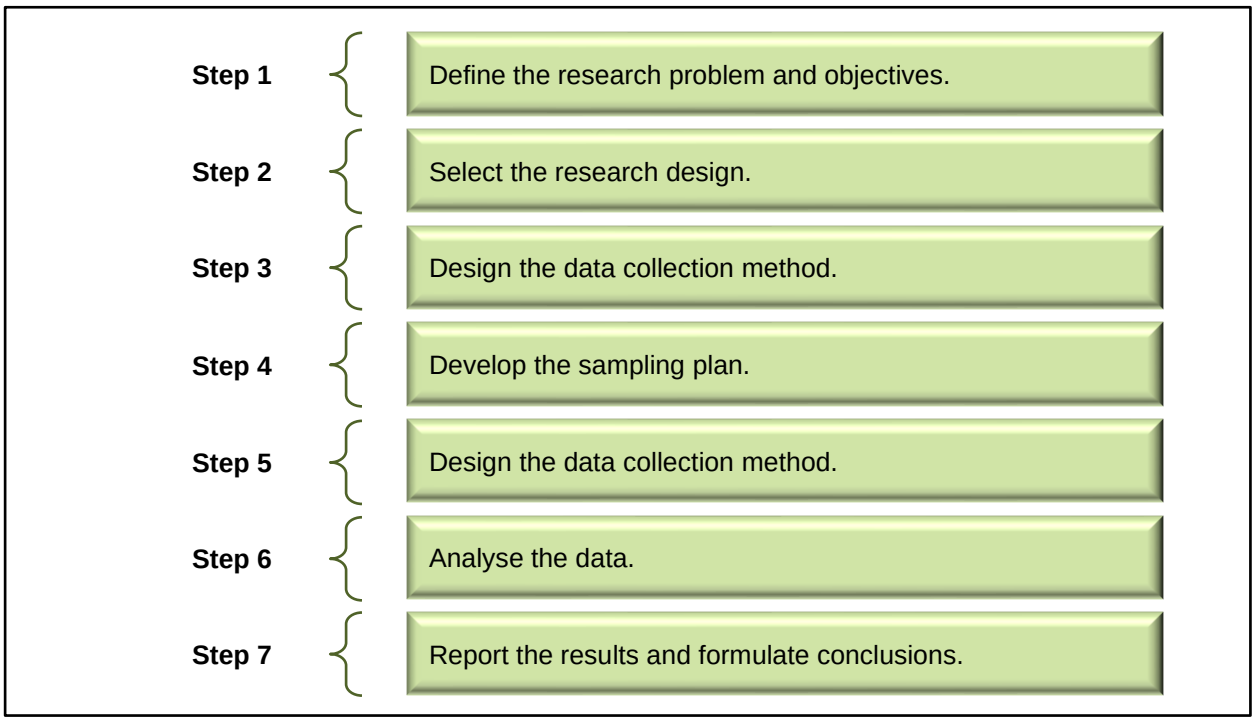
- Cooper and Schindler (2014:76) propose a six-stage process: (a) Clarifying the research question; (b) Proposing research; (c) Designing the research project; (d) Collecting the data and preparation; (e) Analysing and interpreting the data; and (f) Reporting the results.

- Sreejesh *et al*. (2014:14) recommend a seven-step business research process: (a) Problem or opportunity identification; (b) Planning the research design; (c) Selection of the research method; (d) Sampling procedure selection; (e) Data collection; (f) Evaluating the collected data; and (g) Report preparation and presentation.

- Sekaran and Bougie (2016:52) proposed a detailed business research process comprising the following 12 steps: (a) Observation of broad research area; (b) Preliminary data gathering; (c) Problem definition; (d) Critical literature review; (e) Deduction of theoretical framework; (f) Hypotheses generation; (g) Research design; (h) Data collection, analysis and interpretation; (i) Induction or deduction; (j) Report writing; (k) Report presentation; and (l) Managerial decision-making.

As indicated in Figure 4-2, **this study** followed a combination of these research processes.

Figure 4-2: Business research steps used for this study



Source: Adapted from Cooper and Schindler (2014:76) and Zikmund *et al*. (2013:59-60).

4.3.1 Step 1: Define the research problem and objectives

The first step of the business research process commences with defining the research problem and formulating the research objectives (Zikmund *et al*., 2013:61). Consequently, the following sections present the research problem and research objectives for this study.

4.3.1.1 Define the research problem

Rose *et al*. (2015:24) refer to the research problem as the subject of a research study that presents a specific topic that needs to be investigated, which can be either an opportunity or a concern for the business. The problem should be defined carefully and meticulously, as it enables researchers to identify and state concise research objectives (Babin & Zikmund, 2016:62). Sekaran and Bougie (2016:39) accentuate the importance of a clearly defined problem statement and propound that it should be specific, focused, and unambiguous. However, as stated by Babin and Zikmund (2016:62-63), defining the problem is not an easy task, since a well-defined research problem determines the probability of succeeding in gathering information relevant towards the research study and its purpose. Therefore, Burns *et al*. (2017:80) propose that a problem statement should be formulated in the final phase of defining the research problem, since it is a concise statement of the problem to be researched.

Sekaran and Bougie (2016:42) identified the following three criteria to evaluate the quality of a research problem:

- **Relevance** refers to the meaning that a research problem encompasses two perspectives, namely a managerial and an academic perspective. Based on a managerial perspective, the main focus of relevancy is concerned with problems or improvements within a business and its environment. In comparison, the emphasis of relevancy regarding an academic perspective is placed on the amount of information and knowledge available about the topic (i.e. little, much, or contradictory knowledge), or inappropriate relationships from previous research that is impractical for the current research situation (Toffel, 2016:1495).

- **Feasibility** refers to whether a study can address the proposed research objectives even when posed with restrictions or limitations. Therefore, the research problem should be concisely formulated, as it will enable the researcher to conduct the necessary and appropriate research within the timeframe, existing budget and resources.

- **Interesting:** The researcher should be interested in the research, since research is a lengthy process.

As discussed in Chapter 1 (see Section 1.2), the following factors – pertaining to the South African mobile telecommunication industry – can be pointed out:

- The industry has increased exponentially in terms of growth and technological innovations (Abd-Elrahman, 2018:11; Lioudis, 2018; MarketLine, 2018:7; Zhao *et al*., 2012:645).

- New competitors entered the market, including Cell C, and Telkom (Cell C, 2019; MarketLine, 2018:26; MTN, 2017a).

- Customers' preferences, needs, and demands have changed due to changes in socio-demographic aspects, such as age differences, cultural differences, gender preferences, social influence (Foulkes *et al*., 2018:1), and income levels (Govindaraj, 2019).

- Limited available research pertaining to the South African mobile telecommunication industry has been conducted since 2002.

- No apparent relationships have been tested within the South African mobile telecommunication industry in terms of socio-demographic elements.

- There is a general unsatisfactory quality of customer service (Alam *et al*., 2016:63; Alhkami & Alarussi, 2016:124; Ali, 2017:525; Arokiasamy & Abdullah, 2013:7; Kisworo, 2013).

Based on these factors and the in-depth discussion of the research problem (in Chapter 1), the following problem statement was formulated.

South African customers are not satisfied with the service they receive from their mobile telecommunication providers. The South African mobile telecommunication industry is subject to continuous innovations and changes to the market-environment, with more competitors entering the market than before, changes in customers' exposure to information, and subsequently changes in their choices and preferences. Furthermore, limited research on the topic and the specific industry have been conducted, especially from a quality management perspective. Thus, the problem of unsatisfactory customer service arises, which requires recent research on service quality and satisfaction within the mobile telecommunication industry.

4.3.1.2 Defining the research objectives

After the problem has been defined, the research objectives need to be established. Zikmund *et al*. (2013:63) note that research objectives can serve various purposes, such as clarifying a specific situation, identifying and defining an opportunity, or continuously monitoring and evaluating business activities and operations that can be improved. The following primary and secondary research objectives have been formulated based on the research problem (discussed in Section 1.2).

The primary objective of this study was to investigate service quality (expectations and experiences) and customer satisfaction within the South African mobile telecommunication industry, and to determine whether the quality of service influences respondents' satisfaction.

The following secondary objectives have been formulated to address and support the primary objective:

(1) Compile a sample profile of the respondents.

(2) Measure respondents' service quality expectations of their mobile telecommunication provider.

(3) Measure respondents' service quality experiences received from their mobile telecommunication provider.

(4) Compare respondents' service quality expectations with their experience of the service quality offered by their mobile telecommunication provider.

(5) Measure respondents' satisfaction with their mobile telecommunication provider.

(6) Determine whether differences exist between different groups of respondents with regards to the two constructs of the study (i.e. service quality and customer satisfaction).

(7) Determine the influence of service quality on customer satisfaction.

4.3.2 Step 2: Select the research design

A research design is defined as the plan or framework (Malhotra *et al*., 2013:104) that specifies how the required information will be collected, analysed and interpreted through the methods available to the researcher (Burns *et al*., 2017:92; Zikmund *et al*., 2013:66). According to Cooper and Schindler (2014:82), the selection of an appropriate research design is not an easy task. The difficulty is ascribed to the availability of a variety of methods, techniques, procedures, protocols, and sampling plans. Babin and Zikmund (2016:53) identified three types of research designs, namely exploratory, descriptive, and causal research, which are subsequently discussed.

4.3.2.1 Exploratory research design

An exploratory research design refers to the insights obtained through the exploration of a problem (Malhotra *et al*., 2013:106). Iacobucci (2013:199) similarly notes that the objective of exploratory research is to formulate questions about opportunities and ideas. Burns *et al*. (2017:94-95) provide a more detailed definition of exploratory research and describe it as an unstructured and informal method to obtain background information, define general terms, clarify research problems, and establish priorities of the research. According to Malhotra *et al*. (2017:72), it is appropriate to use exploratory research for any of the following purposes:

- To obtain background information about the problem.
- To clearly and fully define the research problem and formulate corresponding hypotheses.
- To allow for the identification and exploration of concepts within a business setting.
- When a preliminary screening process will be utilised to reduce large numbers of project possibilities into smaller probable projects.
- To identify subjective factors or constructs (such as beliefs or opinions) relevant to the study.
- When the interpretation of multivariate data analysis can be assisted through understanding subjective factors.

- When statistical differences between groups arise from the data that require further exploration.
- When respondents are required to share sensitive or personal perspectives that can be embarrassing.
- To further understand and explore respondents' concerns, which they might find difficult to rationalise and enunciate.
- To explore quantitative data to reveal inherent associations between variables.

4.3.2.2 Descriptive research design

A descriptive research design focuses on describing specific characteristics of customers (i.e. who the customer is, what the customer purchases, where the customer purchases, when the customer purchases, and how the customer purchases and pays) that will be obtained by the research (Malhotra *et al*., 2013:108). Burns *et al*. (2017:99) and Iacobucci (2013:199) state that descriptive research is more appropriate if a large sample will be obtained, and it generally includes the utilisation of surveys in order to collect the data. Hair *et al*. (2017:108) propose three factors that influence the adoption of a descriptive research design, namely (a) the characteristic of the original problem or opportunity, (b) the research questions, and (c) the study's research objectives.

Malhotra *et al*. (2017:74) propound that descriptive research can further be classified into two types, namely cross-sectional and longitudinal designs, which are subsequently discussed.

- **Cross-sectional design**

  This type of descriptive research design focuses on extracting sample elements from the target population to measure certain characteristics and is only conducted once. Thus, presenting a description of the sample for a specific period (Brown & Suter, 2014:35; Cooper & Schindler, 2014:128).

- **Longitudinal design**

  Longitudinal designs serve the purpose of monitoring the behaviour of respondents (i.e. target population) over a continuous period to detect any behavioural changes that might arise (Silver *et al*., 2013:75). Saunders *et al*. (2016:200) concur that the focus of a longitudinal study is the ability to study change.

4.3.2.3 Causal research design

A causal research design is implemented to measure cause and effect within relationships (Malhotra *et al*., 2013:115). Iacobucci (2013:199) posits that causal research is the study of the effects of manipulating certain variables. Babin and Zikmund (2016:59), Burns *et al*. (2017:102), as well as Iacobucci (2013:199), identified experiments as the most applicable method to conduct causal research. The characteristics of each research design is summarised in Table 4-1.

Table 4-1: Characteristics of different research designs

Characteristic	Exploratory research	Descriptive research	Causal research
Uncertainty within decision situation	Highly ambiguous	To some extent defined	Unambiguously defined
Main research focus	Research question/objective	Research question/objective	Research hypothesis
Conducted at decision-making period	Early	Later	Later
Research approach (commonly)	Unstructured	Structured	Highly structured
Nature of results	Discovery-oriented, productive albeit speculative, occasionally requires future research.	Potential to be confirmatory although more research is required. Managers can act based on results.	Confirmatory-oriented. Moderately conclusive for managerial action.

Source: Adopted from Zikmund *et al*. (2013:60).

For this study, a combination of exploratory and descriptive research designs was deemed the most appropriate, since it aided this study in obtaining background information as well as a description on the specific characteristics (Babin & Zikmund, 2016:54) and factors affecting customers of the mobile telecommunication industry in South Africa. By using an exploratory research design, background was investigated pertaining to the industry. As a result of using a descriptive research design, insight into customer buying behaviour in the telecommunication industry (i.e. the factors of who, what, where, when and how) will provide businesses within the industry with a description of the customers, what products they tend to purchase, at which location they will encounter the experience, when they will buy products and encounter service experience, how their buying decisions are influenced by previous experiences, and also how they pay for the products when encountering customer service (Burns *et al*., 2017:98).

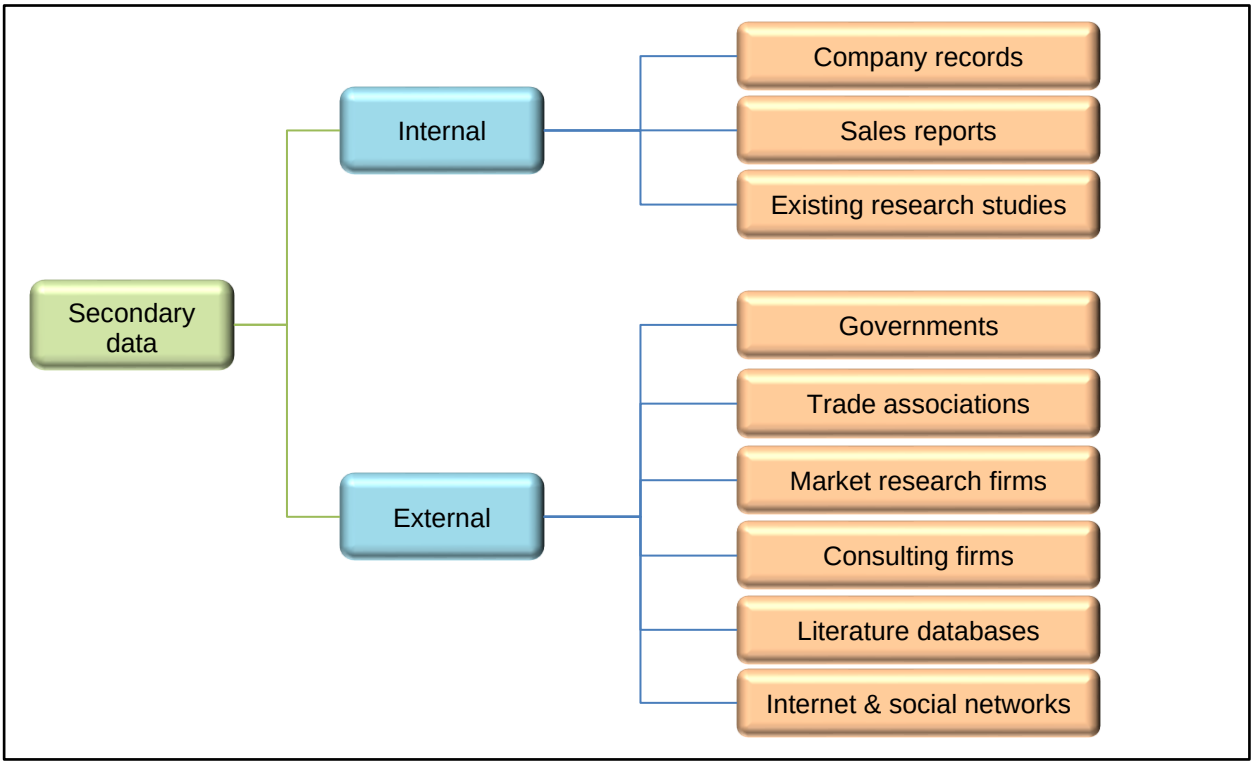
4.3.3 Step 3: Design the data collection method

According to Sarstedt and Mooi (2014:21), the design of the data collection method is the next step in the research process and involves the decision to use secondary and/or primary data. Secondary and primary data are discussed subsequently.

4.3.3.1 Secondary data

Secondary data are previously collected data that already exist and are available to other researchers in the form of internal or external data sources (as indicated in Figure 4-3) (Sreejesh *et al*., 2014:11).

Figure 4-3: Types of secondary data sources



Source: Adopted from Mooi *et al*. (2018:53-54).

According to Malhotra *et al*. (2017:95), secondary data can be used for several reasons, such as:

- assist in defining the research problem;
- develop an action plan to approach the problem;
- assist in the construction of a sampling plan;
- formulate a research design;

- test hypotheses and address some research objectives;
- assist the researcher with the interpretation of primary data; and
- validate the results and findings of qualitative data.

Based on the aforementioned discussion, it is evident that secondary data can assist researchers throughout the business research process. However, before considering how much secondary data is to be used, the advantages and disadvantages of using secondary data should be considered. Table 4-2 indicates the advantages and disadvantages associated with the use of secondary data in research (Clow & James, 2014:64; Sarstedt & Mooi, 2014:29).

Table 4-2: Advantages and disadvantages of using secondary data

Advantages	Disadvantages
Easily accessible.	The required information might not be available.
Cheaper than primary data.	The data might not be relevant to the research problem.
Larger samples might have been targeted.	Data might be outdated.
The sources could be more authoritative.	Data might contain errors.
Allows for comparisons to similar studies.	Primarily focused on factual data.
Occasionally, the data might be more accurate.	The data collection process cannot be controlled.
	The data might be available in an undesired form.

Source: Adopted from Clow and James (2014:64-65), as well as Sarstedt and Mooi (2014:29).

Due to a large amount of irrelevant and insufficient data gathered, criteria exist to allow the researcher to evaluate the quality of the secondary data to ensure that the information retrieved is of value to the study and its objectives. The six criteria, as proposed by Hair *et al*. (2017:52), are subsequently described:

- **Purpose:** The collected data should relate to the research objective(s) of the study.
- **Accuracy:** Original sources should be consulted to ensure that the information deduced from the data is accurate.
- **Consistency:** This criterion ensures that the same information can be gathered from data within multiple sources.
- **Credibility:** The authors of the data sought must be credible and reputable to ensure that information or deductions made originate from a reliable source (i.e. data source).

- **Methodology:** The methodology utilised by a researcher when obtaining secondary data should ensure that factors such as sample size, questionnaire and data collection methods are taken into consideration when analysing results.

- **Bias:** This criterion refers to the motivation of the source of the secondary data, thus constituting any reason for the data to be influenced in any matter by the researcher.

In this study, both internal and external secondary data sources were consulted, specifically academic secondary sources, for the introduction and background chapter (Chapter 1) as well as the literature chapters (Chapters 2 and 3), in order to gain an in-depth understanding of the constructs under investigation. For this chapter (Chapter 4) academic textbooks were more frequently used. Furthermore, the secondary data was collected from the following databases and sources:

- African journals: the collection of African scholarly journals.
- EBSCOhost: online research platforms and databases.
- Emerald Insight journals: international journals.
- Internet sources: Google Scholar and internet sources.
- JSTOR: a collection of academic journals and books.
- SACat: database of South African publications in libraries such as journals and books.
- ScienceDirect: a collection of books, academic journals and articles.
- ProQuest: international dissertations and theses (full-text).
- Textbooks: from publishers such as Cengage, Pearson, South Western, and Wiley.

4.3.3.2 Primary data

Primary data are data collected by a researcher pertaining to the specific purpose of the research study (Sarstedt & Mooi, 2014:28). However, Mooi *et al*. (2018:31) contend that once primary data become subject to use within another study or for answering a different research question, it constitutes as secondary data. The advantages and disadvantages of using primary data are indicated in Table 4-3.

Table 4-3: Advantages and disadvantages of using primary data

Advantages	Disadvantages
Consist of recent data.	More expensive than secondary data.
Focused on the specific research problem.	Increased data collection time.
Proprietary in nature.	

Source: Adopted from Sarstedt and Mooi (2014:29).

Primary data can be collected, according to Wiid and Diggines (2015:94), by means of qualitative or quantitative research. Table 4-4 provides an indication of the differences between qualitative and quantitative research, followed by a brief discussion of the different qualitative and quantitative data collection techniques.

Table 4-4: Differences between qualitative and quantitative research

Component	Qualitative	Quantitative
Type of research	Exploratory	Descriptive or causal
Sample size	Small	Large
Type of questions	Unstructured	Structured
Type of analysis	Subjective	Objective and statistical
Generalisability	Limited	High
Typical costs	Lower	More expensive
Typical time frame	Short	Long

Source: Adopted from Clow and James (2014:42).

4.3.3.2.1 Qualitative data collection techniques

Methods that are used to collect qualitative data are developed from non-numeric forms and comprise an interactive and interpretative development process (Easterby-Smith *et al*., 2015:129). The various qualitative data collection techniques are subsequently described:

- **Focus groups interviews** are interviews that are conducted among a predetermined number of respondents by using a moderator (Sarstedt & Mooi, 2014:79). Usually focus groups are conducted with five to ten participants (Hague *et al*., 2016:46).

- **In-depth interview** refers to the unstructured interview between an interviewer and a respondent, with the main objective of capturing the subjective elements (i.e. attitudes, emotions, beliefs, and feelings) of a respondent (Feinberg *et al*., 2013:219).

- **Ethnography** involves the observing of human behaviour within a natural environment (McDaniel & Gates, 2013:157). Thus, ethnography is concerned with the specific study of cultures (Saunders *et al*., 2016:187).

- **Case studies** involve the examining of phenomena within various environments to assist in the analysis of a business (Adams *et al*., 2014:98). Case studies involve the inspection of a particular object of interest (i.e. business) to the researcher (Easterby-Smith *et al*., 2015:89).

- **Projective techniques** refer to the techniques used where respondents are indirectly prompted to answer a question through projecting their opinion onto a scenario given by the researcher (Zikmund *et al*., 2013:153). Hague *et al*. (2016:77) as well as McDaniel and Gates (2013:97) state that projective techniques are derived from the field of psychology. Hence, various projective techniques exist, including sentence completion, cartoons, picture sorting, word association, and storytelling (Clow & James, 2014:111).

4.3.3.2.2 Quantitative data collection techniques

According to McDaniel and Gates (2015:73) as well as Wiid and Diggines (2015:116), three quantitative data collection methods exist, namely surveys, experiments, and observations. These three methods of collecting primary data through a quantitative approach is discussed next.

- **Surveys** are described as the administering of structured questionnaires (whether verbal, written or electronic) to a target population to obtain information relevant to the research study (Malhotra et al., 2017:269). Hair et al. (2017:118) accentuate that various factors are considered in the selection of a survey method, including (a) situational characteristics, (b) task characteristics, and (c) respondent characteristics. Table 4-5 indicates the various factors that determine the selection of surveys as data collection instrument.

Table 4-5: Factors influencing the use of surveys

Factor	Classification of factor		Description
Situational	Budget		The quantity of resources at the disposal of the researcher.
	Time frame		The time frame in which research will be completed.
	Quality prerequisites	Data completeness	Comprehensiveness of the data to describe the gathered information in full.
		Generalisability	Refers to the accuracy of projecting the data of the target population onto the total population.
		Data precision	The accuracy of responses in comparison to alternatives.
Task	Difficulty		The level of difficulty in completing the survey.
	Required stimuli		The stimuli that researchers will utilise in order to elicit a response from respondents.
	Information requirement		The amount and degree of information that will be collected by the survey.
	Sensitivity		The amount and degree of sensitive questions being asked in the survey which direct the respondent to answer with socially acceptable responses.
Respondent	Diversity		Refers to the extent of shared characteristics amongst respondents.
	Incidence rate		Percentage of total population represented by the target population of the research.
	Participation		Refers to the ability of the respondent as well as the interviewer to interact with one another in the format of question-answer interchange.

Source: Adopted from Hair *et al*. (2017:118-121).

Burns *et al*. (2017:175) state that four types of data collection pertaining to surveys can be used, namely person-administered, computer assisted, computer-administered, or self-administered surveys. The different types of survey methods, advantages, disadvantages, and sub-types of each are briefly described in Table 4-6 below.

Table 4-6: Types of survey methods, advantages, disadvantages, and sub-types

Survey method and description		Advantages	Disadvantages	Sub-types
Person-administered	Respondents read a question and their responses are captured by an interviewer. Can be conducted face-to-face or over the telephone.	Feedback provided by the interviewer. Rapport can be created. An appropriate sample can be ensured. Adaptable to respondent.	Possible human error. Expensive. Time-consuming. Interview evaluation fear.	In-home. Mall-intercept. In-office. Phone surveys.
Computer assisted	Respondents are presented with a survey, but responses are recorded on a computer and computer features are used as support.	Speed. Comparatively error-free. Multimedia incorporation (e.g. visuals, audio). Data is captured instantaneously.	Significant cost to set up. Technical skills are prerequisite.	In-home. Mall-intercept. In-office. Phone surveys.
Computer-administered	The respondent completes the survey by using a computer that presents the answer and captures respondent's answers.	Interactive and user-friendly features. Relatively inexpensive. Interview evaluation fear is reduced.	Respondents should be computer literate and have an internet connection.	Fully automated. Online.
Self-administered	Respondents complete the survey on their own without the use of a computer or interviewer.	Cost reduction. Respondent has control. Interview evaluation fear is reduced.	Dependent on respondent. Unmonitored process. High questionnaire requirements.	Group. Drop-off. Mail.

Source: Adopted from Burns *et al*. (2017:175-181).

- **Experiments:** An experiment is the process conducted within a controlled environment to determine whether certain factors influence the response variables under investigation (Adams *et al*., 2014:95). Cooper and Schindler (2014:195) propose seven steps or activities that the researcher must complete to conduct experiments: (a) choose suitable variables; (b) treatment levels should be defined; (c) monitoring the experimental environment; (d) deciding on the design of the experiment; (e) determine and assign the subjects; (f) pretesting, revision and actual test; and (g) data analysis. Sarstedt and Mooi (2014:20) categorise experiments into two types, namely lab and field experiments. *Lab experiments* are conducted within a controlled experimental setting that disregard real-life conditions (Mooi *et al*., 2018:87). In comparison, *field experiments* refer to experiments that are conducted within a natural, real-life setting (Sekaran & Bougie, 2016:172).

- **Observations**: According to Babin and Zikmund (2016:208) and Hair *et al*. (2017:93), observation can be used in both qualitative and quantitative research. Table 4-7 provides a brief overview of the different types of observational techniques.

Table 4-7: Types of observational techniques

Technique	Description
Direct	The immediate observation of behaviour at occurrence.
Indirect	Observation of the effect that occurred because of behaviour.
Overt	This refers to the acknowledgement of observation by the respondent.
Covert	Respondent is unaware of observation taking place.
Structured	Predetermined selection of which behaviour to observe.
Unstructured	Observation has no restrictions that were predetermined before observation.
In situ	Observation of behaviour within a naturally occurring situation.
Invented	Observation of behaviour within a created environment.

Source: Adopted from Burns *et al*. (2017:146-147).

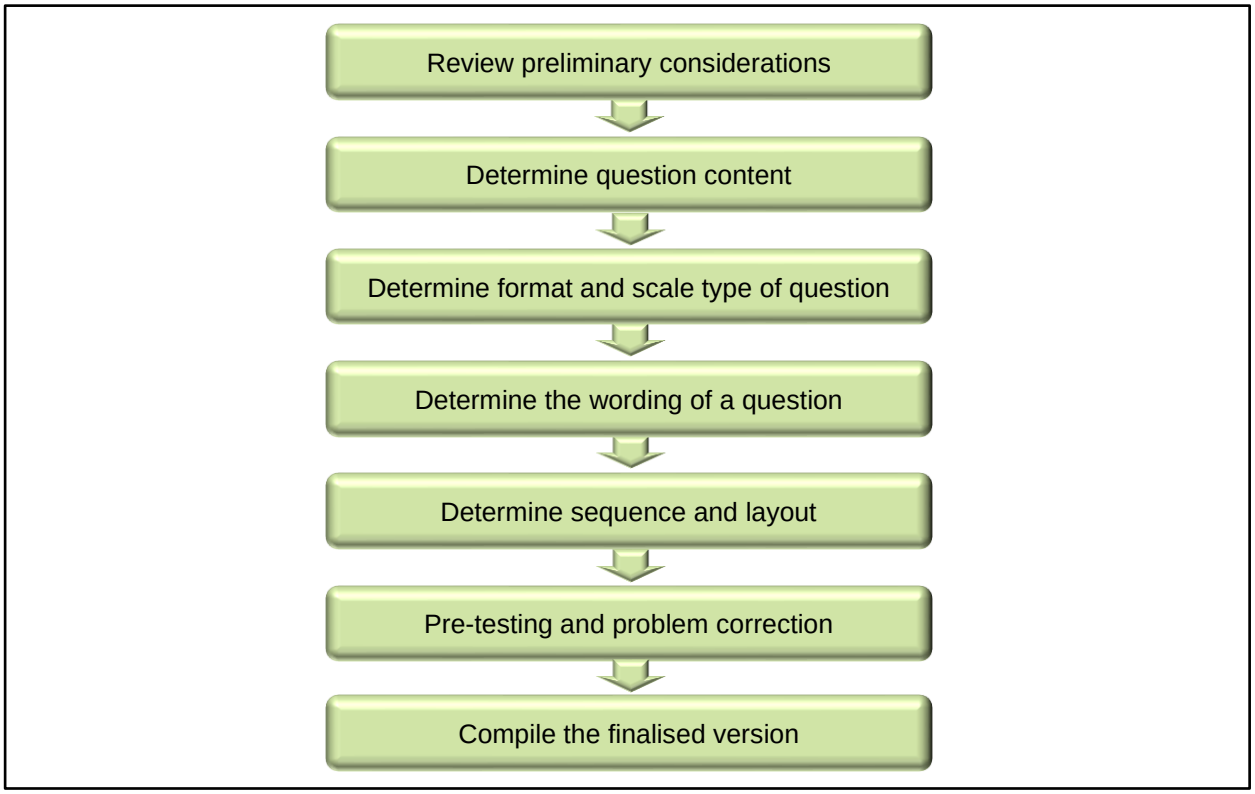
For the purpose of this study, which followed a quantitative research approach, data was collected through the means of utilising both a self-administered method as well as a computer administered method. The self-administered method involved the utilisation of the drop-off sub-type technique, where the respondent was entrusted with the questionnaire's completion and return to the fieldworker within a shopping centre. In addition, the computer administered method involved the use of the Google Forms platform where the questionnaire was hosted online and the link to the site was then shared on social media platforms for respondents to access the questionnaire on their mobile device or computer. The self-administered method had the advantage of reduced data collection time, since fieldworkers were used but had the disadvantage of increased costs and the data had to be entered into a data file. On the other hand, the computer administered method had the advantage of managing the data automatically, meaning it could be used as a data file as is, but had the disadvantage of a taking extensive time to collect responses.

The following section provides a discussion into the design of the questionnaire and its content utilised in this study.

4.3.3.3 Questionnaire design and content

To ensure the effectiveness of the measurement instrument, the questionnaire should follow a design process and certain guidelines before it is administered to respondents. The questionnaire design process followed in this research study is a combination of the process and guidelines proposed by Aaker *et al*. (2013:289) and Feinberg *et al*. (2013:268) (as indicated in Figure 4-4).

Figure 4-4: Questionnaire design process followed in this study



Source: Adopted from Aaker *et al*. (2013:289) and Feinberg *et al*. (2013:268).

4.3.3.3.1 Review preliminary considerations

Feinberg *et al*. (2013:267) accentuate the importance of this step, and maintain that the data and the appropriate informational requirements to be collected by the questionnaire should be taken into consideration when deciding on the questionnaire design. Clow and James (2014:343) and Hair *et al*. (2017:208) propose that a cover letter should be included as part of the questionnaire to encourage respondents to participate in the study. The cover letter should include an explanation of the purpose of the study, provide clear instructions to respondents on how to complete the questionnaire, explain respondents' rights, and assure them of their anonymity and confidentiality. The cover letter used **for this study** is available as part of the questionnaire in Appendix A.

4.3.3.3.2 Determine question content

Cooper and Schindler (2014:302) propound that the content of a question is determined primarily based on the research objectives of the study. Therefore, the decision of the content to be included in a questionnaire can be addressed once the required information have been specified and the aim of the individual questions are addressed (Malhotra *et al*., 2017:380-381).

For the purpose of this study, the questionnaire commenced with a screening question that served the purpose of ensuring that only respondents who qualified participated in the study. The screening question was based on the usage of a South African mobile telecommunication provider and stated: "Which ONE of the following mobile telecommunication providers' services do you MAINLY use?" If respondents chose any of the four major role players (i.e. Vodacom, MTN, Cell C, or Telkom) they qualified to participate, but if the option "None of the above" was chosen, then the respondent did not qualify to participate, and did not have to complete the questionnaire. The questionnaire further consisted of the following three sections:

- Section A: This section was designed to obtain background information regarding respondents' socio-demographics, with the aim of addressing secondary objectives 1 and 6.
- Section B: The aim of this section was to measure respondents' service quality expectations and experiences with regards to their mobile telecommunication provider, with the aim of addressing secondary objectives 2, 3, 4, and 6.
- Section C: The aim of this section was to measure respondents' satisfaction with their mobile telecommunication provider, with the aim of addressing secondary objectives 4 to 6.

The questionnaire concluded with a postscript providing a short statement of appreciation.

4.3.3.3.3 Determine format and scale type of question

Before the phrasing of the questions can commence, the researcher should determine the format of the question (Aaker *et al*., 2013:291). The levels of scale measurement used to measure each variable as well as the appropriate response formats are subsequently discussed.

(a) Levels of scale measurement

Measurement scaling is concerned with the variables that are used to measure the constructs of the study, as well as the level or type of scale used (Mooi *et al*., 2018:35). Hair *et al*. (2017:164) distinguish between the following levels of scale measurement:

− Nominal scales

This scale represents the basic form of measurement, and assigns numerical values to a variable for the sole purpose of classification (Mooi *et al*., 2018:36; Zikmund *et al*., 2013:297). Aaker *et al*. (2013:413) note that when using this scale, the researcher will only be able to conduct a limited number of formal statistical analysis, with the most notable analysis being the mode as measure for central tendency.

- Ordinal scales

  According to Adams *et al*. (2014:71), an ordinal scale utilises a ranking order to classify or label variables. As noted by Bryman and Bell (2015:346), the main difference between ordinal and interval or ratio scales is that ordinal scales do not possess equal distances between ranges. However, the authors further contend that when interval or ratio scales are grouped into categories, it constitutes an ordinal scale and no longer interval or ratio.

- Interval scales

  Interval scales utilise equal intervals between the starting and end points of an ordinal scale, and include an arbitrary zero point (McDaniel & Gates, 2013:213).

- Ratio scales

  Adams *et al*. (2014:71), state that scales with an absolute value of zero constitute ratio scales. Mooi *et al*. (2018:37), maintain that ratio scales have a zero value to indicate the origin of the variable being measured.

(b) Response formats

Babin and Zikmund (2016:306) and Malhotra *et al*. (2018:385-387) distinguish between two major categories of questions, namely open-ended (unstructured) or closed-ended (structured) questions. *Open-ended* questions permit respondents to answer questions in their own words based on their subjective perspectives (Feinberg *et al*., 2013:274) with no structure (Sarstedt & Mooi, 2019:67). In contrast, *closed-ended* questions limit the respondent to choose only an appropriate answer from a predetermined set of alternatives provided (Sekaran & Bougie, 2016:146). Sarstedt and Mooi (2019:71) differentiate between the following types of closed-ended questions:

- Dichotomous questions

  This type of closed-ended question restricts respondents to choose only one option from two alternative responses provided (Feinberg *et al*., 2013:278; Wiid & Diggines, 2015:170).

- Multiple-choice questions

  With multiple-choice questions, an assortment of alternative options is provided from which respondents are required to select only one alternative from all off the alternatives (Malhotra *et al*., 2017:387).

- Scaled-response questions

  This type of closed-ended question focuses on capturing the level of intensity of the respondent's feelings or attitudes (McDaniel & Gates, 2013:255). Various scaling techniques exist to measure the attitudes of respondents, also referred to as attitudinal measurement scales, that can either be rated or ranked (Sekaran & Bougie, 2016:213; Zikmund *et al*., 2013:314). Table 4-8 provides an overview of each attitudinal scale technique with a description.

Table 4-8: Attitudinal scale techniques

Scale type		Description
Rating	Category	Consists of several alternatives from which one response is sought.
	Semantic differential	Bipolar adjectives are listed on each end of scale requiring respondent to select the option that best represents their attitudes.
	Numerical	Bipolar adjectives at each end with numerical values (5 or 7 points) in between, from which a respondent can choose.
	Staple	Descriptor of interest to the researcher is placed in the centre with numerical scales on both ends of the scale, from which respondents can select an option that best describes their attitude.
	Itemised	The utilisation of a five-point or seven-point scale whereby the respondent indicates the level of agreement with a statement, and the overall responses are then summed.
	Likert	Respondents are required to indicate their level of agreement with the provided statements utilising a five-point, seven-point or ten-point scale.
	Constant sum	Respondents are required to divide the presented point values into the number of alternatives provided.
	Graphic	An answer should be selected from the graphic continuum provided.
Ranking	Paired comparison	Respondents are required to select a preferred object from a set of two or more objects.
	Forced ranking	Alternatives are provided, from which the respondent is required to rank certain objects that are similar.
	Comparative	Respondents are required to assess the current object provided in comparison with the benchmark provided.

Source: Adopted from McDaniel and Gates (2013:222-229), Sekaran and Bougie (2016:213-219), as well as Zikmund *et al*. (2013:317-330).

The sections of the questionnaire, related questions, levels of scale measurement, response formats, and scale types implemented **in this study** are summarised in Table 4-9.

Table 4-9: Questionnaire section, question, level of scale measurement, response format, and scale type

Section	Question	Level of scale measurement	Response format	Scale type
Screening question	1	Nominal	Multiple-choice	Category
A: Sample profile	2.1	Nominal	Dichotomous	
	2.2	Nominal	Multiple-choice	Category
	2.3	Nominal	Multiple-choice	Category
	2.4	Ordinal	Multiple-choice	Category
	2.5	Interval	Scaled-response	Likert (5-point)
	2.6	Nominal	Multiple-choice	Category
B: Service quality	3.1 – 3.22	Interval	Scaled-response	Likert (5-point)
C: Customer satisfaction	4.1 – 4.4	Interval	Scaled-response	Likert (5-point)

Source: Researcher's own compilation.

4.3.3.3.4 Determine the wording of a question

Feinberg *et al*. (2013:279) posit that the questions in a questionnaire are critical, as it must be able to elicit the correct information from the respondents. Thus, it is important that both the researcher and respondent have the same understanding of a question. Burns *et al*. (2017:218) recommend the following guidelines pertaining to the correct wording or phrasing of questions:

- Focus on a specific topic or problem.
- Brief or succinct and concise questions should be used.
- Use simple grammar.
- Use concise words.
- Preclude leading questions.
- Exclude presuppositions and assumptions.
- Avoid using double-barrelled questions.
- Prevent overstating the questions.

4.3.3.3.5 Determine sequence and layout

McDaniel and Gates (2015:290) provide the following sequence as a guideline for how the questionnaire should be organised:

- **Screening questions** are used for the identification and qualification of the appropriate respondents that will be representative of the target population (McDaniel & Gates, 2013:259).

- **Opening questions** or warm-ups. These questions follow the screening question and serve the purpose of providing respondents with easy-to-answer questions so that respondents become interested in the questionnaire (Burns *et al*., 2017:225).

- **Transition questions** are focused on measuring the research objectives of a study and thus require more effort to complete from the respondents (McDaniel & Gates, 2013:259). Malhotra *et al*. (2017:189) concur that transition questions enable the respondent to visualise the research topic in broader terms.

- **Difficult and complicated questions.** Hair *et al*. (2017:198) maintain that questions that are difficult to answer should follow once respondents are at ease in answering questions.

- **Demographic questions for classification purposes.** Questions regarding respondents' demographic aspects can be asked in the beginning or end of the questionnaire. However, when private factors such as income or other potentially sensitive questions will be used, it is recommended that these questions will be asked last (Sekaran & Bougie, 2016:153).

For the purpose of this study, all of the abovementioned guidelines were taken into consideration and this study's questionnaire was therefore tested amongst a number of academics as well as respondents as part of the pre-test. The pre-test is subsequently described.

4.3.3.3.6 Pre-testing and problem correction

Brown and Suter (2014:109) maintain that the quality of a questionnaire can only be measured under real and actual conditions; therefore, a pre-test (or pilot test) provides the researcher with an opportunity to become attentive of any uncertainty within the questionnaire.

In this study, the questionnaire was pre-tested on the online platform created on Google Forms and data was subsequently collected from 18 respondents. The feedback of the pre-test indicated that question 2.6 posed a difficulty, since it was a ranking question, and was therefore changed to a rating question.

4.3.3.3.7 Compile the finalised version

After the previous stages have been taken into consideration and the questionnaire has been approved with the necessary changes made, the questionnaire could be implemented to collect the primary data required by the researcher (Wiid & Diggines, 2015:174).

For the purpose of this study, the questionnaire utilised in the pre-test (after question 2.6 was adapted to a rating question) was used as the final measurement instrument of this study to obtain the required primary data. The content of the final questionnaire is discussed next.

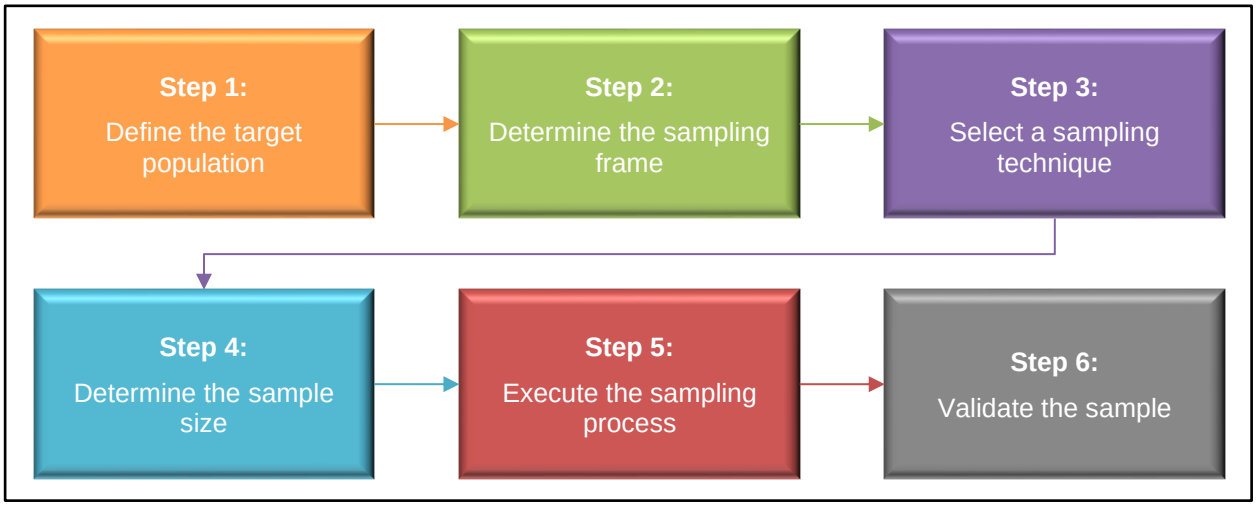
4.3.3.4 Design and content pertinent to this study's questionnaire

In designing the questionnaire for this study, the guidelines pertaining to the development of a questionnaire (see Section 4.3.3.3) were taken into consideration. Pertaining to the final questionnaire (see Appendix A), the questions used in Section A as well as in the screening question were self-generated by the researcher. Section B of the final questionnaire was adapted from the SERVQUAL scale developed by Parasuraman *et al*. (1988:12). The final section (Section C) utilised the scale from Van Tonder and De Beer (2018:8).

4.3.4 Step 4: Develop the sampling plan

A sampling plan consists of various components that identify how the sample elements will be selected from the target population (Burns *et al*., 2017:73). These components include the target population, sampling frame, sampling method or procedure, and sample size (Clow & James, 2014:227), which are discussed in the subsequent sections. Figure 4-5 illustrates the sampling plan used in this study based on the process provided by Malhotra *et al*. (2018:414).

Figure 4-5: Sampling plan used in this study



Source: Adopted from Malhotra *et al*. (2018:414).

4.3.4.1 Step 1: Define the target population

According to Benzo *et al*. (2018:144), a target population describes the group of individuals or businesses that will be investigated to address the secondary research objectives. Babin and Zikmund (2016:341) identified three components of a target population, namely:

- Elements (i.e. the same characteristic possessed by all sample units).
- Sampling units (i.e. description of basic and single respondent).
- Extent (i.e. geographical location) of where the research will be conducted.

The target population of this study is described in Table 4-10 according to these components.

Table 4-10: Target population of this study

Component	Description
Elements	All individuals who have been making use of the services of one of the main mobile telecommunication providers (i.e. Vodacom, MTN, Cell C, or Telkom) in South Africa.
Extent	South Africa.
Timeframe	15 July 2019 to 13 September 2019.

Source: Researcher's own compilation.

4.3.4.2 Step 2: Determine the sampling frame

According to Collis and Hussey (2014:131), a sampling frame includes a record of all the details of potential respondents (i.e. target population) from which the data can be collected. According to the Regulation of Interception of Communications and Provision of Communication-Related Information Act (70 of 2002), all mobile telecommunication providers must ensure that their customers register their personal details for the issuing of SIM cards (Mashida, 2013; MTN, 2017b). However, due to the POPI Act, this study was not allowed access to the mobile providers' databases since the act prohibits the attainment of personal information from South African citizens. Thus, no sampling frame was available for this study.

4.3.4.3 Step 3: Select the sampling technique

A sampling technique refers to the type of probability or non-probability sampling method that will be conducted (Benzo *et al*., 2018:152). The sampling procedure or method refers to probability and non-probability sampling where the chance of respondents to participate in the research is known and unknown respectively (Babin & Zikmund, 2016:348). As mentioned in Section 4.3.4.2,

no sampling frame was available to the researcher. Therefore, this study implemented a non-probability sampling method, whereby there is an unknown chance that a respondent will be asked to participate in this study's survey (Brown *et al*., 2018:207). Both probability and non-probability sampling consist of four types of sampling techniques, which are discussed accordingly.

(a) Probability sampling techniques

The sampling techniques that can be used in probability sampling include simple random sampling, systematic sampling, cluster sampling, and stratified sampling (Babin & Zikmund, 2016:351-354). Table 4-11 provides a comparison of the different types of probability sampling techniques with reference to the description, advantages, and disadvantages.

Table 4-11: Comparison of probability sampling techniques

Type and description	Advantages	Disadvantages
Simple random Assign each sample unit within a sampling frame a number, and accordingly select units through a random technique.	Advanced knowledge of population is limited. Ease of data analysis. Ease of finding an error.	Requires sampling frame. Knowledge of population is not used. Large errors for the same sampling size compared to stratified sampling. High costs.
Systematic An arbitrary starting point is selected from the sampling frame, followed by selecting units on a preselected interval.	Drawing sample is simplified. Easy to check.	If the selected sampling interval relates to the periodic ordering of the population, increased variability may arise.
Stratified The population is divided into groups, followed by the random selection of subsamples from each group.	Representation of all groups are ensured. Allows for the comparison of characteristics. Variability within a similar sample size is reduced.	Accurate information pertaining to the proportion within each stratum is required. Unavailable stratified lists can be costly to prepare.
Cluster Sample units are randomly selected, followed by the comprehensive observation of all sample elements, or a probability sample within the group is utilised.	Can ensure the lowest field cost. Only listing of individuals within clusters are required. Allows for the estimation of cluster and population characteristics.	Increased error compared to other probability samples of similar size. To avoid duplication of individuals, the researcher must be able to assign members within the population to unique clusters.
Multistage Selecting smaller areas in every stage by combining the first four techniques.	Dependent on the combination of techniques.	Dependent on techniques combined.

Source: Adopted from Zikmund *et al*. (2013:405).

(b) Non-probability sampling techniques

Sampling techniques used in non-probability sampling include convenience sampling, purposive or judgement sampling, quota sampling, and chain referral or snowball sampling (Malhotra *et al*., 2017:419). Due to the unavailability of a sampling frame, only non-probability sampling techniques will be employed by the study. Table 4-12 provides a comparison of the different types of non-probability sampling techniques with reference to the description, advantages and disadvantages of each type.

Table 4-12: Comparison of non-probability sampling techniques

Type and description	Advantages	Disadvantages
Convenience Sample units are selected based on convenient availability to participate or on most economical cost.	List of the population is not required.	Possible unrepresentative samples. Random sampling error estimation cannot be made. Relative risk exists when projecting data beyond the sample.
Judgement The researcher selects sample units based on characteristics required to fulfil a purpose.	Useful for certain types of forecasting. Assurance of sample to meet a specific objective.	Bias from the expert's belief can lead to unrepresentative sample. Risky when projecting data beyond the sample.
Quota The population is categorised according to certain properties, followed by the proportion of categories relative to the sample and quotas for each interviewer.	Stratification of population. List of the population is not required.	Very low cost. Researcher's categorisation of units presents bias. Population error that cannot be estimated from non-random selection.
Snowball Utilising current respondents that were selected through probability techniques to identify (i.e. refer) appropriate and additional respondents.	Members of rare populations can be located.	Bias due to sampling units not being independent. Risky when projecting data beyond the sample.

Source: Adopted from Zikmund *et al*. (2013:404).

For the purpose of this study, the non-probability convenience sampling technique was utilised where respondents were conveniently selected by fieldworkers to partake in the study. Concurrently, respondents that were at a convenient location were selected on a random basis by the fieldworker to participate in this study.

4.3.4.4 Step 4: Determine the sample size

According to Sekaran and Bougie (2016:241) the following factors determine the sample size:

- The research objectives.
- The preferred accuracy of the sample to be representative (i.e. within confidence interval).
- The level of risk to be tolerated when predicting the confidence interval (i.e. precision).
- The degree of variability inherent to the population.
- Possible constraints, such as time and cost.
- The size of the target population.

Clow and James (2014:238) proposed the following methods to determine the sample size:

- **General practice:** A sample size between 1 000 and 2 000 is deemed appropriate for the use of surveys, specifically national surveys.
- **Preceding studies:** This method provides researchers with a reference frame that can be used as a comparison to the judgements of other researchers (Zikmund *et al*., 2013:438).
- **Statistical formula:** An example of the statistical formula that can be used to determine the sample size is provided by Burns *et al*. (2017:271) and Clow and James (2014:239):

$$n = \frac{Z^2(pq)}{e^2}$$

n = sample size

Z = standard error associated with the desired confidence level

p = estimated proportion percentage within the population

q = 100 - p

e = acceptable error margin

- **Sample size calculator:** This method utilises sample size calculators that are available online (i.e. the internet) (e.g. Qualtrics, 2019; SurveyMonkey, 2019).
- **Sample size tables:** Sample sizes with regards to a finite population are indicated in a table with the appropriate confidence level also being portrayed.

As explained in Section 1.2, **this study** focuses on investigating unsatisfactory customer service in the South African mobile telecommunication industry, therefore constituting problem-solving research. According to Malhotra *et al*. (2017:418), the suggested sample size for problem-solving research is a minimum of 200 respondents, with a quintessential range of 300 to 500 respondents. According to Sekaran and Bougie (2016:265), a sample seldom requires more than 500 respondents. Table 4-13 provides the guidelines pertaining to sample sizes.

Table 4-13: Sample sizes for various types of research studies

Type of study	Number of respondents
Problem-identification research	1 000 to 2 500
Problem-solving research	300 to 500
Product testing	300 to 500
Test-market audits	300 to 500
Most types of business research	30 to 500
Research where sub-samples are used (e.g. male vs. female)	30 for each sub-sample

Source: Adopted from Malhotra *et al*. (2017:418) and Sekaran and Bougie (2016:265).

For the purpose of this study, the sample size consisted of 300 respondents, which was within the range suggested by Malhotra *et al*. (2017:418) as well as Sekaran and Bougie (2016:265).

4.3.4.5 Step 5: Execute the sampling process

This step refers to ensuring that all of the previously mentioned steps are executed correctly. With regards to this study, all of the steps within the sampling process where followed and Table 4-14 provides a summary of the sampling plan utilised in this study.

Table 4-14: Sampling plan summary for this study

Component	Description
Target population	South African mobile telecommunication users.
Sampling elements	All individuals who have been making use of the services of one of the main mobile telecommunication providers (Vodacom, MTN, Cell C, Telkom) in South Africa.
Extent and timeframe	South Africa, 15 July 2019 to 13 September 2019.
Sampling frame	No available sampling frame.
Sampling method	Non-probability, convenience sampling.
Sample size	300 respondents.

Source: Researcher's own compilation.

4.3.4.6 Step 6: Validate the sample

Malhotra *et al*. (2018:418) state that this step is used to screen for qualifying respondents to partake in the data collection process if they meet the required criteria. **Pertaining to this study**, the screening question utilised was discussed in Section 4.3.3.2.

4.3.5 Step 5: Design the data collection method

After the data collection method and sampling plan has been developed, the data can be collected (Brown & Suter, 2014:125). Silver *et al*. (2013:166) accentuate the importance of this stage and state that the information gathered should be sufficient whilst avoiding errors (i.e. sampling and non-sampling), regardless of the sampling method (i.e. probability or non-probability) used. Burns *et al*. (2017:290) suggest that control mechanisms should be implemented to ensure that non-sampling errors (i.e. fieldworker or respondent errors) are avoided or minimised and that the quality of data is maximised. Each error type and the appropriate control mechanism that can be used to minimise the effect of the error is indicated in Table 4-15 below.

Table 4-15: Data collection errors and their control mechanisms

Error type	Appropriate control mechanisms
Cheating	• Supervision • Validation
Leading	• Supervision • Validation
Interviewer characteristics	• Selection and training of interviewers • Orientation sessions and role-playing
Misunderstandings	• Selection and training of interviewers • Orientation sessions and role-playing
Falsehoods	• Ensuring anonymity and confidentiality • Incentives • Validation checks
Nonresponse	• Ensuring anonymity and confidentiality • Incentives • Third-person technique
Misunderstanding	• Well-drafted questionnaire • Direct questions
Guessing	• Well-drafted questionnaire • Response options, such as “unsure”
Attention loss, distractions, fatigue	• Reversal of scale endpoints • Prompters

Source: Adopted from Burns *et al*. (2017:290-299).

The aforementioned error types were taken into consideration during this study's data collection. Due to the quantitative nature of the study, most fieldworker errors were avoided. In addition, the control mechanisms of anonymity and confidentiality were used, in conjunction with a well-structured questionnaire (with direct questions) to minimise respondent errors.

4.3.5.1 Data collection method in this study

Before the data collection process could commence, the researcher had to obtain the relevant ethical clearance from the North-West University. Upon review, the Economic and Management Sciences Research Committee granted (low risk) ethical clearance and an ethics number was issued (see Appendix B). Upon attaining ethical clearance, data was collected by means of a self-administered questionnaire which was distributed via drop-off (through fieldworkers) as well as online (through social media platforms). The fieldworkers included four BCom Honours (Entrepreneurship and Marketing Management) students from the North-West University who were trained as fieldworkers for this study. The fieldworkers were deemed competent in collecting data, since they had a research subject during the undergraduate degree as well as in their Honours degree at the time of data collection. Furthermore, the data collection period ranged from 15 July 2019 until 13 September 2019.

4.3.5.2 Data management

Quinlan *et al*. (2015:313) accentuate the importance of managing data effectively during and after the data collection process and is concerned with how the data will be stored. Hence, data should be stored correctly, safely and securely since it is an ethical requirement of the North-West University's Economic and Management sciences research committee. **In this study**, the data was securely stored at the office of the supervisor and will be kept safely for a period of three years, after which it will be destroyed.

4.3.6 Step 6: Analyse the data

Cooper and Schindler (2014:86) postulate that the collected data is still unprocessed and does not contain the necessary information to address the research objectives. The authors further state that data analysis assists a researcher in converting the raw data into meaningful information by reducing the data into a controllable size, developing summaries, searching for patterns, and applying statistical methods and techniques. As mentioned in Section 1.6.2.5, the data was analysed by the North-West University's Statistical Consultation Services (see Appendix C).

Before the actual data analysis can commence, the data must first be prepared. Therefore, the following section describes the data preparation process applicable to this study.

4.3.6.1 Data preparation

The data analysis process, as described by Cooper and Schindler (2014:376), commences with the preparation and description of the collected data to simplify the analysis process. Hair *et al*. (2017:248) assert that the data preparation process consists of the following four steps.

- **Step 1: Data validation**

  This step entails the process of determining whether the implemented data collection method was conducted thoroughly and correctly, thus being free of fraud or bias (Hair *et al*., 2017:249). Hague *et al*. (2016:212) accentuate the importance of data quality and maintain that identifying errors within an already analysed dataset is difficult. Hence, data validation is of pivotal importance before commencing with the data analysis process.

- **Step 2: Data editing and coding**

  This step refers to the actions of inspecting the completed questionnaires to ensure that they were all completed and are legible (Babin & Zikmund, 2016:70). These editing actions can be conducted concomitantly with fieldwork or upon completion of data collection (Cooper & Schindler, 2014:377). Thus, data editing serves the purpose of ensuring that the dataset is comprehensive, error-free and can be used in further analysis (McDaniel & Gates, 2015:359). Data coding refers to the assignment of values to data variables, with the purpose of grouping responses into numerical categories (Cooper & Schindler, 2014:379; Mooi *et al*., 2018:98).

- **Step 3: Data entry**

  This step involves the process of submitting the data codes into a matrix (e.g. a statistical programme) for tabulation and analysis (Clow & James, 2014:372). Various applications and software exist for statistical analysis (Swanepoel *et al*., 2018:10). **For the purpose of this study**, the Statistical Package for Social Sciences (SPSS version 25) was utilised.

- **Step 4: Data tabulation**

  Tabulation, as described by Hair *et al*. (2017:261), is the process where all the responses within a certain category is counted. Clow and James (2014:374) assert that two types of data tabulation exist, namely one-way tabulation and cross-tabulation. One-way tabulation consists of the total number of responses of each answer within every question, and cross-tabulation the addition of all the responses within several response categories.

After the preparation of the data, the reliability and validity of measures must first be examined. Hence, the next section discusses reliability and validity.

4.3.6.2 Reliability and validity

According to McDaniel and Gates (2015:133) as well as Sekaran and Bougie (2016:220), the quality of the data is reflected by the reliability and validity of the measures. Therefore, if a researcher requires accurate interpretation of the data, the reliability and validity should be tested before the data is analysed. Babin and Zikmund (2016:281) state that reliability measures the preciseness of a measure, compared to validity that represents the accuracy of the measure. Therefore, the errors associated with the measurement can be minimalised through the establishment of reliability and validity (Field, 2018:15).

4.3.6.2.1 Reliability

Reliability is described as the extent of error-free randomness within a measure (Feinberg *et al*., 2013:128). Therefore, reliability is concerned with the measure's ability to constantly produce similar results regarding the variable (i.e. construct) under investigation (Brown & Suter, 2014:95). Thus, reliability is attributed as a measure of consistency (Hair *et al*., 2017:167). Clow and James (2014:38) propose three methods of assessing reliability, namely test-retest, equivalent forms, and internal consistency, which are accordingly discussed.

- **Test-retest reliability:** According to Bryman and Bell (2015:168), this method requires respondents to repeat the measure twice, but at different times. The rationale behind this method is to expose any variations that exist between the two sampled measures (Hair *et al*., 2017:167).

- **Equivalent forms reliability:** According to Sreejesh *et al*. (2014:115), equivalent forms reliability can be utilised to surmount the problems concomitant with the test-retest method, by developing two equivalent measurement instruments. The two measurement instruments are then completed by the same respondents (Clow & James, 2014:268). The results obtained from the two instruments are subsequently compared to determine the equivalent reliability (McDaniel & Gates, 2013:217; Sreejesh *et al*., 2014:115).

- **Internal consistency reliability:** This method refers to the homogeneity present within a measure, and can be determined by means of two methods, namely split-half or coefficient alpha (Babin & Zikmund, 2016:280).
  - According to Collis and Hussey (2014:275), the split-half method is conducted by separating the scale items into two identical groups, followed by a comparison of the correlation coefficient of the two groups.

- The most popular coefficient alpha used to establish internal consistency is the Cronbach's coefficient alpha (Pallant, 2016:6). Hair *et al*. (2017:168) posit that the value of Cronbach's alpha coefficient ranges from 0 (no internal consistency) to 1 (total internal consistency), with an acceptable result of equal to or above 0.7. Table 4-16 indicates the interpretation of the various Cronbach's alpha values.

Table 4-16: Cronbach's alpha value interpretation

Value	Rating
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$\alpha < 0.5$	Unacceptable

Source: Adopted from George and Mallery (2016:240).

To determine the reliability **of this study's** scales, the internal consistency reliability method was used, whereby the Cronbach's alpha values were calculated for the scales to determine whether the scales were reliable.

4.3.6.2.2 Validity

According to Collis and Hussey (2014:53), validity can be defined as the ability and extent of an instrument to measure a phenomenon for which it was developed to measure (i.e. the scale measures that the researcher intended to measure). The following types of validity can be distinguished (Malhotra *et al*., 2017:362):

- **Content validity**

  This method of determining validity encompasses the appropriateness of the measurement with reference to the underlying construct, as determined subjectively by an expert (Feinberg *et al*., 2013:131; Sekaran & Bougie, 2016:221).

- **Criterion validity**

  This refers to the correlation ability of a measure with regards to standard measures found in similar constructs (Babin & Zikmund, 2016:282). If both the data from the measure and similar criteria are collected concomitantly, *concurrent validity* is established. However, if the scale predicts future criteria, then *predictive validity* is confirmed (Field, 2018:53).

- **Construct validity**

  Cooper and Schindler (2014:259) as well as Sekaran and Bougie (2016:222) assert that construct validity is focused on the comparison of the theory regarding a construct with the actual results obtained through the measurement instrument (i.e. the instrument fulfilled its measurement purpose). Zikmund *et al*. (2013:308) propose two types of construct validity, namely convergent and discriminant validity.

  Convergent validity refers to the extent of correlated scores between different scales that are intended to measure the same construct (Cooper & Schindler, 2014:259). *Discriminant validity* is confirmed when a theoretical prediction of lack of correlation between two variables is proved empirically (Sekaran & Bougie, 2016:222).

For this study the validity of the measurement instrument was tested through content validity, as the SERVQUAL scale is a popular instrument used to measure service quality, and thus the scale's validity has already been confirmed by numerous studies. Construct validity was also tested through the means of calculating the Kaiser-Meyer-Olkin measure of sample adequacy (KMO).

4.3.6.3 Statistical data analysis strategy followed in this study

Due to the quantitative nature of this study, various descriptive and inferential statistics can be deployed to transform the data into usable information. A description of the descriptive and inferential statistics used in this study follows below.

4.3.6.3.1 Descriptive statistics

According to Hair *et al*. (2017:264), descriptive statistics serve the purpose of summarising and describing the gathered data. Brown *et al*. (2018:259) posit that descriptive statistics involve the distribution of the responses on a certain variable of interest to the researcher. Saunders *et al*. (2016:527) state that descriptive statistics assist the researcher in numerically describing and comparing variables under investigation and include measures of central tendency and dispersion. *Central tendency* is a statistical measure that indicates the typical or average scores and includes the median (i.e. the middle point value of all the scores arranged from smallest to largest), mean (i.e. average value of all the scores) (Sarstedt & Mooi, 2019:110-111) and mode (i.e. the most occurring value in the dataset) (Burns *et al*., 2017:319). *Dispersion or measures* of variability includes: frequency and percentage distribution, range (i.e. distance between minimum and maximum values) and standard deviation (i.e. the extent to which there is variation in the values) (Brown *et al*., 2018:259; Burns *et al*., 2017:320-321).

The descriptive statistical techniques used **in this study** are accordingly discussed:

- **Frequency distribution**

  Frequencies indicate the number of responses pertaining to a specific variable (Brown & Suter, 2014:148). A frequency distribution summarises the data collected and provides a depiction or illustration through the use of a table or chart to indicate the frequency in occurrence of a variable (Babin & Zikmund, 2016:363).

- **Percentages**

  Cooper and Schindler (2014:420) state that percentages can be used for two purposes; (a) the dataset can be simplified into a range from 0 to 100, and (b) allows standardisation with 100 serving as the reference frame. This descriptive statistical type is simple yet effective in the indication of the relative relationship between variables due to a better presentation of the relative significance of the data (Wiid & Diggines, 2015:252).

- **Mean**

  According to Hair *et al*. (2017:172), the mean (x̄) represents an arithmetic average calculated from the collected data. The mean can be calculated through the use of the following formula (Brown *et al*., 2018:260; Burns *et al*., 2017:320; Zikmund *et al*., 2013:417):

$\bar{X} = \frac{\sum X_i}{n}$	$\bar{X}$ = the mean X_i = individual score n = number of values (i.e. sample size) $\sum$ = summation of all X_i values

- **Standard deviation**

  Brown *et al*. (2018:260), Burns *et al*. (2017:322), Mooi *et al*. (2018:115), and Zikmund *et al*. (2013:420) describe the standard deviation as an index referring to the variability of the distribution of the data, which can be measured with the following formula:

$S = \sqrt{S^2} = \sqrt{\frac{\sum(X_i - \bar{X})^2}{n-1}}$	S = standard deviation X_i = each score $\bar{X}$ = the mean n = number of values (i.e. sample size) $\sum$ = summation of values

4.3.6.3.2 Inferential statistics

According to Burns *et al*. (2017:318), the purpose of inferential statistics is to attain conclusions pertaining to the sample, meaning that inferential statistics is dependent on the sample and its characteristics. **For this study**, the following inferential statistical methods were utilised:

- **Independent-samples t-test**

  This technique serves the purpose of determining whether differences exist between two groups on a continuous measure based on a specific attribute or variable (Brown & Suter, 2014:164). Field (2018:449) provides the following formula to calculate the independent samples t-test:

$t = \frac{\bar{X}_1 - \bar{X}_2}{s_{\bar{X}_1 - \bar{X}_2}}$	t = independent-samples t-test $\bar{X}_1$ = group 1 mean $\bar{X}_2$ = group 2 mean $s_{\bar{X}_1 - \bar{X}_2}$ = combined standard error for mean difference

- **Paired-samples t-test**

  Brown and Suter (2014:166) accentuate that paired-samples t-tests are used to compare two means that are provided by the same sample. Babin and Zikmund (2016:425) provide the following formula for calculating the value of the paired-samples t-test:

$t = \frac{\bar{d}}{Sd/\sqrt{n}}$	t = paired-samples t-test $\bar{d}$ = average difference between means Sd = observed standard deviation between means n = number of observed differences in means

- **One-way ANOVA**

  According to Clow and James (2014:408), one-way ANOVAs are utilised when a comparison between three or more means are required. Wiid and Diggines (2015:282) state that this technique is used to test the relationship between a single dependent variable and a single independent variable that represents a continuous and categorical variable respectively.

- **Standard multiple regression**

  This statistical technique evaluates each independent variable based on the variable's predictive power after all the variables are entered simultaneously into the calculation model (Pallant, 2016:150). Therefore, the type of relationship that exist between a dependent and independent variable is tested (Wiid & Diggines, 2015:290). Thus, the effect that two or more independent variables exert on a continuous dependent variable is tested simultaneously, to describe the one dependent variable from investigating the independent variables (Babin & Zikmund, 2016:434).

Based on the abovementioned discussions, Table 4-17 summarises the statistical techniques which were utilised in this study to achieve the secondary objectives and test the hypotheses.

Table 4-17: Summary of statistical techniques used in this study

Hypothesis		Statistical test to be used
H_1:	Respondents of different genders differ statistically significantly in terms of their service quality expectations, experiences, and satisfaction towards their mobile telecommunication provider.	Independent samples t-test
H_2:	Respondents with different types of subscriptions differ statistically significantly in terms of their service quality expectations, experiences, and satisfaction towards their mobile telecommunication provider.	Independent samples t-test
H_3:	Respondents' service quality expectations differ statistically significantly from the service quality they experienced from their mobile telecommunication provider.	Paired samples t-test
H_4:	Service quality has a positive and significant effect on respondents' satisfaction with their mobile telecommunication provider.	Standard multiple regression

Source: Researcher's own compilation.

4.3.7 Stage 7: Report the results and formulate conclusions

The final stage of the business research process is concerned with the findings, analysis, interpretation, conclusions, and recommendations obtained from the empirical results of a research study (Cooper & Schindler, 2016:504). Burns *et al*. (2017:70) emphasise the importance of this stage, and postulate that the results should be adequately conveyed in the simplest manner possible, since it will result in clear and unambiguous reporting of the results which will ultimately ensure that decision-makers do not ignore significant results due to complex discussions.

For this study, the results and findings are presented in Chapter 5, whereas the conclusions and recommendations (based on the results and findings) are presented in Chapter 6.

4.4 CONCLUSION

This chapter presented the research methodology of this study, and specifically applied the business research process, where each stage within the process is discussed and the appropriate methods utilised in this study are identified, applied and explained. The last stage in the business research process, which is concerned with communicating the results and findings as well as the conclusions and recommendations, is discussed in Chapters 5 and 6.

Consequently, the following chapter presents the results and findings of this study as obtained from the data collection data analysis.

CHAPTER 5

EMPIRICAL RESULTS AND FINDINGS

5.1 INTRODUCTION

Chapter 4 presented the research methodology that was followed in this study, where the seven-stage business research process was applied. Consequently, this chapter forms a part of the seventh and final stage of the business research process, and aims to report the results from the empirical data analysis.

This chapter commences with a brief discussion of the response realisation rate. The results and findings of this study's empirical investigation is presented chronologically based on the questionnaire outline. Thus, the descriptive statistics concerning the sample and the constructs of the study are reported, followed by the reliability and validity testing of the measurement scales. Thereafter, the inferential results are reported in order to test the formulated hypotheses and address the secondary objectives of the study. The chapter concludes with a summary of the main findings derived from the empirical investigation.

5.2 RESPONSE REALISATION RATE

As noted in Chapter 4 (Section 4.3.5), various errors can occur throughout the data collection process, and can therefore influence the quality and validity of the data. As a result, not all questionnaires are always fully completed where required, since a respondent can fail to answer a question (i.e. non-response error) due to the respondent that stops participation during the process, or do not answer a question of interest (Brown *et al*., 2018:226; Burns *et al*., 2017:300).

In this study, only questionnaires with a non-response (i.e. missing value) in the construct measurement section (i.e. Sections B and C) were discarded to ensure optimal data quality. As mentioned in Chapter 4 (Section 4.3.4.4), the proposed sample size for this study was 300 respondents. Table 5-1 provides a summary of the completed number of questionnaires, the number of discarded questionnaires, the final number of questionnaires, and the final realisation rate expressed in percentage.

Table 5-1: Response realisation rate

Proposed sample size	300
Number of completed questionnaires	306
Number of discarded questionnaires	6
Number of final useable questionnaires (completed minus discarded)	300
Realisation rate (final divided by proposed)	100%

Source: Researcher's own calculation from the empirical results.

As indicated in Table 5-1, the number of useable questionnaires is an exact match to the proposed sample size, thus indicating that the proposed sample size was realised. However, since the demographic questions (in Section A of the questionnaire) were not compulsory to answer, some respondents did not provide complete demographic information. However, these questionnaires were not discarded since the vital sections of the questionnaire (construct measurement) were complete and usable. As a result, the valid percentages (excluding missing values) were reported for the sample profile variables.

5.3 SAMPLE PROFILE

The questionnaire included a screening question to ensure that the desired target population participated in the data collection. The screening question asked respondents to indicate which South African mobile telecommunication provider's services they utilise. Consequently, the screening question indicated respondents' main mobile telecommunication provider. However, for ethical purposes, the results from the screening question will not be provided, since this study does not have the required permission from South African mobile telecommunication providers to disclose this information. Notwithstanding, the results from the screening question did not have any influence on the outcome of this study, since it was solely used to identify qualifying respondents.

The first section of the questionnaire (Section A) was designed to obtain background information pertaining to respondents for the purpose of compiling a sample profile, and as such addressing secondary objectives 1 and 6 (see Section 1.5). Table 5-2 provides the results obtained from the data regarding the sample in frequencies (F) and percentages (%) to portray the sample profile of the respondents who participated in the study.

Table 5-2: Sample profile

Sample profile variable	F	%
Gender		
Male	143	48.0
Female	155	52.0
Province of residence		
Gauteng	95	31.9
Limpopo	10	3.4
North West	120	40.3
Free State	22	7.4
KwaZulu Natal	5	1.7
Western Cape	9	3.0
Eastern Cape	6	2.0
Northern Cape	12	4.0
Mpumalanga	19	6.4
Ethnicity		
African	79	26.5
Asian	1	0.3
Coloured	20	6.7
Indian	0	0.0
White	198	66.4
Duration with provider		
Less than 1 year	11	3.7
1 to 3 years	46	15.3
4 to 6 years	56	18.7
7 to 9 years	85	28.3
10 years or longer	102	34.0
Type of subscription with provider		
Prepaid	83	27.7
Contract	193	64.3
Data only SIM	13	4.3
Wireless internet router	10	3.3
Other	1	0.3

Source: Researcher's own calculation from the empirical results.

As evident from Table 5-2, male (48.0%) and female (52.0%) respondents are almost equally represented. The majority of the respondents lived in the North West Province (40.3%), and 66.4% were white. Furthermore, the majority of respondents (34.0%) had been with their mobile telecommunication provider for ten years or longer. Thus, indicating that the participating respondents displayed signs of long-term commitment with their mobile telecommunication provider and therefore most of the customers were deemed loyal towards their mobile telecommunication provider. In addition, the majority of respondents (64.30%) indicated that they were subscribed to their mobile telecommunication provider's services through a contract.

The following main finding can be deduced concerning the sample profile of this study:

Main finding 1: The sample comprised predominantly white (male and female) respondents from the North West Province, with a contract subscription from their mobile telecommunication provider, and who have been using the services of their provider for ten years or longer.

The next section reports the results of the rating question used to measure certain elements according to the level of importance it represents to the respondents.

5.3.1 Respondents' rating of important elements

The questionnaire also had a question in Section A where respondents had to rate certain elements of their mobile telecommunication provider based on the level of importance the element constitutes. The interpretation of the calculated mean scores ($\bar{x}$) is based on the scale descriptions of the five-point Likert scale used in the questionnaire (see Appendix A) to rate the elements. The scale ranged from "1 = not important at all" to "5 = extremely important".

Table 5-3 provides the mean scores ($\bar{x}$) and standard deviations (SD) of the rated elements based on the level of importance the element signifies to the respondents.

Table 5-3: Importance of elements

Element	$\bar{x}$	SD
Affordability	3.94	1.085
Customer service	4.06	1.016
Geographical coverage	4.25	0.991
Internet connectivity	4.47	0.867
Variety of products	3.24	1.151

Source: Researcher's own calculation from the empirical results.

As evident from Table 5-3, the element that scored the highest level of importance was “Internet connectivity” ($\bar{x}$ = 4.47; SD = 0.867). The lowest scoring element of importance was “Variety of products” ($\bar{x}$ = 3.24, SD = 1.151). Therefore, the following main findings can be deduced:

Main finding 2: Respondents regarded internet connectivity as the most important element provided by their mobile telecommunication provider.

Main finding 3: Respondents regarded the variety of products offered by their mobile telecommunication provider as the least important element.

The next section indicates the reliability and validity of the scales used in measuring the constructs of this study before the rest of the secondary objectives are addressed.

5.4 RELIABILITY AND VALIDITY

The next section provides the reliability and validity testing of the scales utilised in this study to measure service quality (expectations and experiences) and customer satisfaction.

5.4.1 Reliability

The reliability of the measurement scales was tested through the calculation of the Cronbach’s alpha values. Pallant (2016:104) asserts that the Cronbach’s alpha values used to measure the internal consistency of a scale’s reliability should be 0.70 or greater to be acceptable, with a preferred value of 0.80. Table 5-4 provides the Cronbach’s alpha values (α-values) for the scales used in this study and indicates whether the scale is reliable or not.

Table 5-4: Reliability of this study’s measurement instrument

Variable	Number of items	α-value	Reliable / Not reliable
Service quality expectations	22	0.946	Reliable
Tangibles	4	0.835	Reliable
Reliability	5	0.880	Reliable
Responsiveness	4	0.834	Reliable
Assurance	4	0.837	Reliable
Empathy	5	0.851	Reliable

Table 5-4: Reliability of this study's measurement instrument (continues)

Variable	Number of items	α-value	Reliable / Not reliable
Service quality experiences	22	0.957	Reliable
Tangibles	4	0.813	Reliable
Reliability	5	0.905	Reliable
Responsiveness	4	0.863	Reliable
Assurance	4	0.852	Reliable
Empathy	5	0.867	Reliable
Customer satisfaction	4	0.901	Reliable

Source: Researcher's own calculation from the empirical results.

It is evident from Table 5-4 that all the Cronbach's alpha values for the scales used in this study are larger than 0.70, which indicates that the scales used to measure the constructs in this study are reliable (Babin & Zikmund, 2016:281). Furthermore, the calculated Cronbach's alpha values ranged between 0.813 and 0.905, which corresponds with an internal consistency reliability level deemed good and excellent (George & Mallery, 2016:240). Therefore, the internal consistency reliability of the scales used in this study are confirmed, which signifies that the scales utilised to measure service quality and customer satisfaction in the South African mobile telecommunication industry are reliable.

The following main finding can therefore be deduced:

Main finding 4: All the measurement scales used to measure the service quality and customer satisfaction constructs of this study are reliable.

5.4.2 Validity

Content validity of the SERVQUAL scale used in this study's measurement instrument has already been confirmed, since the SERVQUAL scale is a popular instrument used to assess service quality within an industry. However, in order to assess the construct validity of the measurement scales, a measure of sample adequacy (MSA) was calculated.

The MSA utilised the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity through conducting a principal component analysis. According to Field (2018:797), the value for a KMO statistic must be between 0 and 1, where 0 represents the inappropriateness of conducting factor analysis and 1 represents the ability to conduct factor analysis. Bartlett's test of sphericity is used

to determine whether the variables are uncorrelated (Malhotra, 2018:711). Therefore, Bartlett's test of sphericity indicates the correlations of the principle component analysis, and thus represents these correlations with a p-value (Sarstedt & Mooi, 2019:265).

Table 5-5 provides the KMO and p-values for the scales used to measure the constructs of this study. Table 5-5 also provides the percentage of variance explained, as well as the communalities for the different factors.

Table 5-5: Construct validity

Variable	Factors extracted	KMO	p-value (Bartlett)	% of variance explained	Communalities
Service quality expectations					
Tangibility	1	0.803	<0.001	67.02	0.628 – 0.711
Reliability	1	0.872	<0.001	68.31	0.580 – 0.754
Responsiveness	1	0.807	<0.001	67.15	0.647 – 0.732
Assurance	1	0.809	<0.001	68.13	0.560 – 0.761
Empathy	1	0.849	<0.001	62.95	0.557 – 0.694
Service quality experience					
Tangibility	1	0.785	<0.001	64.15	0.571 – 0.668
Reliability	1	0.872	<0.001	72.69	0.604 – 0.800
Responsiveness	1	0.786	<0.001	70.95	0.666 – 0.758
Assurance	1	0.801	<0.001	69.40	0.595 – 0.764
Empathy	1	0.848	<0.001	65.78	0.386 – 0.775
Customer satisfaction	1	0.789	<0.001	77.23	0.652 – 0.820

Source: Researcher's own calculation from the empirical results.

Based on Table 5-5, it is evident that:

- With regards to the *tangibility* dimension that measured respondents' service quality *expectations*, the KMO value (0.803) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the tangibility dimension can be reduced to one factor with 67.02% of the variance explained and communalities ranging from 0.628 to 0.711.

- With regards to the *reliability* dimension that measured respondents' service quality *expectations*, the KMO value (0.872) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the reliability dimension can be reduced to one factor with 68.31% of the variance explained and communalities ranging from 0.580 to 0.754.

- With regards to the *responsiveness* dimension that measured respondents' service quality *expectations*, the KMO value (0.807) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the tangibility dimension can be reduced to one factor with 67.15% of the variance explained and communalities ranging from 0.647 to 0.732.

- With regards to the *assurance* dimension that measured respondents' service quality *expectations*, the KMO value (0.809) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the tangibility dimension can be reduced to one factor with 68.13% of the variance explained and communalities ranging from 0.560 to 0.761.

- With regards to the *empathy* dimension that measured respondents' service quality *expectations*, the KMO value (0.849) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the tangibility dimension can be reduced to one factor with 62.95% of the variance explained and communalities ranging from 0.557 to 0.694.

- With regards to the *tangibility* dimension that measured respondents' service quality *experiences*, the KMO value (0.785) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the tangibility dimension can be reduced to one factor with 64.15% of the variance explained and communalities ranging from 0.571 to 0.668.

- With regards to the *reliability* dimension that measured respondents' service quality *experiences*, the KMO value (0.872) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the tangibility dimension can be reduced to one factor with 72.69% of the variance explained and communalities ranging from 0.604 to 0.800.

- With regards to the *responsiveness* dimension that measured respondents' service quality *experiences*, the KMO value (0.786) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the tangibility dimension can be reduced to one factor with 70.95% of the variance explained and communalities ranging from 0.666 to 0.758.

- With regards to the *assurance* dimension that measured respondents' service quality *experiences*, the KMO value (0.801) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the tangibility dimension can be reduced to one factor with 69.40% of the variance explained and communalities ranging from 0.595 to 0.764.

- With regards to the *empathy* dimension that measured respondents' service quality *experiences*, the KMO value (0.848) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the tangibility dimension can be reduced to one factor with 65.78% of the variance explained and communalities ranging from 0.386 to 0.775.

- With regards to *customer satisfaction*, the KMO value (0.789) and Bartlett's test of sphericity ($p < 0.001$) indicate that factor analysis is appropriate. Furthermore, the tangibility dimension can be reduced to one factor with 77.23% of the variance explained and communalities ranging from 0.652 to 0.820.

The following main finding can be deduced from the abovementioned results:

Main finding 5: The scales used to measure the constructs of this study (i.e. service quality and customer satisfaction) are valid.

5.5 RESPONDENTS' SERVICE QUALITY EXPECTATIONS OF THEIR MOBILE TELECOMMUNICATION PROVIDER

The interpretation of the calculated mean scores is based on the scale descriptions of the five-point Likert scale used in the questionnaire (see Appendix A) to measure respondents' expectations from their mobile telecommunication provider. The scale ranged from "1 = I do not expect this" to "5 = I always expect this". Table 5-6 reports the descriptive statistics with the mean scores ($\bar{x}$) and standard deviations (SD) of respondents' service quality expectations, followed by a discussion of the results and main findings.

Table 5-6: Descriptive statistics for service quality expectations

Dimension of service quality expectations	$\bar{x}$	SD
Tangibles	**4.06**	**0.811**
The mobile provider has modern-looking equipment at its physical outlets (e.g. computers, furniture).	3.93	1.039
The physical facilities of the mobile provider are visually appealing (e.g. building, entrance, layout).	3.98	0.983
The employees working at the mobile provider's physical outlet are neat-appearing (e.g. clothing, uniforms).	4.23	0.958
Materials associated with the service provided by the mobile provider are visually appealing (e.g. forms, display boards, files).	4.10	0.985
Reliability	**4.47**	**0.700**
When the mobile provider promises to do something by a certain time, it does so.	4.50	0.913
The mobile provider shows a sincere interest when I have a problem.	4.51	0.820
The mobile provider performs its service right the first time.	4.51	0.803
The mobile provider delivers on its customer service promises.	4.54	0.798
The mobile provider insists on error-free records.	4.27	0.916

Table 5-6: Descriptive statistics for service quality expectations (continues)

Dimension of service quality expectations	$\bar{x}$	SD
Responsiveness	**4.45**	**0.674**
The mobile provider informs me of the services that will be performed and when it will be performed.	4.44	0.793
I receive prompt service from the mobile provider.	4.45	0.818
The mobile provider's employees are always willing to help me.	4.56	0.767
The mobile provider's employees are never too busy to respond to my requests.	4.35	0.915
Assurance	**4.43**	**0.706**
The mobile provider's employees instil confidence in me.	4.23	0.976
I feel safe in my transactions with the mobile provider.	4.53	0.819
The mobile provider's employees are consistently polite to me.	4.44	0.846
The mobile provider's employees are knowledgeable enough to answer my questions.	4.53	0.794
Empathy	**4.24**	**0.746**
I receive individual attention from the mobile provider as a whole.	4.19	1.011
The mobile provider has convenient operating hours.	4.38	0.843
I receive special attention from the mobile provider's employees.	4.04	1.002
The mobile provider's employees have my best interests at heart.	4.29	0.943
The mobile provider's employees understand my specific needs.	4.32	0.906
Overall service quality expectations	4.33	0.613

Source: Researcher's own calculation from the empirical results.

As evident in Table 5-6 with regards to the *tangibility* dimension of service quality expectations, the overall mean score was $\bar{x}$ = 4.06 (SD = 0.811), meaning that respondents expect the tangibility items to be delivered by their mobile telecommunication provider most of the time. Furthermore, the item "The employees working at the mobile provider's physical outlet are neat-appearing (e.g. clothing, uniforms)" scored the highest ($\bar{x}$ = 4.23; SD = 0.958), and the statement "The mobile provider has modern-looking equipment at its physical outlets (e.g. computers, furniture)" scored the lowest ($\bar{x}$ = 3.93; SD = 1.039).

Regarding the *reliability* dimension of service quality expectations, it is evident that respondents expect their mobile telecommunication provider to be reliable most of the time ($\bar{x}$ = 4.47; SD = 0.700). Specifically, the item "The mobile provider delivers on its customer service promises" realised the highest mean score ($\bar{x}$ = 4.54; SD = 0.798), and the lowest mean score realised was on the item "The mobile provider insists on error-free records" ($\bar{x}$ = 4.27; SD = 0.916).

With regards to the *responsiveness* dimension of service quality expectations, respondents indicated that they expect the items of their mobile telecommunication provider's responsiveness most of the time ($\bar{x}$ = 4.45; SD = 0.674). The highest mean score realised was on the item "The mobile provider's employees are always willing to help me" ($\bar{x}$ = 4.56; SD = 0.767), and the lowest mean score realised was on the item "The mobile provider's employees are never too busy to respond to my requests" ($\bar{x}$ = 4.35; SD = 0.915).

Pertaining to the *assurance* dimension of service quality expectations, the overall mean score was $\bar{x}$ = 4.43 (SD = 0.706), meaning that respondents expect the items of their mobile telecommunication provider's assurance most of the time. Specifically, the items "I feel safe in my transactions with the mobile provider" and "The mobile provider's employees are knowledgeable enough to answer my questions" scored the highest ($\bar{x}$ = 4.53; SD = 0.819 and 0.794 respectively). The lowest mean score realised was on the item "The mobile provider's employees instil confidence in me" ($\bar{x}$ = 4.23; SD = 0.976).

Table 5-6 also indicates that the *empathy* dimension of service quality expectations scored an overall mean score of $\bar{x}$ = 4.24 (SD = 0.746), meaning that respondents expect the items of their mobile telecommunication provider's empathy most of the time. Specifically, the item "The mobile provider has convenient operating hours" scored the highest ($\bar{x}$ = 4.38; SD = 0.843), and the lowest mean score realised was on the item "I receive special attention from the mobile provider's employees" ($\bar{x}$ = 4.04; SD = 1.002).

Regarding overall *service quality expectations*, it is evident that respondents have relatively high expectations of their mobile telecommunication provider, and expect the services to be delivered accurately ($\bar{x}$ = 4.33; SD = 0.613).

Based on the abovementioned, the following main findings can be deduced:

Main finding 6: With regards to the *tangibility* dimension, the majority of respondents indicated that they expect the employees of their mobile telecommunication provider to appear neatly.

Main finding 7: Pertaining to the *reliability* dimension, the majority of respondents indicated that they expect their mobile telecommunication provider to deliver on its customer service promises.

Main finding 8: With regards to the *responsiveness* dimension, most respondents indicated that they expect the employees of their mobile telecommunication provider to assist them with queries.

Main finding 9: With reference to the *assurance* dimension, most of the respondents indicated that they expect to feel safe in their transactions with their mobile telecommunication provider, and that the employees should be knowledgeable.

Main finding 10: With regards to the *empathy* dimension, most respondents indicated that they expect their mobile telecommunication provider to have convenient operating hours.

Main finding 11: Pertaining to *overall service quality*, the majority of respondents indicated that they expect their mobile telecommunication provider to be reliable.

Main finding 12: Pertaining to *overall service quality*, the majority of respondents indicated that tangibles are the least important expectation from their mobile telecommunication provider.

5.6 RESPONDENTS' SERVICE QUALITY EXPERIENCES OF THEIR MOBILE TELECOMMUNICATION PROVIDER

Reporting of the calculated mean scores is based on the scale descriptions of the five-point Likert scale used in the questionnaire (see Appendix A) to measure respondents' experiences with their mobile telecommunication provider. The scale ranged from "1 = Negative" to "5 = Positive". Table 5-7 provides the mean scores ($\bar{x}$) and standard deviations (SD) of respondents' service quality experiences.

Table 5-7: Descriptive statistics for service quality experiences

Dimension of service quality experiences	$\bar{x}$	SD
Tangibles	**3.90**	**0.724**
The mobile provider has modern-looking equipment at its physical outlets (e.g. computers, furniture).	3.83	0.888
The physical facilities of the mobile provider are visually appealing (e.g. building, entrance, layout).	3.99	0.894
The employees working at the mobile provider's physical outlet are neat-appearing (e.g. clothing, uniforms).	3.87	0.906
Materials associated with the service provided by the mobile provider are visually appealing (e.g. forms, display boards, files).	3.91	0.931

Table 5-7: Descriptive statistics for service quality experiences (continues)

Dimension of service quality experiences	$\bar{x}$	SD
Reliability	**3.44**	**0.934**
When the mobile provider promises to do something by a certain time, it does so.	3.41	1.089
The mobile provider shows a sincere interest when I have a problem.	3.37	1.133
The mobile provider performs its service right the first time.	3.48	1.093
The mobile provider delivers on its customer service promises.	3.55	1.070
The mobile provider insists on error-free records.	3.39	1.099
Responsiveness	**3.61**	**0.901**
The mobile provider informs me of the services that will be performed and when it will be performed.	3.71	1.082
I receive prompt service from the mobile provider.	3.71	1.034
The mobile provider's employees are always willing to help me.	3.59	1.073
The mobile provider's employees are never too busy to respond to my requests.	3.43	1.091
Assurance	**3.60**	**0.900**
The mobile provider's employees instil confidence in me.	3.38	1.077
I feel safe in my transactions with the mobile provider.	3.77	1.085
The mobile provider's employees are consistently polite to me.	3.67	1.076
The mobile provider's employees are knowledgeable enough to answer my questions.	3.59	1.089
Empathy	**3.52**	**0.878**
I receive individual attention from the mobile provider as a whole.	3.47	1.116
The mobile provider has convenient operating hours.	3.91	1.030
I receive special attention from the mobile provider's employees.	3.32	1.078
The mobile provider's employees have my best interests at heart.	3.44	1.115
The mobile provider's employees understand my specific needs.	3.46	1.089
Overall service quality experiences	3.60	0.765

Source: Researcher's own calculation from the empirical results.

Based on Table 5-7, it is evident that respondents experienced their mobile telecommunication provider's *tangibility* dimension of service quality experiences as adequate ($\bar{x}$ = 3.90; SD = 0.724). The item "The physical facilities of the mobile provider are visually appealing (e.g. building, entrance, layout) scored the highest ($\bar{x}$ = 3.99; SD = 0.894). The item "The mobile provider has modern-looking equipment at its physical outlets (e.g. computers, furniture)" scored the lowest ($\bar{x}$ = 3.83; SD = 0.888).

Pertaining to the *reliability* dimension of service quality experiences, it is evident that respondents experienced their mobile telecommunication provider's reliability as adequate ($\bar{x}$ = 3.44; SD = 0.934). Furthermore, the item "The mobile provider delivers on its customer service promises" scored the highest ($\bar{x}$ = 3.55; SD = 1.070), and the lowest mean score realised was on the item "The mobile provider shows a sincere interest when I have a problem" ($\bar{x}$ = 3.37; SD = 1.133).

Concerning the *responsiveness* dimension of service quality experiences, respondents experienced the responsiveness of their mobile telecommunication provider's service as adequate ($\bar{x}$ = 3.61; SD = 0.901). The items "The mobile provider informs me of the services that will be performed and when it will be performed" and "I receive prompt service from the mobile provider" scored the highest ($\bar{x}$ = 3.71; SD = 1.082 and 1.034 respectively), and the lowest mean score realised was on the item "The mobile provider's employees are never too busy to respond to my requests" ($\bar{x}$ = 3.43; SD = 1.091).

Results from the *assurance* dimension of service quality experiences indicate that respondents experienced the assurance of their mobile telecommunication provider's service as adequate ($\bar{x}$ = 3.60; SD = 0.900). Specifically, the item "I feel safe in my transactions with the mobile provider" scored the highest ($\bar{x}$ = 3.77; SD = 1.085) and the lowest mean score realised was on the item "The mobile provider's employees instil confidence in me" ($\bar{x}$ =3.38; SD = 1.077).

Concerning the *empathy* dimension of service quality experiences, it is evident that respondents experienced their mobile telecommunication provider's empathy as adequate ($\bar{x}$ = 3.52; SD = 0.878). Specifically, the item "The mobile provider has convenient operating hours" scored the highest ($\bar{x}$ = 3.91; SD = 1.030), and the lowest mean score realised was on the item "I receive special attention from the mobile provider's employees" ($\bar{x}$ = 3.32; SD = 1.078).

With reference to the *overall service quality experiences*, it is evident that respondents experienced service delivered by their mobile telecommunication provider as adequate ($\bar{x}$ = 3.60; SD = 0.765).

Based on the abovementioned, the following main findings can be deduced:

Main finding 13: With regards to the *tangibility* dimension, the majority of respondents experienced the physical facilities of their mobile telecommunication provider as visually appealing.

Main finding 14: With reference to the *reliability* dimension, most respondents experienced that their mobile telecommunication provider delivered on its customer service promises.

Main finding 15: Concerning the *responsiveness* dimension, most respondents experienced prompt service from their mobile telecommunication provider and were also informed about the services to be delivered.

Main finding 16: Regarding the *assurance* dimension, most respondents experienced that they felt safe in their transactions with their mobile telecommunication provider.

Main finding 17: Concerning the *empathy* dimension, most respondents experienced that their mobile telecommunication provider had convenient operating hours.

Main finding 18: Pertaining to *overall service quality*, respondents experienced the quality of their mobile telecommunication provider's tangible elements to be the highest.

Main finding 19: Pertaining to *overall service quality*, respondents experienced the reliability of their mobile telecommunication provider to be the lowest, as compared to the other service quality dimensions.

Main finding 20: In terms of *overall service quality expectations and experiences*, respondents' expectations of the service quality offered by their mobile telecommunication provider is significantly higher than their experience of the actual service delivered by their mobile telecommunication provider.

The final section of the questionnaire (Section C) aimed to measure respondents' satisfaction with their mobile telecommunication provider, which is subsequently discussed.

5.7 RESPONDENTS' SATISFACTION WITH THEIR MOBILE TELECOMMUNICATION PROVIDER

The interpretation of the mean scores is based on the scale descriptions of the five-point Likert scale used in the questionnaire (see Appendix A) to measure respondents' satisfaction with their mobile telecommunication provider. The satisfaction scale options were based on respondents' agreement with the statements provided, and ranged from "1 = strongly disagree" to "5 = strongly agree". Table 5-8 provides the mean scores ($\bar{x}$) and standard deviations (SD) of respondents' satisfaction, followed by a discussion of the results as well as the main findings deduced from these results.

Table 5-8: Descriptive statistics for customer satisfaction

Customer satisfaction item	$\bar{x}$	SD
I am always delighted with the customer service provided by my mobile provider.	3.40	0.995
Overall, I am satisfied with the customer service provided by my mobile provider.	3.61	1.007
I think I made the right decision to make use of my mobile provider.	3.72	1.071
I feel good about using this mobile provider.	3.78	1.063
Overall customer satisfaction	**3.63**	**0.909**

Source: Researcher's own calculation from the empirical results.

As evident from Table 5-8, respondents were mostly neutral (i.e. did not agree or disagree with the statements) with regards to their overall satisfaction with their mobile telecommunication provider's service ($\bar{x}$ = 3.63; SD = 0.909). The item "I feel good about using this mobile provider" scored the highest ($\bar{x}$ = 3.78; SD = 1.063), and the lowest mean score realised was for the item "I am always delighted with the customer service provided by my mobile provider" ($\bar{x}$ = 3.40; SD = 0.995).

Based on these results, the following main findings can be deduced:

Main finding 21: Respondents agreed the most that they felt good using the services from their mobile telecommunication provider.

Main finding 22: Respondents agreed the least that they are always delighted with the customer service offered by their mobile telecommunication provider.

5.8 HYPOTHESES TESTING

The hypotheses formulated for this study are tested in this section. All the hypotheses are reported on an individual basis, whereby the results and main findings of each hypothesis are presented. Hypotheses can be classified into two groups, namely null hypotheses and alternative hypotheses, whereby the former refers to the assumption that no differences exist, and the latter refers to the assumption that differences do exist (Joubert & Venter, 2017:43). To determine whether these differences exist, the probability of the hypotheses' inferences to be true are indicated, which is commonly referred to as the statistical significance, which can be 0.10 (90%), 0.05 (95%), or 0.01 (99%) (Babin & Zikmund, 2016:404). This probability of statistical significance is denoted as the p-value (Van Zyl & Pellissier, 2017a:177). A p-value, however, that indicates statistical significance does not guarantee or imply that the difference is of practical significance (Pallant, 2016:212). One way to measure practical significance, is the assessment of Cohen's d-value, which is calculated by dividing the difference that exists between mean scores with the standard deviation (Field, 2018:114). According to Cohen (1988:22), the d-value (i.e. effect size) can be interpreted as small (d = 0.20), medium (d = 0.50), or large (d = 0.80).

Pertaining to this study, all the formulated hypotheses are alternative hypotheses, since differences are anticipated to exist. These hypotheses are accepted at the 95% significance level (i.e. $p < 0.05$), and the null hypothesis is rejected if the p-value is smaller than 0.05.

5.8.1 Hypothesis 1

H_1: Respondents of different *genders* differ statistically significantly in terms of their service quality expectations, experiences, and satisfaction towards their mobile telecommunication provider.
This hypothesis is further refined as follows: H_{1a}: Respondents of different genders differ statistically significantly in terms of their service quality expectations. H_{1b}: Respondents of different genders differ statistically significantly in terms of their service quality experiences. H_{1c}: Respondents of different genders differ statistically significantly in terms of their satisfaction.

To test H_1, an independent samples t-test was conducted, since gender only consisted of two groups (i.e. male and female). The results of the abovementioned hypotheses (H_{1a} to H_{1c}) are presented in Table 5-9, and the count (N), mean scores ($\bar{x}$), and standard deviations (SD) are

provided as part of the descriptive statistics. The p-values and the corresponding d-values are also represented in Table 5-9.

Table 5-9: Significant differences between genders

Variable	Gender	N	$\bar{x}$	SD	p-value	d-value
Service quality expectations	Male	143	4.25	0.607	0.036	0.24
	Female	155	4.40	0.612		
Service quality experiences	Male	143	3.60	0.761	0.836	0.02
	Female	155	3.59	0.765		
Satisfaction	Male	143	3.60	0.955	0.625	0.05
	Female	155	3.65	0.862		

Source: Researcher's own calculation from the empirical results.

As shown in Table 5-9 above, it is evident that:

- With regards to H_{1a}, the p-value (p = 0.036) is smaller than 0.05, indicating that there is a statistically significant difference between male and female respondents in terms of their *expectations* of their mobile telecommunication providers' service quality. Thus, H_{1a} is supported. However, the d-value indicates that it is not important in practice.

- With regards to H_{1b}, the p-value (p = 0.836) is greater than 0.05, which indicates that there is not a statistically significant difference between male and female respondents pertaining to their *experiences* of their mobile telecommunication providers' service quality. Therefore, H_{1b} is not supported.

- With regards to H_{1c}, the p-value (p = 0.625) is greater than 0.05, which indicates that no statistically significant differences exist between male and female respondents in terms of their *satisfaction* with their mobile telecommunication provider. H_{1c} is therefore not supported.

Based on the above results, the following main findings can be deduced:

Main finding 23: Male and female respondents differ statistically significantly in terms of their service quality *expectations* of their mobile telecommunication provider. However, the practical significance is small.

Main finding 24: Male and female respondents do not differ statistically significantly in terms of their service quality *experiences* or *satisfaction* with their mobile telecommunication provider.

5.8.2 Hypothesis 2

H_2: Respondents with different types of *mobile subscriptions* differ statistically significantly in terms of their service quality expectations, experiences, and satisfaction towards their mobile telecommunication provider.

This hypothesis is further refined as follows:

H_{2a}: Respondents with different types of mobile subscriptions differ statistically significantly in terms of their service quality expectations.

H_{2b}: Respondents with different types of mobile subscriptions differ statistically significantly in terms of their service quality experiences.

H_{2c}: Respondents with different types of mobile subscriptions differ statistically significantly in terms of their satisfaction.

In order to test H_2, ANOVAs were conducted. Accordingly, Table 5-10 reports the results of the abovementioned hypotheses (H_{2a} to H_{2c}), and indicates the descriptive statistics – count (N), mean scores ($\bar{x}$), and standard deviations (SD) – as well as the p-values and d-values.

Table 5-10: Statistical differences between type of subscription

Variable	N	$\bar{x}$	SD	p-value	Subscription	d-value			
						(1)	(2)	(3)	(4)
Service quality expectations	83	4.28	0.636	0.264	(1)		0.15	0.21	0.15
	193	4.38	0.592		(2)	0.15		0.33	0.32
	13	4.10	0.845		(3)	0.21	0.33		0.10
	10	4.19	0.458		(4)	0.15	0.32	0.10	
Service quality experiences	83	3.65	0.768	0.195	(1)		0.05	0.59	0.33
	193	3.62	0.765		(2)	0.05		0.54	0.28
	13	3.20	0.768		(3)	0.59	0.54		0.26
	10	3.40	0.689		(4)	0.33	0.28	0.26	
Satisfaction	83	3.60	0.937	0.377	(1)		0.07	0.36	0.09
	193	3.67	0.878		(2)	0.07		0.43	0.15
	13	3.23	1.018		(3)	0.36	0.43		0.24
	10	3.50	1.124		(4)	0.09	0.15	0.24	

Note: (1) Prepaid; (2) Contract; (3) Data only sim; (4) Wireless internet router.

Source: Researcher's own calculation from the empirical results.

As shown in Table 5-10 above, it is evident that:

- Relating to H_{2a}, the p-value (p = 0.264) is larger than 0.05, which indicates that there is not a statistically significant difference between respondents with different subscriptions in terms of their *expectations* of their mobile telecommunication providers' service quality. As a result, H_{2a} is not supported.

- Relating to H_{2b}, the p-value (p = 0.195) is larger than 0.05, which indicates that there is not a statistically significant difference between respondents with different subscriptions in terms of their *experiences* of their mobile telecommunication providers' service quality. Therefore, H_{2b} is not supported.

- Relating to H_{2c}, the p-value (p = 0.377) is larger than 0.05, which indicates that there is not a statistically significant difference between respondents with different subscriptions in terms of their *satisfaction* with their mobile telecommunication provider. H_{2c} is therefore not supported.

Based on the above results, the following main finding can be deduced:

Main finding 25: Respondents with different types of mobile subscriptions do not differ statistically significantly from each other in terms of their service quality expectations, experiences, or satisfaction with their mobile telecommunication provider.

5.8.3 Hypothesis 3

H_3: Respondents' service quality expectations differ statistically significantly from the service quality they experienced from their mobile telecommunication provider.

This hypothesis is further refined as follows:

H_{3a}: Respondents' service quality expectations differ statistically significantly from the service quality they experienced from their mobile telecommunication provider regarding the *tangibility* dimension of service quality.

H_{3b}: Respondents' service quality expectations differ statistically significantly from the service quality they experienced from their mobile telecommunication provider regarding the *reliability* dimension of service quality.

H_{3c}: Respondents' service quality expectations differ statistically significantly from the service quality they experienced from their mobile telecommunication provider regarding the *responsiveness* dimension of service quality.

H_{3d}: Respondents' service quality expectations differ statistically significantly from the service quality they experienced from their mobile telecommunication provider regarding the *assurance* dimension of service quality.

H_{3e}: Respondents' service quality expectations differ statistically significantly from the service quality they experienced from their mobile telecommunication provider regarding the *empathy* dimension of service quality.

H_{3f}: Respondents' *overall service quality* expectations differ statistically significantly from the overall service quality they experienced from their mobile telecommunication provider.

For the purpose of testing H_3, a paired samples t-test was utilised. The results of the abovementioned hypotheses (H_{3a} to H_{3f}) are presented in Table 5-11, signifying the count (N), mean scores ($\bar{x}$), and standard deviations (SD) as part of the descriptive statistics, and presents the p-values and corresponding d-values as part of the inferential statistics.

Table 5-11: Statistical differences between service quality expectations and experiences

Pair	Dimension	N	$\bar{x}$	SD	p-value	d-value
1	Tangibility (expectations)	300	4.06	0.811	0.002	0.19
	Tangibility (experiences)	300	3.90	0.724		
2	Reliability (expectations)	300	4.47	0.700	<0.001	1.10
	Reliability (experiences)	300	3.44	0.934		
3	Responsiveness (expectations)	300	4.45	0.674	<0.001	0.93
	Responsiveness (experiences)	300	3.61	0.901		
4	Assurance (expectations)	300	4.43	0.706	<0.001	0.92
	Assurance (experiences)	300	3.60	0.900		
5	Empathy (expectations)	300	4.24	0.746	<0.001	0.82
	Empathy (experiences)	300	3.52	0.878		
6	Overall service quality expectations	300	4.33	0.613	<0.001	0.95
	Overall service quality experiences	300	3.60	0.765		

Source: Researcher's own calculation from the empirical results.

As shown in Table 5-11 above, it is evident that:

- Pertaining to H_{3a}, the p-value ($p = 0.002$) is smaller than 0.05, which denotes that a statistically significant difference exists between respondents' service quality expectations and experiences of their mobile telecommunication providers' *tangibility* dimension. Therefore, H_{3a} is supported. However, the d-value ($d = 0.19$) indicates a small effect.

- Pertaining to H_{3b}, the p-value ($p < 0.001$) is smaller than 0.05, indicating that a statistically significant difference exists between respondents' service quality expectations and experiences of their mobile telecommunication providers' *reliability*. Therefore, H_{3b} is supported. Moreover, the d-value ($d = 1.10$) indicates that the effect is large.

- Pertaining to H_{3c}, the p-value ($p < 0.001$) is smaller than 0.05, which indicates that a statistically significant difference exists between respondents' service quality expectations and experiences of their mobile telecommunication providers' *responsiveness*. Therefore, H_{3c} is supported. Furthermore, the d-value ($d = 0.93$) indicates that the effect is large.

- Pertaining to H_{3d}, the p-value ($p < 0.001$) is smaller than 0.05, which signifies that a statistically significant difference exists between respondents' service quality expectations and experiences of their mobile telecommunication providers' *assurance*. Consequently, H_{3d} is supported. Moreover, the d-value ($d = 0.92$) indicates that the effect is large.

- Pertaining to H_{3e}, the p-value ($p < 0.001$) is smaller than 0.05, which denotes that a statistically significant difference exists between respondents' service quality expectations and experiences of their mobile telecommunication providers' *empathy*. Therefore, H_{3e} is supported. Furthermore, the d-value ($d = 0.82$) indicates that the effect is large.

- Pertaining to H_{3f}, the p-value ($p < 0.001$) is smaller than 0.05, which indicates that a statistically significant difference exists between respondents' *overall service quality* expectations and experiences of their mobile telecommunication provider. As a result, H_{3f} is supported. Moreover, the d-value ($d = 0.95$) indicates that the effect is large.

Based on the above results, the following main findings can be deduced:

Main finding 26: Respondents' service quality expectations differ statistically significantly from their experiences (with the small effect size indicating that expectations are slightly more than experiences) with regards to their mobile telecommunication provider's service quality *tangibility* dimension.

Main finding 27: Respondents' service quality expectations differ statistically significantly from their experiences (with the large effect size indicating that expectations are much higher than experiences) with regards to their mobile telecommunication provider's *reliability*.

Main finding 28: Respondents' service quality expectations differ statistically significantly from their experiences (with the large effect size indicating that expectations are much higher than experiences) with regards to their mobile telecommunication provider's *responsiveness*.

Main finding 29: Respondents' service quality expectations differ statistically significantly from their experiences (with the large effect size indicating that expectations are much higher than experiences) with regards to their mobile telecommunication provider's *assurance*.

Main finding 30: Respondents' service quality expectations differ statistically significantly from their experiences (with the large effect size indicating that expectations are much higher than experiences) with regards to their mobile telecommunication provider's *empathy*.

Main finding 31: Respondents' *overall service quality* expectations differ statistically significantly from their experiences (with the large effect size indicating that expectations are much higher than experiences) obtained from their mobile telecommunication provider.

5.8.4 Hypothesis 4

H_4: The dimensions of service quality have a positive and significant effect on respondents' satisfaction with their mobile telecommunication provider.

This hypothesis is further refined as follows:

H_{4a}: The *tangibility* dimension of service quality experiences has a positive and significant effect on respondents' satisfaction with their mobile telecommunication provider.

H_{4b}: The *reliability* dimension of service quality experiences has a positive and significant effect on respondents' satisfaction with their mobile telecommunication provider.

H_{4c}: The *responsiveness* dimension of service quality experiences has a positive and significant effect on respondents' satisfaction with their mobile telecommunication provider.

H_{4d}: The *assurance* dimension of service quality experiences has a positive and significant effect on respondents' satisfaction with their mobile telecommunication provider.

H_{4e}: The *empathy* dimension of service quality experiences has a positive and significant effect on respondents' satisfaction with their mobile telecommunication provider.

In order to test H_4, a standard multiple regression was conducted. According to Pallant (2016:159-163), the interpretation of the output calculated for a standard multiple regression can be presented in accordance with three steps, namely (a) check the assumptions, (b) evaluate the model, and (c) evaluate each of the independent variables.

Thus, preparatory to the utilisation of a standard multiple regression technique, it is necessary to ensure that none of the assumptions pertaining to this technique were violated (Pallant, 2016:152). The following aspects were therefore considered:

- **Sample size**

  In order to ensure that the results of the standard multiple regression are generalizable, the sample should be large enough. According to Tabachnick and Fidell (cited by Pallant, 2016:151), the minimum sample size requirement (for multiple regression) should be calculated by considering the number of independent variables of the study, using the following formula: $N > 50 + 8m$ (where m = number of independent variables).

  For this study, five independent variables were included for multiple regression. Thus, a minimum sample size of 90 respondents are required. As a total of 300 usable responses were collected for this study, the suggested minimum sample size requirement for multiple regression is exceeded.

- **Multicollinearity**

  Multicollinearity should be determined to establish whether the independent variables are highly correlated. To ensure that multicollinearity does not exist, the correlations should be calculated, with the relationships ideally between 0.3 and 0.7. Moreover, multicollinearity can also be tested through the calculation of the tolerance and variation inflation factor (VIF) values; which should be larger than 0.10 and less than 10.0 respectively (Pallant, 2016:159).

  For this study, the correlations between the independent variables ranged from 0.422 to 0.583, the tolerance values ranged from 0.257 to 0.576, and the VIF ranged from 1.737 to 3.897. Based on these results, it is evident that multicollinearity does not exist.

- **Outliers, normality, linearity, homoscedasticity, independence of residuals**

  According to Pallant (2016:160), one way to identify outliers is by ensuring that there are no deviations on the Normal Probability Plot (P-P) or Scatterplot. The results of the P-P and Scatterplots for this study were normal, with data points distributed in a relatively straight line (for the P-P), and residuals distributed rectangularly for the Scatterplot. Thus, based on these results, the distribution of the data can be regarded as normal, with no outliers.

Regarding the residual statistics, a Cook's distance value of below 1 is suggested (Tabachnick & Fidell, 2013:75). Relevant to the residual statistics calculated from this study's empirical results, a maximum Cook's distance value of 0.119 was realised. Hence, indicating no inherently significant problems or issues pertaining to homoscedasticity.

Based on the abovementioned discussion and associated results, it is evident that the assumptions underlying multiple regression were met, and that the standard multiple regression can now be conducted.

The second step of a multiple regression entails evaluating the model (Pallant, 2016:162). The purpose of this step is to indicate the amount of variance present within the dependent variable that can be explained by the model (i.e. independent variables). Table 5-12 provides the model summary with the amount of variance explained (R^2).

Table 5-12: Model summary

Model	R	R^2	Adjusted R^2
1	0.621[a]	0.385	0.375

a. Predictors: (constant), tangibility, reliability, responsiveness, assurance, and empathy dimensions of service quality experience.

Source: Researcher's own calculation from the empirical results.

From Table 5-12, it is evident that the model, with customer satisfaction as the dependent variable and the dimensions of service quality experience (i.e. tangibility, reliability, responsiveness, assurance, and empathy) as the independent variables (i.e. predictors), indicate that the five independent variables explain 38.5% ($R^2 = 0.385$) of the variance in the dependent variable. Table 5-13 further indicates the significance level of the model with customer satisfaction as the dependent variable and the five dimensions of service quality experiences as the independent variables within the calculated ANOVA.

Table 5-13: ANOVA[a]

Model		Sum of squares	df	Mean square	F-value	p-value
1	Regression	95.117	5	19.023	36.839	<0.001*[b]
	Residual	151.821	294	0.516		
	Total	246.937	299			

* p-value < 0.05 is statistically significant.

b. Predictors: (constant), tangibility, reliability, responsiveness, assurance, and empathy dimensions of service quality experience.

Source: Researcher's own calculation from the empirical results.

It is evident from Table 5-13 that the p-value ($p < 0.001$) is smaller than 0.05, which indicates that the model is statistically significant.

According to Pallant (2016:162), the final step of a multiple regression entails evaluating each of the independent variables to establish which of the independent variables included in the model predicts the dependent variable. The beta weight coefficient (β-weight) indicates the estimates when variables have been standardised (i.e. a mean score of 0 and standard deviation of 1 is assigned to variables) (Hair *et al*., 2017:333; Sekaran & Bougie, 2016:315). According to Babin and Zikmund (2016:435), the higher the value of the β-weight, the stronger the relationship. Statistical significance of the relationship is achieved when the p-value is less than 0.05 (Ellis & Steyn, 2003:53). Consequently, Table 5-14 indicates that the constant is significant (p-value < 0.05), and according to the β-weights and corresponding p-values, only reliability and empathy are predictors of customer satisfaction (with $p = 0.001$ and 0.003 respectively; $\beta = 0.290$ and 0.256 respectively).

Table 5-14: Coefficients[a]

Model	Variable	Standardised coefficient Beta-value	t	p-value
1	(Constant)		4.875	<0.001*
	Tangibility (*experience*)	0.047	0.786	0.432
	Reliability (*experience*)	0.290	3.348	0.001*
	Responsiveness (*experience*)	0.029	0.339	0.735
	Assurance (*experience*)	0.064	0.706	0.481
	Empathy (*experience*)	0.256	2.978	0.003*

* p-value < 0.05 is statistically significant.
a. Dependent variable: customer satisfaction.

Source: Researcher's own calculation from the empirical results.

With regards to H_4 formulated for this study, the following can thus be concluded:

- Pertaining to H_{4a}, the p-value ($p = 0.432$) is larger than 0.05, which indicates that the *tangibility* dimension of the service quality experienced at the mobile telecommunication provider has no statistically significant effect on respondents' satisfaction. Therefore, H_{4a} is not supported.

- Pertaining to H_{4b}, the p-value ($p = 0.001$) is smaller than 0.05, indicating that the *reliability* experienced at the mobile telecommunication provider has a statistically significant and medium effect (β-weight = 0.290) on respondents' satisfaction. H_{4b} is therefore supported.

- Pertaining to H_{4c}, the p-value (p = 0.735) is larger than 0.05, which indicates that the *responsiveness* dimension of the service quality experienced at the mobile telecommunication provider has no statistically significant effect on respondents' satisfaction. Therefore, H_{4c} is not supported.

- Pertaining to H_{4d}, the p-value (p = 0.481) is larger than 0.05, which indicates that the *assurance* dimension of the service quality experienced at the mobile telecommunication provider has no statistically significant effect on respondents' satisfaction. Therefore, H_{4d} is not supported.

- Pertaining to H_{4e}, the p-value (p = 0.003) is smaller than 0.05, indicating that the *empathy* experienced at the mobile telecommunication provider has a statistically significant and medium effect (β-weight = 0.256) on respondents' satisfaction. H_{4e} is therefore supported.

- Overall, the *reliability* dimension of service quality experiences indicated the strongest effect (β-weight = 0.290) on respondents' satisfaction.

Based on the above results, the following main findings can be deduced:

Main finding 32: The *tangibility* dimension of service quality experiences does not have a statistically significant effect on respondents' satisfaction with their mobile telecommunication provider.

Main finding 33: The *reliability* dimension of service quality experiences has a statistically significant and positive effect on respondents' satisfaction with their mobile telecommunication provider.

Main finding 34: The *responsiveness* dimension of service quality experiences does not have a statistically significant effect on respondents' satisfaction with their mobile telecommunication provider.

Main finding 35: The *assurance* dimension of service quality experiences does not have a statistically significant effect on respondents' satisfaction with their mobile telecommunication provider.

Main finding 36: The *empathy* dimension of service quality experiences has a statistically significant and positive effect on respondents' satisfaction with their mobile telecommunication provider.

Main finding 37: Overall, the *reliability* dimension of service quality experiences has the strongest effect on customers' satisfaction within the South African mobile telecommunication industry.

5.9 SUMMARY OF MAIN FINDINGS

The following section and Table 5-15 provide a summary of the main findings relating to the formulated secondary objectives.

Table 5-15: Summary of the main findings relating to the formulated secondary objectives

Secondary objective 1: Compile a sample profile of the respondents	
Main finding 1	The sample comprised predominantly white (male and female) respondents from the North West Province, with a contract subscription from their mobile telecommunication provider, and who have been using the services of their provider for ten years or longer.
Main finding 2	Respondents regarded internet connectivity as the most important element provided by their mobile telecommunication provider.
Main finding 3	Respondents regarded the variety of products offered by their mobile telecommunication provider as the least important element.
Secondary objective 2: Measure respondents' service quality expectations of their mobile telecommunication provider.	
Main finding 5	The scales used to measure the constructs of this study (i.e. service quality and customer satisfaction) are valid.
Main finding 6	With regards to the *tangibility* dimension, the majority of respondents indicated that they expect the employees of their mobile telecommunication provider to appear neatly.
Main finding 7	Pertaining to the *reliability* dimension, the majority of respondents indicated that they expect their mobile telecommunication provider to deliver on its customer service promises.
Main finding 8	With regards to the *responsiveness* dimension, most respondents indicated that they expect the employees of their mobile telecommunication provider to assist them with queries.
Main finding 9	With reference to the *assurance* dimension, most of the respondents indicated that they expect to feel safe in their transactions with their mobile telecommunication provider, and that the employees should be knowledgeable.

Table 5-15: Summary of the main findings relating to the formulated secondary objectives (continues)

Secondary objective 2: Measure respondents' service quality expectations of their mobile telecommunication provider.	
Main finding 10	With regards to the *empathy* dimension, most respondents indicated that they expect their mobile telecommunication provider to have convenient operating hours.
Main finding 11	Pertaining to *overall service quality*, the majority of respondents indicated that they expect their mobile telecommunication provider to be reliable.
Main finding 12	Pertaining to *overall service quality*, the majority of respondents indicated that tangibles are the least important expectation from their mobile telecommunication provider.
Secondary objective 3: Measure respondents' service quality experiences received from their mobile telecommunication provider.	
Main finding 5	The scales used to measure the constructs of this study (i.e. service quality and customer satisfaction) are valid.
Main finding 13	With regards to the *tangibility* dimension, the majority of respondents experienced the physical facilities of their mobile telecommunication provider as visually appealing.
Main finding 14	With reference to the *reliability* dimension, most respondents experienced that their mobile telecommunication provider delivered on its customer service promises.
Main finding 15	Concerning the *responsiveness* dimension, most respondents experienced prompt service from their mobile telecommunication provider and were also informed about the services to be delivered.
Main finding 16	Regarding the *assurance* dimension, most respondents experienced that they felt safe in their transactions with their mobile telecommunication provider.
Main finding 17	Concerning the *empathy* dimension, most respondents experienced that their mobile telecommunication provider had convenient operating hours.
Main finding 18	Pertaining to *overall service quality*, respondents experienced the quality of their mobile telecommunication provider's tangible elements to be the highest.
Main finding 19	Pertaining to *overall service quality*, respondents experienced the reliability of their mobile telecommunication provider to be the lowest, as compared to the other service quality dimensions.
Main finding 20	In terms of *overall service quality expectations and experiences*, respondents' expectations of the service quality offered by their mobile telecommunication provider is significantly higher than their experience of the actual service delivered by their mobile telecommunication provider.
Secondary objective 4: Measure respondents' satisfaction with their mobile telecommunication provider.	
Main finding 5	The scales used to measure the constructs of this study (i.e. service quality and customer satisfaction) are valid.
Main finding 21	Respondents agreed the most that they felt good using the services from their mobile telecommunication provider.
Main finding 22	Respondents agreed the least that they are always delighted with the customer service offered by their mobile telecommunication provider.

Table 5-15: Summary of the main findings relating to the formulated secondary objectives (continues)

Secondary objective 5: Determine whether differences exist between different groups of respondents with regards to the two constructs of the study (i.e. service quality and customer satisfaction).	
Main finding 4	All the measurement scales used to measure the service quality and customer satisfaction constructs of this study are reliable.
Main finding 23	Male and female respondents differ statistically significantly in terms of their service quality *expectations* of their mobile telecommunication provider. However, the practical significance is small.
Main finding 24	Male and female respondents do not differ statistically significantly in terms of their service quality *experiences* or *satisfaction* with their mobile telecommunication provider.
Main finding 25	Respondents with different types of mobile subscriptions do not differ statistically significantly from each other in terms of their service quality expectations, experiences, or satisfaction with their mobile telecommunication provider.
Main finding 26	Respondents' service quality expectations differ statistically significantly from their experiences (with the small effect size indicating that expectations are slightly more than experiences) with regards to their mobile telecommunication provider's service quality *tangibility* dimension.
Main finding 27	Respondents' service quality expectations differ statistically significantly from their experiences (with the large effect size indicating that expectations are much higher than experiences) with regards to their mobile telecommunication provider's *reliability*.
Main finding 28	Respondents' service quality expectations differ statistically significantly from their experiences (with the large effect size indicating that expectations are much higher than experiences) with regards to their mobile telecommunication provider's *responsiveness*.
Main finding 29	Respondents' service quality expectations differ statistically significantly from their experiences (with the large effect size indicating that expectations are much higher than experiences) with regards to their mobile telecommunication provider's *assurance*.
Main finding 30	Respondents' service quality expectations differ statistically significantly from their experiences (with the large effect size indicating that expectations are much higher than experiences) with regards to their mobile telecommunication provider's *empathy*.
Main finding 31	Respondents' *overall service quality* expectations differ statistically significantly from their experiences (with the large effect size indicating that expectations are much higher than experiences) obtained from their mobile telecommunication provider.

Table 5-15: Summary of the main findings relating to the formulated secondary objectives (continues)

Secondary objective 6: Determine the influence of the dimensions of service quality on customer satisfaction.	
Main finding 32	The *tangibility* dimension of service quality experiences does not have a statistically significant effect on respondents' satisfaction with their mobile telecommunication provider.
Main finding 33	The *reliability* dimension of service quality experiences has a statistically significant and positive effect on respondents' satisfaction with their mobile telecommunication provider.
Main finding 34	The *responsiveness* dimension of service quality experiences does not have a statistically significant effect on respondents' satisfaction with their mobile telecommunication provider.
Main finding 35	The *assurance* dimension of service quality experiences does not have a statistically significant effect on respondents' satisfaction with their mobile telecommunication provider.
Main finding 36	The *empathy* dimension of service quality experiences has a statistically significant and positive effect on respondents' satisfaction with their mobile telecommunication provider.
Main finding 37	Overall, the *reliability* dimension of service quality experiences has the strongest effect on customers' satisfaction within the South African mobile telecommunication industry.

5.10 CONCLUSION

This chapter presented the empirical results and findings of the collected and analysed data. The response realisation rate and the valid responses are presented, after which the sample profile was presented. The remainder of this chapter was presented according to the secondary objectives and hypotheses formulated for this study.

During the statistical analysis of this chapter, various statistical techniques were implemented to report on the statistical findings. Descriptive statistics such as frequencies, percentages, mean scores, and standard deviations were reported. Inferential statistics included one-way analysis of variance (ANOVAs), independent samples t-test, paired samples t-test, and a standard multiple regression. The reliability of the measurement instrument's scales was tested through calculating the Cronbach's alpha values, and content and construct validity were used to test the validity of the scales. This chapter concluded with a summary of the main findings and how these findings relate to the formulated secondary objectives. The next chapter presents the conclusions, managerial implications and recommendations, limitations, and future research suggestions pertaining to this study and its literature, as well as empirical results findings.

CHAPTER 6

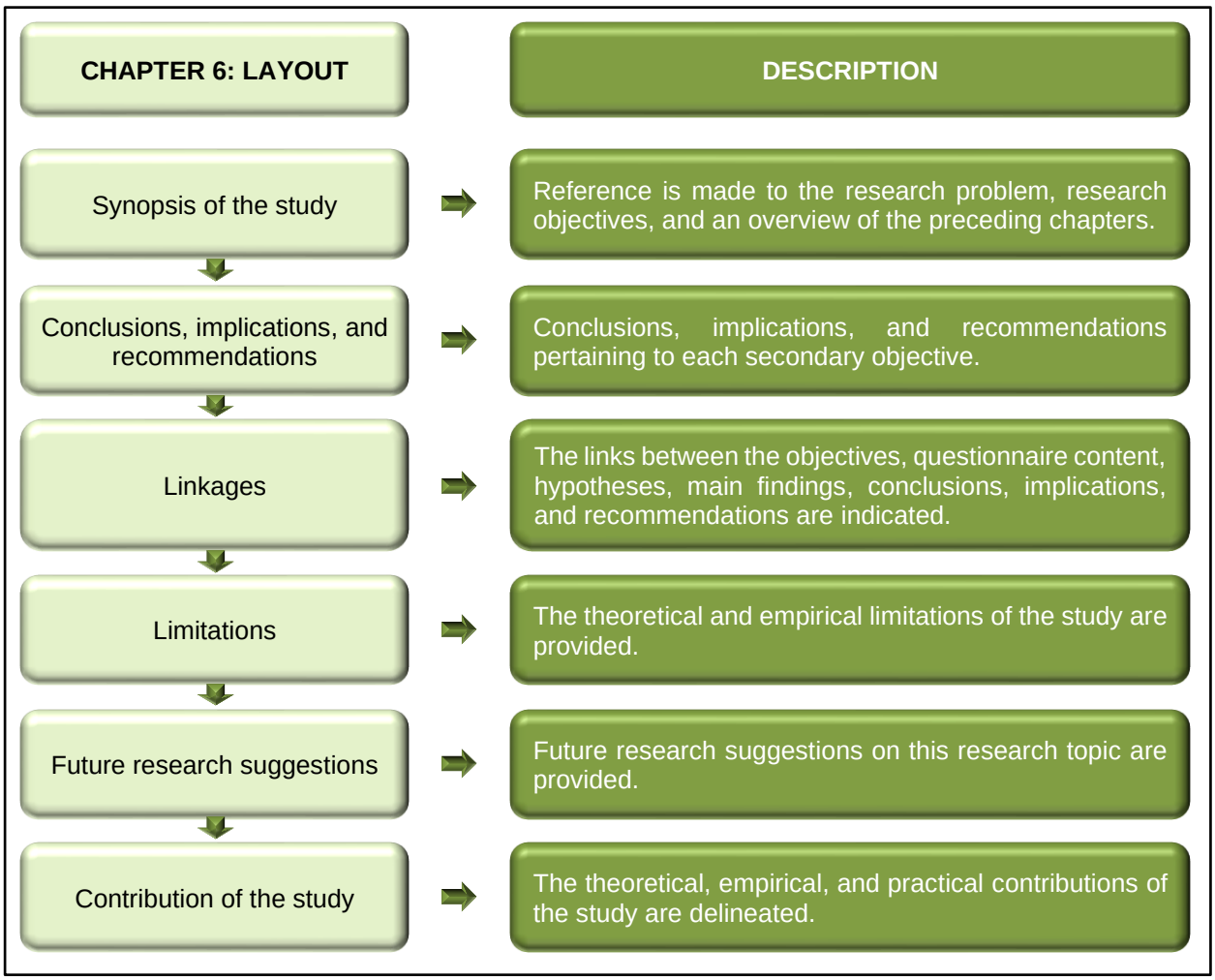
CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter serves the purpose of presenting conclusions and recommendations regarding service quality and customer satisfaction in the South African mobile telecommunication industry. The conclusions presented in this chapter are based on the empirical results reported in Chapter 5, as well as the findings from the literature review conducted in Chapters 1 to 3.

This chapter commences with a synopsis of the study, including reference to the research problem, research objectives, and an overview of the preceding chapters. Thereafter, the conclusions, implications, and recommendations pertaining to each secondary objective are presented. The subsequent section provides a summative table presenting the linkages between the secondary objectives, questionnaire content, hypotheses, main findings, conclusions, implications, and recommendations. The chapter concludes with a discussion of the limitations of the study, recommendations for further research on the topic, as well as the contribution of the study. Figure 6-1 provides the chronological layout of this chapter.

Figure 6-1: Chronological layout of Chapter 6



Source: Researcher's own compilation.

6.2 SYNOPSIS OF THE STUDY

The South African mobile telecommunication industry is challenged by various changes, such as an increase in network usage, easy access to information, development and upgrades of technology (MarketLine, 2018:7). These changes result in more technological innovations and improvements (Abd-Elrahman, 2018:11; Dicey, 2018; Lioudis, 2018; Zhao *et al*., 2012:645). In addition, these changes, innovations, and improvements increase the level of competitiveness within this industry. This intense level of competition is reflected in the sense that there are only four major role players in the South African mobile telecommunication industry (BusinessTech, 2019a). Therefore, to remain competitive in this industry, a value-added service approach is utilised by the mobile telecommunication providers to differentiate them from one another by offering unique value to customers (Rahman, 2014:80; Viriri & Phiri, 2017:104) and to increase their satisfaction (Alhkami & Alarussi, 2016:117).

As explained in Chapter 1, overall customer satisfaction in South Africa is decreasing (BrandsEye, 2019:1; Burger, 2017; Dlamini, 2015). More specific in the mobile telecommunication industry, there are still customers that are dissatisfied with the service delivered by their mobile telecommunication provider (Alam *et al*., 2016:63; Alhkami & Alarussi, 2016:124; Ali, 2017:525; Arokiasamy & Abdullah, 2013:7; Kisworo, 2013). It is therefore necessary to measure the quality of services offered by South African mobile telecommunication providers, since it influences the loyalty of customers and ultimately the profitability of the specific service provider (Achadinha, 2015:50; Adamu, 2017:3; Booysen, 2017:40; Burch, 2018).

The results, findings, implications, and subsequent recommendations from this study can potentially assist South African mobile telecommunication providers in identifying ways to improve the quality of services offered to their customers.

Therefore, the primary objective of this study (see Section 1.5) was to investigate service quality (expectations and experiences) and customer satisfaction within the South African mobile telecommunication industry, and to determine whether the quality of service influences respondents' satisfaction. This enabled the researcher to gather insight pertaining to respondents' expectations and experiences, as well as their satisfaction with the current quality of services offered by their mobile telecommunication providers (i.e. Vodacom, MTN, Cell C, and Telkom).

To assist in addressing the primary objective, the following secondary objectives (see Section 1.5) were formulated:

(1) Compile a sample profile of the respondents.

(2) Measure respondents' service quality expectations of their mobile telecommunication provider.

(3) Measure respondents' service quality experiences received from their mobile telecommunication provider.

(4) Compare respondents' service quality expectations with their experience of the service quality offered by their mobile telecommunication provider.

(5) Measure respondents' satisfaction with their mobile telecommunication provider.

(6) Determine whether differences exist between different groups of respondents with regards to the two constructs of the study (i.e. service quality and customer satisfaction).

(7) Determine the influence of service quality on customer satisfaction.

Chapter 2 provided a literature review on business management, quality management and customer service, since this study specifically focuses on improving customer service from a managerial perspective. From this literature, it was established that quality should be applied within every aspect of this business (Musengi-Ajulu & Cunningham, 2017:116). Quality management is also very important, since it influences customers' satisfaction (Botha, 2017:356). In addition, it was also evident from Chapter 2 that customer service within the South African mobile telecommunication industry encompasses nearly half of all complaints within the industry (BrandsEye, 2019:1), which emphasises the importance of investigating this concept, as it has been established to significantly influence customers' satisfaction (Booysen, 2015:238-239).

Chapter 3 investigated the constructs of the study, namely service quality and customer satisfaction. Some of the benefits that can arise from offering quality services to customers include the following:

- Obtaining a competitive advantage (Voon, 2017:68).
- Allowing for the implementation of a recovery mechanism (Mmutle & Shonhe, 2017:3).
- Increasing customer satisfaction (Khan & Jadoun, 2015:541).
- Increasing customer loyalty as a result of increased satisfaction (Baines *et al*., 2014:593).
- Increased profits (Pakurár *et al*., 2019:3; Qadri & Khan, 2014:3).

In addition, as explained in Section 3.4, in order to improve the quality of services, the various dimensions that influence service quality should be investigated. These dimensions include tangibles, reliability, responsiveness, assurance, and empathy (Cant, 2018:40; Parasuraman *et al*., 1988:12). These dimensions can create certain gaps (see Section 3.5), which prevents the delivery of quality services (Adetunji *et al*., 2013:31; McDaniel *et al*., 2013:421). If these gaps are successfully addressed and closed, customer satisfaction (see Sections 3.8 to 3.11) can occur (Lamb *et al*., 2017:208), which formed the final focus of Chapter 3.

Chapter 4 provided insight into the business research process that was applied to this study, and discussed and motivated the application of available research methodology. A combination of exploratory and descriptive research designs was used in this study. Consequently, the primary data was collected by means of quantitative research, whereby a self-administered questionnaire was distributed to customers within the South African mobile telecommunication industry. The fieldwork was conducted online as well as through the use of five BCom Honours (Entrepreneurship and Marketing Management) students from the North-West University.

Chapter 5 presented the empirical results and findings. After the data was edited, coded and cleaned after collection, the final sample consisted of 300 respondents, thus indicating a 100% response realisation rate. The data was analysed through the utilisation of SPSS (version 25). The statistical analyses included (a) descriptive statistics (i.e. frequencies, percentages, means, and standard deviations) to provide a sample profile and measure respondents' service quality experiences, expectations, and satisfaction, (b) inferential statistics (i.e. independent samples t-tests, ANOVAS, and a standard multiple regression) to address the secondary objectives and test the hypotheses, (c) Cronbach's alpha values to test the reliability of the measurement scales, and (d) KMO values to assess the validity of the measurement scales.

Each of the secondary objectives of the study are subsequently addressed and reported on by providing conclusions, implications, and recommendations as derived from the main findings in Section 5.9.

6.3 CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS FOR THE SECONDARY OBJECTIVES

The conclusions, implications, and recommendations resulting from the literature review (i.e. Chapters 1 to 3) and the empirical results and findings (i.e. Chapter 5) are presented in accordance with the secondary objectives formulated for this study.

6.3.1 Secondary objective 1

Compile a sample profile of the respondents.

The conclusions, implications, and recommendations for this secondary objective are derived from main findings 1 to 3, as well as the literature discussion on the topic in Chapter 1. Table 6-1 presents the findings from the literature, the conclusions, implications and recommendations pertaining to secondary objective 1.

Table 6-1: Secondary objective 1: Literature findings, conclusions, implications, and recommendations

Literature findings for secondary objective 1
As indicated in Section 1.2.1, customers differ from one another in terms of their socio-demographic aspects (i.e. cultural differences, gender preferences, influence from society, and income levels), which influence their buying behaviour and preferences (Foulkes *et al*., 2018:1; Govindaraj, 2019; Kotler & Armstrong, 2018:195). These socio-demographic differences are important for South African businesses, since South Africa is one of the countries with the most diverse population characteristics (De Meyer-Heydenrych, 2017:44). Hence, South African businesses should seek to understand and adapt to the preferences of customers in this diversified population (De Beer, 2018:19; Van Noordwyk & Van Tonder, 2019:27).
Conclusions pertaining to secondary objective 1
Conclusion 1.1: The sample consisted mostly of white (male and female) respondents from the North West Province. **Conclusion 1.2:** Most respondents had a contract subscription, and had been with their mobile telecommunication provider for ten years or longer. **Conclusion 1.3:** Respondents regarded the internet connectivity as the most important element that should be provided by their mobile telecommunication provider.
Implications pertaining to secondary objective 1
The following implications can be derived from conclusions 1.1 to 1.3. **Implication 1.1:** From the composition of the sample profile, it can be reasoned that the customer base of mobile telecommunication providers in the North West Province also represents both genders. Hence, both genders were in the ideal position to provide information pertaining to the customer service and service quality of provider. **Implication 1.2:** Since most respondents had a contract (i.e. long-term) subscription and have been with their provider for ten years or longer, it can be reasoned that these respondents were in the ideal position to provide insights into the customer service and service quality provided by their mobile telecommunication provider. Hence, forming a valuable source of reference to managers. **Implication 1.3:** As respondents specifically indicated their need for internet connectivity, mobile telecommunication providers should ensure that this service is provided.

Table 6-1: Secondary objective 1: Literature findings, conclusions, implications, and recommendations (continues)

Recommendations pertaining to secondary objective 1
Based on the above implications, the following recommendations are suggested to enable mobile telecommunication providers to turn these implications into opportunities. **Recommendation 1.1:** Mobile telecommunication providers should ensure that both male and female customers receive the same quality of services, and that no discrimination or preference is made to one specific gender. **Recommendation 1.2:** Mobile telecommunication providers can ensure that the quality of the services is in accordance with the contract agreement between them and the customer. In addition, mobile telecommunication providers can offer additional benefits for customers that are subscribed through a contract, since it specifies the services to be delivered and ensures that the mobile telecommunication providers' services are used as stipulated in the contract. Mobile telecommunication providers should ensure that quality control measures are implemented so that the same level of quality can be provided consistently to customers. In addition, mobile telecommunication providers can also offer benefits to loyal customers, in an effort to retain loyal customers by strengthening the relationship with these customers as well as ensuring that their specific individual needs are met. Moreover, mobile telecommunication providers can also encourage more customers to commit to using their services through increasing the perceived value to be offered or increased marketing efforts. Thus, increasing customer loyalty. **Recommendation 1.3:** Mobile telecommunication providers should ensure that their customers can easily and uninterruptedly connect to the internet with the best possible connection options. As mentioned in Chapter 1, mobile telecommunication providers can achieve this through the implementation of the 5G network, which will provide customers with the best possible mobile internet connection possible.

Source: Researcher's own compilation.

6.3.2 Secondary objective 2

Measure respondents' service quality expectations of their mobile telecommunication provider.

Secondary objective 2 is addressed by main findings 4 to 12. Consequently, Table 6-2 presents the findings from the literature, the conclusions, implications and recommendations pertaining to secondary objective 2.

Table 6-2: Secondary objective 2: Literature findings, conclusions, implications, and recommendations

Literature findings for secondary objective 2
Service quality expectations – as explained in Section 3.7.1– are subjective in nature due to the fact that it is based on the personal beliefs of an individual (Verma, 2012:266; Zeithaml, 2018:51). Moreover, understanding customer expectations pertaining to the quality of services are important to service providers, since these expectations will serve as reference when customers evaluate the service delivered by the provider (Alam *et al*., 2016:57; Iacobucci, 2013:186).
Conclusions pertaining to secondary objective 2
Conclusion 2.1: As per main findings 4 and 5, the scale used to measure respondents' service quality expectations (i.e. the SERVQUAL model) has been confirmed as reliable and valid.
Conclusion 2.2: Respondents expect that the employees of their mobile telecommunication provider must appear neatly.
Conclusion 2.3: Respondents expect their mobile telecommunication provider to deliver on its customer service promises.
Conclusion 2.4: Respondents expect the employees of their mobile telecommunication provider to be able to assist them with queries.
Conclusion 2.5: Respondents expect their transactions with their mobile telecommunication provider to be secure, and that the employees are knowledgeable.
Conclusion 2.6: Respondents expect their mobile telecommunication provider to have convenient operating hours.
Conclusion 2.7: Respondents expect their mobile telecommunication provider to be reliable.

Table 6-2: Secondary objective 2: Literature findings, conclusions, implications, and recommendations (continues)

Implications pertaining to secondary objective 2
The following implications can be derived from conclusions 2.1 to 2.7. **Implication 2.1:** The SERVQUAL scale can be successfully implemented to measure customers' service quality expectations within the South African mobile telecommunication provider industry. **Implication 2.2:** Managers should take into consideration that respondents will expect employees to be always neat-appearing. **Implication 2.3:** Mobile telecommunication providers should ensure that customers' service promises are always met. **Implication 2.4:** Respondents will expect that employees working at the mobile telecommunication provider are able and willing to assist them with any queries. **Implication 2.5:** Mobile telecommunication providers should ensure that the transactions between the respondent and the business are secure and that employees have sufficient knowledge about all products and services. **Implication 2.6:** Mobile telecommunication providers must realise that respondents expect convenient operating hours from the allocated provider. **Implication 2.7:** Mobile telecommunication providers should ensure that consistently reliable services are offered, since it will influence the overall expectations of respondents.
Recommendations pertaining to secondary objective 2
Based on the above implications, the following recommendations are suggested to enable mobile telecommunication providers to turn these implications into opportunities. **Recommendation 2.1:** Mobile telecommunication providers in South Africa can consider using the SERVQUAL instrument to measure their customers' service quality expectations. **Recommendation 2.2:** Mobile telecommunication providers can improve their customers' expectations pertaining to the *tangibility* dimension of service quality by: • Supplying employees with a generic uniform or implementing a standardised dress code; • Implementing stricter and uniform policies regarding neatness and tidiness; and • Making use of neat-appearing models in advertisements.

Table 6-2: Secondary objective 2: Literature findings, conclusions, implications, and recommendations (continues)

Recommendations pertaining to secondary objective 2
Recommendation 2.3: Mobile telecommunication providers can improve their customers' expectations pertaining to the *reliability* dimension of service quality by: • Ensuring that attainable customer service promises are made and met; • Implementing customer service training and development programmes for employees that will be delivering excellent customer service (i.e. front-line personnel); • Implementing a business-wide quality strategy in order to ensure that consistent quality customer services are offered; and • Providing an indication of the customer service promise to be delivered in advertisements. **Recommendation 2.4:** Mobile telecommunication providers can improve their customers' expectations pertaining to the *responsiveness* dimension of service quality by: • Providing employees with incentives to increase morale, which will ultimately increase employees' willingness to assist customers with queries; and • Providing customers with the necessary information pertaining to any queries. Examples are providing them with directions in-store to a specific customer service counter or by demarcating within the store where customer service assistance can be obtained. **Recommendation 2.5:** Mobile telecommunication providers can improve their customers' expectations pertaining to the *assurance* dimension of service quality by: • Comprehensively informing customers of all of the available payment options; • Providing customers with privacy when completing a transaction; • Allowing customers to give consent to matters pertaining to personal information; • Communicating to customers what documents (if any) are required from them in advance; • Ensuring customers that their personal information will not be distributed to any third-parties; and • Establishing clearly designated information points in the store where additional information could be obtained about products or services.

Table 6-2: Secondary objective 2: Literature findings, conclusions, implications, and recommendations (continues)

Recommendations pertaining to secondary objective 2
Recommendation 2.6: Mobile telecommunication providers can improve their customers' expectations pertaining to the *empathy* dimension of service quality by: • Informing customers of the operating hours, which can be done on their website, the store's window display, or advertisements; and • Taking into account the working and socialising hours of customers and ensuring that there are always employees available to assist customers. **Recommendation 2.7:** Mobile telecommunication providers can improve their customers' *overall* expectations of service quality by: • Informing customers of all customer service promises; and • Informing customers on all services they should receive from the provider.

Source: Researcher's own compilation.

6.3.3 Secondary objective 3

Measure respondents' service quality experiences received from their mobile telecommunication provider.

Secondary objective 3 is addressed by main findings 4, 5, and 13 to 20. Table 6-3 presents the findings from the literature, the conclusions, implications, and recommendations pertaining to secondary objective 3.

Table 6-3: Secondary objective 3: Literature findings, conclusions, implications, and recommendations

Literature findings for secondary objective 3
By effectively managing customers' service quality experiences (as discussed in Section 3.7.2), a service provider can attain a competitive advantage in the market (Bolton *et al*., 2014:258; Verhoef *et al*., 2009:38). It was also established that customers' experiences about service quality are determined by their subjective emotional responses (Persigehl & Vermeer, 2019:55), which result in different customer experiences since every customer's experience will differ (De Keyser *et al*., 2015:10-11).

Table 6-3: Secondary objective 3: Literature findings, conclusions, implications, and recommendations (continues)

Literature findings for secondary objective 3
The literature investigation also uncovered that touchpoints (or number of interactions) are increasing due to technological advances (Bolton, 2019:14). Therefore, mobile telecommunication providers should increase the number of touchpoints (or number of interactions) available to customers. For instance, more call centres can be opened, or online platforms can also be utilised more to assist customers.
Conclusions pertaining to secondary objective 3
Conclusion 3.1: As per main findings 4 and 5, the scale used to measure respondents' service quality experiences (i.e. the SERVQUAL model) has been confirmed as reliable and valid. **Conclusion 3.2:** Respondents experienced their mobile telecommunication provider's physical facilities to be visually appealing. **Conclusion 3.3:** Respondents experienced that their mobile telecommunication provider delivered on its customer service promises. **Conclusion 3.4:** Respondents experienced prompt and well-informed service delivery from their mobile telecommunication provider. **Conclusion 3.5:** Respondents experienced that their transactions with their mobile telecommunication provider were safe or secure. **Conclusion 3.6:** Respondents experienced that their mobile telecommunication provider has convenient operating hours. **Conclusion 3.7:** Respondents experienced the reliability of their mobile telecommunication provider's services to be lacking.
Implications pertaining to secondary objective 3
The following implications can be derived from conclusions 3.1 to 3.7. **Implication 3.1:** The SERVQUAL scale can be implemented to measure customers' service quality experiences within the South African mobile telecommunication industry. **Implication 3.2:** If respondents perceive their provider to be using old technology or equipment, it might encourage them to switch providers.

Table 6-3: Secondary objective 3: Literature findings, conclusions, implications, and recommendations (continues)

Implications pertaining to secondary objective 3
Implication 3.3: If a mobile telecommunication provider does not display a sincere interest in respondent problems, respondents might be inclined to cancel their subscription with the provider. **Implication 3.4:** If respondents perceive that their mobile telecommunication provider is not providing them with a prompt service, they might be inclined to switch to another provider. **Implication 3.5:** If respondents do not perceive the employees to be able to confidently assist them or if they feel that their transactions are insecure, they might be inclined to switch to another provider. **Implication 3.6:** If respondents feel that they do not receive special attention form the mobile telecommunication provider and are only part of a database, they might be inclined to switch to another provider that can provide them with specialised attention. The same can be applied if the provider does not have convenient operating hours.
Recommendations pertaining to secondary objective 3
Based on the above implications, the following recommendations are suggested to enable mobile telecommunication providers to turn these implications into opportunities. **Recommendation 3.1:** Mobile telecommunication providers in South Africa can consider utilising the SERVQUAL measurement instrument to measure their customers' service quality experiences. **Recommendation 3.2:** Mobile telecommunication providers can improve their customers' experiences pertaining to the *tangibility* dimension of service quality by: • Acquiring more modern-looking equipment in the physical stores; • Upgrading the displays in the stores; • Ensuring that the stores are always clean and neat; • Conducting regular maintenance of equipment as well as painting the stores; and • Conducting random inspections at stores.

Table 6-3: Secondary objective 3: Literature findings, conclusions, implications, and recommendations (continues)

Recommendations pertaining to secondary objective 3
Recommendation 3.3: Mobile telecommunication providers can improve their customers' experiences pertaining to the *reliability* dimension of service quality by: • Fulfilling customer service promises; • Following up with customers after their visit to a store; • Improving the complaints handling procedure; • Employing more effective methods of solving customer service issues; • Investigating and addressing customer problems as soon as possible; • Keeping customers updated about the status of their inquiries at all time; and • Providing customers with a timeframe of when their issues will be resolved. **Recommendation 3.4:** Mobile telecommunication providers can improve their customers' experiences pertaining to the *responsiveness* dimension of service quality by: • Ensuring employees responded to customer requests through employee evaluation surveys; • Ensuring employees provide prompt service to all customers; • Offering performance incentives to employees to increase their willingness to assist customers; • Clearly communicating to customers when services will be delivered; and • Providing customers with information desks or pamphlets that provide information about the products or services. **Recommendation 3.5:** Mobile telecommunication providers can improve their customers' experiences pertaining to the *assurance* dimension of service quality by: • Educating employees so that they are knowledgeable about the services; • Increasing the number of employees working at a store; • Upgrading the payment methods; • Keeping customer information confidential; and • Providing customers with more privacy when completing a transaction.

Table 6-3: Secondary objective 3: Literature findings, conclusions, implications, and recommendations (continues)

Recommendations pertaining to secondary objective 3
Recommendation 3.6: Mobile telecommunication providers can improve their customers' experiences pertaining to the *empathy* dimension of service quality by: • Offering personalised and customised services to customers; • Continuously updating customer information; and • Following up with customers after service interactions. **Recommendation 3.7:** Mobile telecommunication providers can improve their customers' *overall* service quality experiences by increasing the reliability of their services.

Source: Researcher's own compilation.

6.3.4 Secondary objective 4

Measure respondents' satisfaction of their mobile telecommunication provider.

Secondary objective 4 is addressed by main findings 5, 21 and 22. Consequently, Table 6-4 presents the findings from the literature, the conclusions, implications, and recommendations as pertaining to secondary objective 4.

Table 6-4: Secondary objective 4: Literature findings, conclusions, implications, and recommendations

Literature findings for secondary objective 4
It was discovered in Chapter 3 that customer satisfaction results in customer loyalty (Iacobucci, 2013:185), customer retention (Baines *et al*., 2014:593), improved organisational culture (Lamb *et al*., 2017:7-8), and increased profits (Qadri & Khan, 2014:3). If the service delivered surpasses the customer's expectations, then delight will occur, if the service only matches the customer's expectation, then satisfaction will occur, otherwise dissatisfaction will ensue (Iacobucci, 2018:240). Customer satisfaction can also be classified into two types: transaction-specific and cumulative (Ganiyu *et al*., 2012:16; Matos *et al*., 2013:527). The first refers to the customer's satisfaction with a service at a specific transaction (occasion) and the latter refers to the customer's overall satisfaction with all the service encounters received over time (Eid, 2015:252; Paposa *et al*., 2019:3769; Su & Tong, 2016:430; Ullah *et al*., 2017:2).

Table 6-4: Secondary objective 4: Literature findings, conclusions, implications, and recommendations (continues)

Literature findings for secondary objective 4
The literature investigation also uncovered that customer satisfaction within the South African mobile telecommunication industry has declined, resulting in less than half of the respondents being loyal and more than a third considering switching providers (Consulta, 2019).
Conclusions pertaining to secondary objective 4
Conclusion 4.1: As per main findings 4 and 5, the scale used to measure respondents' satisfaction has been confirmed as reliable and valid. **Conclusion 4.2:** Respondents were the least satisfied with the customer service offered by their mobile telecommunication provider.
Implications pertaining to secondary objective 4
The following implications can be derived from conclusions 4.1 and 4.2. **Implication 4.1:** The scale used in this study to measure respondents' satisfaction can be successfully implemented to measure customers' satisfaction within the South African mobile telecommunication industry. **Implication 4.2:** Management should understand that in order to increase customer satisfaction, respondents should be delighted by the services delivered. This means that the actual service delivered by the mobile telecommunication provider should surpass the respondents' expectations they had about the service prior to the service encounter. Ensuring that respondents are satisfied with the quality of the services offered will potentially result in respondents displaying increased levels of loyalty with their mobile telecommunication provider, and decrease the likelihood that they will switch between providers.
Recommendations pertaining to secondary objective 4
Based on the above implications, the following recommendations are suggested to enable mobile telecommunication providers to turn these implications into opportunities. **Recommendation 4.1:** Mobile telecommunication providers in South Africa can consider utilising the customer satisfaction scale used in this study to measure their customers' satisfaction levels.

Table 6-4: Secondary objective 4: Literature findings, conclusions, implications, and recommendations (continues)

Recommendations pertaining to secondary objective 4
Recommendation 4.2: Mobile telecommunication providers can conduct surveys pertaining to the specific expectations of customers to gather insight into the factors or elements that are viewed as important by customers. Mobile telecommunication providers can then adapt their service offerings to the specified expectations of their customers. Moreover, continuous assessment of the quality of services offered by mobile telecommunication providers can also be conducted to ensure that any errors associated with the quality of the services delivered are identified and rectified as soon as they arise. Mobile telecommunication providers can also utilise follow-ups – where customers are asked to provide their feedback pertaining to the quality of services received, which will assist the provider in improving its quality of services offered. In addition, mobile telecommunication providers can conduct these surveys or follow-ups anonymously to increase the amount of responses.

Source: Researcher's own compilation.

6.3.5 Secondary objective 5

Determine whether differences exist between different groups of respondents with regards to the two constructs of the study (i.e. service quality and customer satisfaction).

Secondary objective 5 is addressed by main findings 4, and 23 to 31. Table 6-5 presents the findings from the literature, the conclusions, implications and recommendations pertaining to secondary objective 5.

Table 6-5: Secondary objective 5: Literature findings, conclusions, implications and recommendations

Literature findings for secondary objective 5
Based on the literature review in Section 1.2.1, it is postulated that customers differ from one another in terms of their socio-demographic aspects, such as cultural differences, gender preferences, influence from society, and income levels (Foulkes *et al*., 2018:1; Govindaraj, 2019; Kotler & Armstrong, 2018:195).

Table 6-5: Secondary objective 5: Literature findings, conclusions, implications and recommendations (continues)

Conclusions pertaining to secondary objective 5
Conclusion 5.1: Male and female respondents differ from one another in terms of their expectations about the quality of services of their mobile telecommunication provider.
Conclusion 5.2: Male and female respondents do not differ in terms of their experiences or satisfaction pertaining to the services delivered by their mobile telecommunication provider.
Conclusion 5.3: Respondents with different types of mobile subscriptions do not differ from each other in terms of their expectations, experiences, or satisfaction about the quality of services offered by their mobile telecommunication provider.
Conclusion 5.4: Respondents experienced their mobile telecommunication provider's tangibles to be of lower quality than what they expected it to be.
Conclusion 5.5: Respondents experienced their mobile telecommunication provider's *reliability* to be of lower quality than what they expected it to be.
Conclusion 5.6: Respondents experienced the *reliability* of the services delivered by their mobile telecommunication provider to be of lower quality than they expected it to be.
Conclusion 5.7: Respondents experienced their mobile telecommunication provider's *assurance* to be of lower quality than they expected it to be.
Conclusion 5.8: Respondents experienced the *empathy* of the services delivered by their mobile telecommunication provider to be of lower quality than they expected it to be.
Conclusion 5.9: Regarding *overall service quality*, respondents' expectations were significantly higher than their experience of the service quality offered by their mobile telecommunication provider.
Implications pertaining to secondary objective 5
The following implications can be derived from conclusions 5.1 to 5.9.
Implication 5.1: Due to the fact that male and female respondents differ in terms of the quality of services that they expect to receive from their mobile telecommunication provider, it is necessary for management to understand and investigate the specific expectations of each gender. The implication thereof is that certain aspects of the service delivery process could be more expected from one gender than from the other. Thus, if managers can gain insight into the specific expectations of each gender, services can be altered to match those expectations.

Table 6-5: Secondary objective 5: Literature findings, conclusions, implications and recommendations (continues)

Implications pertaining to secondary objective 5
Implication 5.2: Since male and female respondents do not differ in terms of their experiences of service quality or their satisfaction with their mobile telecommunication provider, it indicates that the same level of quality was received by both genders. This implies that if the quality of the service delivery increases, it effects both genders in the same manner. Thus, managers should ensure that the same level of quality is provided to both genders.
Implication 5.3: Since respondents do not differ from each other based on the type of mobile subscription they have with their mobile telecommunication provider; the same quality of services is expected from all mobile subscription types. The implication of this is that mobile telecommunication providers should deliver the same level of quality and services to all types of subscriptions.
Implication 5.4: Regarding the *tangibility* dimension of service quality, respondents differ with regards to their expectations and experiences pertaining to their mobile telecommunication provider's service quality. Therefore, managers should increase the quality of all the services delivered. The implication of this is that respondents do not perceive the quality of services that they receive from the provider to match their expectations. Thus, it reflects that respondents have higher expectations of the tangibility of services than what they experience (receive) from their mobile telecommunication provider.
Implication 5.5: Since respondents differ in terms of their expectations and experiences pertaining to their mobile telecommunication provider's *reliability* dimension, managers should increase the quality of the services delivered. The implication of this is that respondents do not perceive the quality of services that they receive from the provider to match their expectations. Thus, it reflects that respondents have higher expectations of the reliability of services than what they experience (receive) from their mobile telecommunication provider.
Implication 5.6: Relevant to the *responsiveness* dimension of service quality, respondents differ in terms of their expectations and experiences. Managers should therefore increase the quality of all the services delivered. The implication of this is that respondents do not perceive the quality of services that they receive from the provider to match their expectations. Thus, respondents have higher expectations of the responsiveness of services than what they experience (receive) from their mobile telecommunication provider.

Table 6-5: Secondary objective 5: Literature findings, conclusions, implications and recommendations (continues)

Implications pertaining to secondary objective 5
Implication 5.7: Since respondents differ in terms of their expectations and experiences pertaining to their mobile telecommunication provider's *assurance* dimension of service quality, managers should increase the quality of all the services delivered. The implication of this is that respondents do not perceive the quality of services that they receive from the provider to match their expectations. Therefore, reflecting that respondents have higher expectations of the reliability of services than what they experience (receive) from their mobile telecommunication provider. **Implication 5.8:** Because respondents differ in terms of their expectations and experiences pertaining to their mobile telecommunication provider's *empathy* dimension of service quality, managers should increase the quality of the services delivered. The implication of this is that respondents do not perceive the quality of services that they receive from the provider to match their expectations. Thus, respondents have higher expectations of the empathy of services than what they experience (receive) from their mobile telecommunication provider. **Implication 5.9:** Respondents have higher expectations pertaining to the quality of services than what they actually experience (receive) from their mobile telecommunication provider. If this is not rectified, respondents might consider switching to another provider if they feel that the service delivered by the other provider might match their expectations of the service.
Recommendations pertaining to secondary objective 5
Based on the above implications, the following recommendations are suggested to enable mobile telecommunication providers to turn these implications into opportunities. **Recommendation 5.1:** Mobile telecommunication providers can conduct research to determine the specific expectations of each gender. **Recommendation 5.2:** Mobile telecommunication providers should ensure that they provide the same quality of service to both genders. They should also ensure that gender neutral advertisements are utilised to effectively communicate to both genders. **Recommendation 5.3:** Mobile telecommunication providers should ensure that the same level of quality is offered to customers no matter the type of subscription.

Table 6-5: Secondary objective 5: Literature findings, conclusions, implications and recommendations (continues)

Recommendations pertaining to secondary objective 5
Recommendation 5.4: Mobile telecommunication providers should continuously monitor the quality of all services that they deliver to customers. This can be done by means of service quality surveys, as well as customer satisfaction surveys.

Source: Researcher's own compilation.

6.3.6 Secondary objective 6

Determine the influence of the dimensions of service quality of customer satisfaction.

Secondary objective 6 is addressed by main findings 32 to 37. Table 6-6 presents the findings from the literature, the conclusions, implications and recommendations pertaining to secondary objective 6.

Table 6-6: Secondary objective 6: Literature findings, conclusions, implications and recommendations

Literature findings for secondary objective 6
From the literature review (in Section 3.8), it was established that service quality and customer satisfaction are not the same concepts (Ramamoorthy *et al*., 2018:837; Tan *et al*., 2014:35). Customer satisfaction will occur when customers perceive the service delivered by a business to be valuable and fulfil their needs and expectations (Neupane, 2015:13). Therefore, service quality influences customer satisfaction (Alam *et al*., 2016:57; Bagram & Khan, 2012:2; De Meyer-Heydenrych *et al*., 2017:6; Iacobucci, 2013:185). In addition, the higher the quality of the service delivered, the higher the level of customer satisfaction (Ahrholdt *et al*., 2017:439; Ngo & Nguyen, 2016:111).
Conclusions pertaining to secondary objective 6
Conclusion 6.1: The *tangibility* dimension of service quality does not influence respondents' satisfaction with their mobile telecommunication provider. **Conclusion 6.2:** The *reliability* dimension of service quality has been established to influence respondents' satisfaction with their mobile telecommunication provider.

Table 6-6: Secondary objective 6: Literature findings, conclusions, implications and recommendations (continues)

Conclusions pertaining to secondary objective 6
Conclusion 6.3: The *responsiveness* dimension of service quality does not influence respondents' satisfaction with their mobile telecommunication provider.
Conclusion 6.4: The *assurance* dimension of service quality does not influence respondents' satisfaction with their mobile telecommunication provider.
Conclusion 6.5: The *empathy* dimension of service quality influences respondents' satisfaction with their mobile telecommunication provider.
Conclusion 6.6: The reliability dimension of service quality has the strongest influence on respondents' satisfaction with their mobile telecommunication provider.
Implications pertaining to secondary objective 6
The following implications can be derived from conclusions 6.1 to 6.6.
Implication 6.1: Respondents' satisfaction was not influenced by the quality of the tangible services delivered.
Implication 6.2: If mobile telecommunication providers can deliver reliable services, respondents will be more satisfied with the quality of services delivered.
Implication 6.3: Respondents' satisfaction was not influenced by the responsiveness of the services delivered.
Implication 6.4: Respondents' satisfaction was not influenced by the quality of the assured services delivered.
Implication 6.5: If mobile telecommunication providers can display more empathy when engaging with respondents, the respondents will be more satisfied with the quality of services delivered.
Implication 6.6: In order to increase customer satisfaction within the mobile telecommunication industry, providers should increase their reliability of the services delivered.

Table 6-6: Secondary objective 6: Literature findings, conclusions, implications and recommendations (continues)

Recommendations pertaining to secondary objective 6
Based on the above implications, the following recommendations are suggested to enable mobile telecommunication providers to turn these implications into opportunities. Because the reliability and empathy dimensions influence customer satisfaction, the following recommendations are suggested to improve these two dimensions: **Recommendation 6.1:** Mobile telecommunication providers must focus significantly on the reliability and empathy dimensions of service quality to improve customers' satisfaction. **Recommendation 6.2:** To improve the reliability dimension of service quality, mobile telecommunication providers can implement the following to increase their customers' satisfaction: • Fulfilling customer service promises; • Following up with customers after their visit to a store; • Improving the complaints handling procedure; • Employing more effective methods of solving customer service issues; • Investigating and addressing customer problems as soon as possible; • Keeping customers updated about the status of their inquiries at all times; • Providing customers with a timeframe of when their issues will be resolved; • Providing customers with a reliable internet connection. As mentioned in Chapter 1, mobile telecommunication providers can achieve this through the implementation of the 5G network, which will provide customers with the best possible mobile internet connection possible; and • As mentioned in Section 6.3.4, mobile telecommunication providers can also utilise customer satisfaction surveys to specifically measure customers' satisfaction pertaining to the reliability of service quality.

Table 6-6: Secondary objective 6: Literature findings, conclusions, implications and recommendations (continues)

Recommendations pertaining to secondary objective 6
As mentioned in Section 6.3.2, mobile telecommunication providers can also take into consideration the specific expectations that customers have pertaining to the reliability of service quality by: • Ensuring that attainable customer service promises are made and met; • Implementing customer service training and development programmes for employees that will be delivering excellent customer service (i.e. front-line personnel); • Implementing a business-wide quality strategy in order to ensure that consistent quality is offered in terms of customer services; and • Providing an indication of the customer service promise to be delivered in advertisements. **Recommendation 6.3:** To improve the empathy dimension of service quality, mobile telecommunication providers can implement the following to increase their customers' satisfaction: • Offering personalised and customised services to customers; • Continuously updating customer information; • Following up with customers after service interactions; and • As mentioned in Section 6.3.4, mobile telecommunication providers can also utilise customer satisfaction surveys to specifically measure customers' satisfaction pertaining to the empathy of service quality. As mentioned in Section 6.3.2, mobile telecommunication providers can also take into consideration the specific expectations that customers have pertaining to the empathy of service quality by: • Informing customers of the operating hours, which can be done on their website, the store's window display, or advertisements; and • Taking into account the working and socialising hours of customers and ensuring that there are always employees available to assist customers.

Source: Researcher's own compilation.

6.4 LINKAGES

Table 6-7 provides a summary of the linkages between the objectives, questionnaire content, hypotheses, main findings, conclusions, implications, and recommendations.

Table 6-7: Summary of the linkages between the objectives, questionnaire content, hypotheses, main findings, conclusions, implications, and recommendations

Question in questionnaire	Hypotheses	Main findings	Conclusions	Implications	Recommendations
Secondary objective 1: Compile a sample profile of the respondents.					
Section A 2.1 – 2.6	–	1 – 3	1.1 – 1.3	1.1 – 1.3	1.1 – 1.3
Secondary objective 2: Measure respondents' service quality expectations of their mobile telecommunication provider.					
Section B 3.1 – 3.22	H_3	5 – 12	2.1 – 2.7	2.1 – 2.7	2.1 – 2.7
Secondary objective 3: Measure respondents' service quality experiences received from their mobile telecommunication provider.					
Section B 3.1 – 3.22	H_3	5, 13 – 20	3.1 – 3.7	3.1 – 3.7	3.1 – 3.7
Secondary objective 4: Measure respondents' satisfaction with their mobile telecommunication provider.					
Section C 4.1 – 4.4	–	5, 21 & 22	4.1 & 4.2	4.1 & 4.2	4.1 & 4.2
Secondary objective 5: Determine whether differences exist between different groups of respondents with regards to the two constructs of the study (i.e. service quality and customer satisfaction).					
Sections A – C 2.1 – 4.4	H_1 & H_2	4, 23 – 31	5.1 – 5.9	5.1 – 5.9	5.1 – 5.4
Secondary objective 6: Determine the influence of the dimensions of service quality on customer satisfaction.					
Sections B & C 3.1 – 4.4	H_4	32 – 37	6.1 – 6.6	6.1 – 6.6	6.1 – 6.6

6.5 LIMITATIONS

Research studies encounter various challenges throughout the research process. As a result, no research study is perfect or flawless, since some limitations can influence the effectiveness of the research process or the outcome thereof (Burns *et al.*, 2017:443). Considering this, it is important to note some limitations pertaining to this study. Therefore, the following sections present the theoretical as well as empirical limitations that were encountered in this study.

6.5.1 Theoretical limitations

- Limited research has been conducted in the South African mobile telecommunication industry pertaining to customers' service quality expectations, experiences and satisfaction. Therefore, the researcher sought and were depended on literature sources from international studies on mobile telecommunication providers and other industries.

- No research studies, to the best of the researcher's knowledge, have been conducted from a business management perspective on service quality and customer satisfaction within the South African mobile telecommunication industry. Therefore, literature from various business-related fields were sought and utilised.

6.5.2 Empirical limitations

- Due to the Protection of Personal Information (POPI) *Act* No. 4 of 2013, this study could not obtain a sampling frame of the customers within the mobile telecommunication industry.

- Since no sampling frame was available, a convenience sampling technique was utilised. This resulted in a bias and skewedness of data since the fieldworker had to convince respondents to voluntarily participate in the research.

- Due to the fact that the data was collected within the North West Province, the sample was not representative of the South African population as a whole. This is also evident from the inaccurate representation of the various ethnic groups of the sample.

- No remuneration was offered to respondents, thus decreasing the number of respondents willing to partake in the study.

- Due to the voluntary nature of respondents' participation, respondents could abandon or end the survey at any time. This occurred in this study and resulted in six questionnaires that were discarded.

- Time constraints limited this study in gathering more insight into the reliability and empathy dimensions of service quality experiences. The time constraint also prevented this study from gathering data from a larger sample.

- Cost constraints also limited the amount of data collected, since fieldworkers had to be remunerated. Cost restraints also prevented this study from gathering insight into the reliability and empathy dimensions of service quality experiences, since it would have required additional data collection and analysis costs to further investigate these dimensions.

6.6 FUTURE RESEARCH SUGGESTIONS

The following suggestions are proposed for future research on this topic:

- A continuous or omnibus design can be utilised, where service quality and customer satisfaction are measured on a continuous basis.
- Global comparisons can provide valuable insight for businesses about the service quality experiences, expectations, and customer satisfaction of different countries.
- The study can also be applied to measure the service quality expectations and experiences, as well as satisfaction in another province. This can also serve as a reference for province comparisons.
- A qualitative research approach can be utilised in future studies to obtain more valuable insight from customers, especially pertaining to the reliability and empathy dimensions of service quality experiences.
- Prospective studies can also be focused on industry comparisons, where the results from various industries are compared to uncover whether differences exist in terms of service quality expectations, experiences or satisfaction.
- Future studies pertaining to income levels can also be conducted to determine whether differences exist in terms of service quality expectations, experiences or satisfaction based on different income levels of respondents.
- Service quality expectations, experiences and customer satisfaction can also be investigated within a specific business or within businesses of different sizes, to determine whether differences exist between the quality of services provided at large businesses in comparison to that offered at small businesses.
- The service quality offered at franchises can also be investigated to determine customers' service quality expectations, experiences and satisfaction pertaining to franchises.
- Future studies can also investigate the type of quality controls used by businesses to ensure that quality services are delivered. In addition, future studies can also investigate the type of quality control that is most important and required by a specific service provider.
- Future studies can also focus specifically on the possible effect that service quality may have on the profitability of the mobile telecommunication providers.

6.7 CONTRIBUTION OF THE STUDY

The contribution of this study is threefold and is explained in the following section:

6.7.1 Theoretical contribution

This study contributes to existing business and management literature by providing insight into the theoretical aspects of interest to this study, namely business management, quality management, customer service, service quality, and customer satisfaction.

6.7.2 Empirical contribution

Results, deductions, and conclusions are provided from the data collected and analysed with regards to service quality and customer satisfaction in the South African mobile telecommunication industry. Moreover, the results of this study confirm that the dimensions of service quality influence customers' satisfaction.

6.7.3 Practical contribution

This study made a number of implications and recommendations from the literature findings and the empirical results, which could potentially be useful for mobile telecommunication providers and other service delivery businesses.

6.8 CONCLUSION

This chapter commenced with an overview of the study as a whole, and as such highlighted various aspects discussed in the previous chapters (i.e. Chapters 1 to 5). Conclusions, implications, and recommendations for each secondary research objective was made to provide mobile telecommunication providers in South Africa with insight pertaining to service quality and customer satisfaction within the industry. The relation between the research objectives, questionnaire content, hypotheses, main findings, conclusions, implications and recommendations were presented in Table 6-7. Thereafter, the limitations of the study were posited and suggestions for future research were proposed. Finally, the chapter presented the theoretical, empirical, and practical contributions of this study.

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APPENDIX A

QUESTIONNAIRE

This survey forms part of a master's study in Business Management on service quality and satisfaction in the South African mobile telecommunication industry.

Objective:

The objective of this study is to determine South African customers' service quality perceptions of and satisfaction with their mobile service provider.

Confidentiality and anonymity:

Participating in this survey is completely voluntary, and you may withdraw from the process at any time. All information provided by you will be completely anonymous and will be treated with the utmost standard of privacy and confidentiality. You will not be required to provide personal information during the completion of the survey. The data obtained from this survey will be stored in a secure location and destroyed within the next three years. No information will be disclosed to any other parties, and no information will be reported on an individual basis.

Results:

The research results will only be used empirically for the written dissertation of the study, and as such, it is important for statistical purposes to ensure that you answer all the questions. All participants are welcome to request results upon completion of this study.

Completing the questionnaire should take approximately 10 minutes of your time. When evaluating a question, please answer from your own perspective, by marking or completing where required.

Please accept my thanks, in anticipation of your willingness to participate in this research. Should you have any questions, please contact Prof Louis van Staden at louis.vanstaden@nwu.ac.za.

Yours sincerely,

Leon du Preez

(Ethical clearance: NWU-00714-19-A4)

Fieldworker Initials and Surname: ***Questionnaire number:***

Screening question:

1 Which ONE of the following mobile telecommunication providers' services do you MAINLY use?

Vodacom	1
MTN	2
Cell C	3
Telkom	4
None of the above	5

If your answer is "Vodacom" or "MTN" or "Cell C" or "Telkom" to the above question, please proceed to complete the questionnaire. If your answer is "None of the above" to the above question, you do not have to complete the questionnaire.

SECTION A – BACKGROUND INFORMATION

Please note that this section is not compulsory. The information from this section will ONLY be used to compile a sample profile and will not be reported on individually.

2.1 What is your gender?

	X
Male	1
Female	2

2.2 In which province do you reside?

	X
Gauteng	1
Limpopo	2
North West	3
Free State	4
KwaZulu Natal	5
Western Cape	6
Eastern Cape	7
Northern Cape	8
Mpumalanga	9

2.3 What is your population group?

	X
African	1
Asian	2
Coloured	3
Indian	4
White	5
Other (please specify):	6

2.4 For how long have you been with your mobile telecommunication provider (as indicated in **question 1)**?

	X
Less than 1 year	1
1 to 3 years	2
4 to 6 years	3
7 to 9 years	4
10 years or longer	5

2.5 Please rate the following elements of your mobile telecommunication provider based on the level of importance to you (1 = Not important at all; 5 = Extremely important).

Element	Not important at all	Somewhat important	Important	Very important	Extremely important
Affordability	1	2	3	4	5
Customer service offered	1	2	3	4	5
Geographical coverage	1	2	3	4	5
Internet connectivity	1	2	3	4	5
More variety of products	1	2	3	4	5

2.6 Which type of subscription do you have with your mobile telecommunication provider (as selected in **question 1)**?

	X
Prepaid	1
Contract	2
Data only sim	3
Wireless internet router	4
Other, please specify:	5

SECTION B – SERVICE QUALITY EXPECTATIONS AND EXPERIENCES

Please indicate the service quality you expect from your mobile telecommunication provider (on the left-hand side), and the quality of the services as you experienced (on the right-hand side).

	EXPECTATION OF CUSTOMER SERVICE						EXPERIENCE OF CUSTOMER SERVICE				
	I do not expect this	I expect this sometimes	It does not matter	I expect this most of the time	I always expect this	**Statements pertaining to the mobile telecommunication provider**	Negative	Mostly Negative	Adequate	Mostly Positive	Positive
	Tangibles										
3.1	1	2	3	4	5	The mobile provider has modern-looking equipment at its physical outlets (e.g. computers, furniture).	1	2	3	4	5
3.2	1	2	3	4	5	The physical facilities of the mobile provider are visually appealing (e.g. building, entrance, layout).	1	2	3	4	5
3.3	1	2	3	4	5	The employees working at the mobile provider's physical outlet are neat-appearing (e.g. clothing, uniforms).	1	2	3	4	5
3.4	1	2	3	4	5	Materials associated with the service provided by the mobile provider are visually appealing (e.g. forms, display boards, files).	1	2	3	4	5
	Reliability										
3.5	1	2	3	4	5	When the mobile provider promises to do something by a certain time, it does so.	1	2	3	4	5
3.6	1	2	3	4	5	The mobile provider shows a sincere interest when I have a problem.	1	2	3	4	5
3.7	1	2	3	4	5	The mobile provider performs its service right the first time.	1	2	3	4	5
3.8	1	2	3	4	5	The mobile provider delivers on its customer service promises.	1	2	3	4	5
3.9	1	2	3	4	5	The mobile provider insists on error-free records.	1	2	3	4	5

	EXPECTATION OF CUSTOMER SERVICE						EXPERIENCE OF CUSTOMER SERVICE				
	I do not expect this	I expect this sometimes	It does not matter	I expect this most of the time	I always expect this	**Statements pertaining to the mobile telecommunication provider**	Negative	Mostly Negative	Adequate	Mostly Positive	Positive
	Tangibles										
3.10	1	2	3	4	5	The mobile provider informs me of the services that will be performed and when it will be performed.	1	2	3	4	5
3.11	1	2	3	4	5	I receive prompt service from the mobile provider.	1	2	3	4	5
3.12	1	2	3	4	5	The mobile provider's employees are always willing to help me.	1	2	3	4	5
3.13	1	2	3	4	5	The mobile provider's employees are never too busy to respond to my requests.	1	2	3	4	5
	Assurance										
3.14	1	2	3	4	5	The mobile provider's employees instil confidence in me.	1	2	3	4	5
3.15	1	2	3	4	5	I feel safe in my transactions with the mobile provider.	1	2	3	4	5
3.16	1	2	3	4	5	The mobile provider's employees are consistently polite to me.	1	2	3	4	5
3.17	1	2	3	4	5	The mobile provider's employees are knowledgeable enough to answer my questions.	1	2	3	4	5
	Empathy										
3.18	1	2	3	4	5	I receive individual attention from the mobile provider as a whole.	1	2	3	4	5
3.19	1	2	3	4	5	The mobile provider has convenient operating hours.	1	2	3	4	5
3.20	1	2	3	4	5	I receive special attention from the mobile provider's employees.	1	2	3	4	5
3.21	1	2	3	4	5	The mobile provider's employees have my best interests at heart.	1	2	3	4	5
3.22	1	2	3	4	5	The mobile provider's employees understand my specific needs.	1	2	3	4	5

SECTION C – CUSTOMER SATISFACTION

Please indicate your level of agreement with the following statements:

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
4.1	I am always delighted with the customer service provided by my mobile provider.	1	2	3	4	5
4.2	Overall, I am satisfied with the customer service provided by my mobile provider.	1	2	3	4	5
4.3	I think I made the right decision to make use of my mobile provider.	1	2	3	4	5
4.4	I feel good about using this mobile provider.	1	2	3	4	5

Thank you for your time in participating in this research.

APPENDIX B

ETHICAL APPROVAL

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24 June 2019

Prof L J van Staden and Prof N Mackay
Per e-mail

Dear Prof van Staden and Prof Mackay,

FEEDBACK – ETHICS APPLICATION 21062019 – L P du Preez (26132672)(NWU-00714-19-A4) MCom in Business Management – Prof L J van Staden and Prof N Mackay

Your ethics application on, *A quality management perspective on customer service in the South African mobile telecommunication industry,* that served on the EMS-REC meeting of 21 June 2019 refers.

Outcome:

Approved as a minimal risk study. A number, NWU-00714-19-A4, is given for three years of ethics clearance.

Kind regards,

A.L Bevan-Dye

Prof Ayesha Bevan-Dye
Deputy Chairperson: Economic and Management Sciences Research Ethics Committee (EMS-REC) Vaal Campus

APPENDIX C

STATISTICAL ANALYSIS CONFIRMATION

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27 February 2020

Re: Dissertation, Mnr L du Preez, student number 26132672

We hereby confirm that the Statistical Consultation Services of the North-West University analysed the data of the above-mentioned student and assisted with the interpretation of the results. However, any opinion, findings or recommendations contained in this document are those of the author, and the Statistical Consultation Services of the NWU (Potchefstroom Campus) do not accept responsibility for the statistical correctness of the data reported.

Kind regards

Prof SM Ellis (Pr. Sci. Nat.)
Associate Professor: Statistical Consultation Services

APPENDIX D

LANGUAGE EDITING CONFIRMATION

This certificate declares that the dissertation with the title **A quality management perspective on customer service in the South African mobile telecommunication industry** by L.P. du Preez was edited by:

Ann-Lize Grewar

BA in Language and Literature Studies

BA Hons in Translation Studies

SATI-membership number 1002647

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