



**DEVELOPING AN INTEGRATED PREDICTIVE- EXPLANATORY MODEL OF  
BEHAVIOURAL INTENTIONS FOR MOBILE CELLULAR SERVICES**

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**DECEMBER 2021**

## DECLARATION

I, Douglas Musiiwa, student number \_\_\_\_\_, declare that this thesis entitled “Developing an Integrative Predictive-Explanatory Model of Behavioural Intentions for Mobile Cellular Services”, hereby submitted for the degree of the Doctor of Philosophy (PhD) in Management Sciences (Business Management), has not been submitted by me to any other university before. I further declare that this is my own independent work in design and execution and that all materials contained herein have been duly acknowledged. I cede the copyright of this thesis in favour of the Central University of Technology, Free State.

Date: 02 December 2021

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## ACKNOWLEDGEMENTS

I shall forever not forget and remain thankful to the following people for their immense contributions to my academic life and for the successful completion of this study.

- The Almighty God for His blessings, mercies, protection and for giving me strength and perseverance to pull through difficult times during my studies.
- I feel very much indebted to my wife, Mrs Norla Musiwa, and our children, who supported me during the study period.
- My main supervisor, Professor Patient Rambe, for his professional coaching, guidance, his quick response to my questions and more importantly, his unwavering support and flexibility to accommodate me anytime I had a challenge during my studies.
- My greatest appreciation goes to Professor Peter P Khaola of National University of Lesotho, for his inspiration for me to undertake this study with the Central University of Technology (CUT) and for his immense support in teaching me statistical analysis.
- My co-supervisors, Professors Crispin Chipunza, Dennis Y. Dzansi and Dr Edmund Owusu Amoakoh, for their support and assistance.
- To all my colleagues and friends at the National University of Lesotho for their contributions in diverse ways and their moral support.
- To the Faculty of Management Sciences at the Central University of Technology, Free State, for organising various workshops that assisted me in improving my academic writing skills at this level of study.

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## ABSTRACT

Creating a critical mass of loyal customers and their retention has been recognised as the cornerstone for the future survival of an organisation. However, customer retention strategies depend on the accurate prediction of behavioural intentions (BIs), which is an immediate predictor of actual behaviour. To improve the prediction of BIs, organisations need to understand all the possible factors that can affect a buyer's relationship with a brand. Perceived justice (PJSR), service recovery satisfaction (RSat), service quality (SQ), overall satisfaction (OCS), and switching barriers (SBs), have been considered as determinants of BIs in simple bivariate explanatory models. However, we live in a complex multivariate world such that, studying the determinants of BIs in isolation would seem artificial and inconsequential. Furthermore, the previous BIs models have been largely explanatory, which provide little practical relevance without assessing their predictive capacity. Consequently, there has been a call for the development of comprehensive models of BIs that incorporate more variables in a single model, which is both explanatory and predictive. Despite this call, an integrated explanatory-predictive framework that explains how BI antecedents' nomological causal relationships collectively lead to the formation of BIs in a consumer's mind is yet to emerge. To address this gap in the research, the researcher synthesised literature from different research streams to construct an integrated explanatory-predictive framework of BIs in situations where service failure and service recovery are involved.

Cross-sectional survey data from 405 mobile phone subscribers, collected using a self-administered questionnaire in different districts of Lesotho was analysed using SmartPLS 3.2.9. The model had a high explanatory power ( $R^2 = 0.75$ ), high in-sample predictive relevance ( $Q^2$  value for BI = 0.547) and high out-of-sample predictive capacity [(low positive values of the linear regression model (LM) - the root mean square error (RMSE)]. The mediation tests show that OCS is the central construct through which all the other variables influence the formation of BI. The moderation test of SBs was only significant on the SQ->BI relationship, specifically revealing that when SBs are low, the influence of SQ on BIs is strong, but high SBs tend to obscure the effects of SQ on BI. The importance-performance matrix analysis (IPMA) reveal that OCS was the most important construct, followed by perceived justice (PJSR), RSat and SQ, in descending order. Overall, the results reveal that

the performance of the cellular industry on these constructs is above average (50%), but more effort is required to improve their performance. The IPMA results of the indicator items reveal that the reliability dimension of SQ was considered the most important item in determining BI, but in general, the performance of all the indicator items was slightly above the average (50 per cent) mark.

Theoretically, the study expands the current knowledge and understanding of the formation of behavioural intentions. Conceptually, the study is unique in that to the researcher's knowledge, it is the first of its kind to construct a framework that combines an analysis of the explanatory power, predictive relevance, the importance and performance of the determinants of BI in a single framework. In that regard, the study is a respond to the call for the development of consumer behaviour models that have more practical relevance but being grounded in strong theoretical explanations. Besides its relevance in predicting the future intentions of subscribers in the mobile phone industry, the model also offers specific, actionable recommendations for that guide management when developing customer retention strategies. A detailed explanation of the contribution of this study is discussed in Chapter 8 of this thesis.

**Key words:** Behavioural intentions; Explanatory and Predictive modelling; Importance-performance map; Overall customer satisfaction; Mediation and Moderation analysis; Perceived justice with service recovery; Service recovery satisfaction; Service quality; Switching barriers.

## CHAPTER 1: ORIENTATION TO THE STUDY

### 1.1. INTRODUCTION

The current developments in Information and Communication Technology (ICT) have transformed societies by connecting them into a global village. Because ICT has turned the world into a global village, it has become a significant driver and key indicator of economic growth in many countries in the world (Donou-Adonsou, Lim & Mathey, 2016; Kurniawati, 2020). The positive impact of ICT on economic growth has been confirmed empirically in several countries, including in Australia (Salahuddin & Alam 2015), Japan (Ishida, 2015), China (Kumar et al., 2016), India (Agarwal et al., 2018), USA (Adedoyin et al., 2020) and in South Africa (Salahuddin & Gow, 2016). Several companies have made huge investments in the mobile telephony sector within the ICT industry because of its exponential growth rate and its positive impact on economic growth. The new forms of communication offered by mobile telecommunication services (MCS) (Nath & Liu, 2017) have increased information exchange among the societies in the world (Erumban & Das, 2016; Niebel, 2018), causing a complete paradigm shift in human development and people's standard of living (Lee, Hong & Hwang, 2017; Zhang & Danish, 2019). However, companies in the mobile telephony sector are faced with stiff competition that threatens their future survival. According to the Global System of Mobile Communication Association (GSMA) report released in 2021, the global market for the mobile telecommunication industry in Southern African countries, has reached the maturity stage, with stagnant growth. The reports also show that mobile network operators (MNOs) in this part of the world, are likely to struggle for survival in the future because on the continued dwindling of the profit margins. Furthermore, MCS have become more commoditised, whereas customers continue to push for more stable connectivity, better responsiveness, more value adding services and lower rates (GSMA, 2021). These developments put pressure on MNOs to create a critical mass of loyal customers for their success and future survival.

The major challenge faced by MNOs is that customers are increasingly becoming users of multiple subscriber identification module (SIM) cards. This problem has been exacerbated by the advent of smartphones that can hold multiple SIM cards in a single mobile phone handset. By enabling simultaneous usage of more than one



SIM card, smartphones have increased competition for the customer's wallet among the MNOs. Giovanis et al. (2016) reported that the annual global customer attrition rate for mobile telecommunication industry is 25 percent. High customer attrition rates are unwanted, considering that acquiring a new customer costs five times more than retaining an existing one (Reichheld & Sasser, 1990, Saha & Theingi, 2009; Pfiefer, 2005; Min et al., 2016; Basaran & Askoy, 2017). The major concern is therefore, how MNOs could predict the likely behaviour of subscribers so that they can design appropriate intervening marketing strategies to retain them. In that case, the behavioural intentions of subscribers are critical to the prediction of their behaviour.

The key assumption of behavioural intentions theories is that customers make rational plans or intentions to switch their current service provider if offered a better service elsewhere (Viriri & Phiri, 2017; Vijaya & Sivasankar, 2018; Salhieh, 2019). Therefore, MNOs should satisfy their customers if they are to win their repatronage. This can happen if MNOs are able to identify and understand what motivates customers to formulate repurchase intentions in their minds (Giovanis et al., 2016). Since repurchase intentions are derived from an evaluative process of specific service performance factors, it is difficult to predict them without an understanding of the evaluative factors customers use in their appraisal of the performance of a service provider.

The need to retain customers puts pressure on managers to understand what influences customers to select a specific service provider and how such behaviour of customers can be predicted before its manifestation. Psychologists believe that the formation of behavioural intentions in the consumer's mind precedes actual behaviour (Ajzen, 1991; Ajzen, 2015; Ashman, Wolny & Solomon, 2015). Thus, behavioural intentions are understood to represent the future plans of an individual that guide and inspire him/her to perform a specific behaviour in the future. Thus, prediction of consumers' behavioural intentions is critical to the development of customer retention strategies.

Many studies on behavioural intention do not distinguish between a buyer's initial purchase intentions and his or her repeat purchase intentions. Yet, Qureshi et al.

(2009) and Chen et al. (2016) argue that the determinants of the initial purchase intentions and repeat purchase intentions of customers are conceptually different and should, therefore, be studied separately. The negative implications of high mobile subscriber's attrition rates in the mobile phone industry makes the prediction of the repeat purchase behavioural intentions more important now than before. Hence, this research focuses on modelling the prediction of repeat purchase loyalty intention, defined as an individual's willingness to make another purchase from the same company based on previous experience (Kim, Galliers, Shin, Ryoo & Kim, 2012).

Given that intentions are immediate predictors of actual behaviour (Ajzen, 1991, 2015), practitioners must have a deeper understanding of how they are formed in the context of service management. Behavioural intentions are generally represented by the repeat purchase and word-of-mouth (WOM) intentions (Miranda, Rubio & Chamorro, 2014; Theodorakis, Howat, Ko & Avourdiadou, 2014; Giovanis, Athanasopoulou & Tsoukatos, 2016). In the context of service delivery, repeat purchase and word-of-mouth (WOM) intentions are motivated by the magnitude of the gap between what customers expect and what the service received (Giovanis et al., 2016). The actual service received is a measure of the overall service performance of the service provider. Customers consider several factors in assessing the overall service performance (Luk, Sharma & Chen, 2013; Giovanis et al., 2016). If the service performance is perceived to be satisfactory, customers form favourable behavioural intentions. Unfavourable behavioural intentions are formed in situations where customers are generally unhappy with the service performance of the service provider. Unhappy customers may leave the service provider for alternative suppliers (Lim, Yeo, Goh & Koh, 2018; Malhotra & Batra, 2019). Thus, customers' behavioural intentions are closely linked to their loyalty intentions. Despite this appreciation in business management, not many studies have focused on developing models that can be used to predict customers' behavioural intentions. Rather than focusing on the prediction of behavioural intentions, the previous modelling of behavioural intentions has been focused on providing a deeper explanation of the determinants of BIs (Hofman, Sharma & Watts, 2017).

While explanatory modelling is necessary for theory building, existing explanatory models of behavioural intentions have been accused of putting too much emphasis on the past behaviour of the consumer, which does not necessarily predict the future behaviour of a customer (Söderlund & Öhman, 2005; Hofman et al. 2017; Hair & Sarstedt, 2020). Rather than relying on past behaviours, future purchase intentions can be predicted from the extent to which the delivered service matches the customers' expectations (Malter et al., 2020; Rigdon et al., 2020; Hair et al., 2021). Therefore, it can be argued that a predictive model will be more relevant for estimating the future behaviour of customers than an explanatory model (Hofman et al., 2017). However, the predictive relevance of a model cannot be guaranteed from its explanatory sufficiency, neither can an explanatory model substitutes the practical relevance of a predictive model (Shmuel et al., 2019; Hair et al., 2021). Thus, instead of treating explanatory and predictive modelling as distinct and competing approaches to modelling of behavioural intentions, they must be considered as complementary approaches. One possible reason why both explanatory and predictive could not be combined or integrated into one by past researchers could be because of the unavailability of appropriate statistical software. The advent of the partial least square structural equation modelling (PLS-SEM) statistical method in the last decade, arguably provides the means of combining explanatory and predictive assessments in one model (Shmueli et al., 2019; Hair et al., 2021). As argued by Sarstedt, Ringle and Hair (2021), the key methodological attractiveness of the PLS-SEM is that the approach follows a causal-predictive paradigm, in which the aim is to test the predictive power of a model carefully developed on the grounds of strong explanatory theories and logic.

Giovanis et al. (2016) claim that, in business management studies, the basic model that has been designed to predict the formation of BIs is the service evaluation model, which was first developed by Cronin et al. (2000) and later replicated by Caruana (2002) as well as Brady et al. (2005). This model assumes that consumers evaluate and form intentions to repurchase from the same service provider based on specific service performance evaluative factors. Several service performance evaluative factors have been identified in the literature, such that fitting them all in a single model would not be possible. Where there are too many factors to fit in one model, Shoemaker, Tankard, and Lasorsa (2004), recommend that only key

variables that theoretically constitute the critical blocks of a model be should be considered for model building.

Several scholars in service settings (e.g. Jones et al., 2000; Maxham & Netemeyer, 2002; Sharma et al., 2012; Namukasa, 2013; Hussain, 2016; Saleem, Zahra & Yaseen, 2017), view service quality (SQ) and overall customer satisfaction (OCS) as the most critical service evaluation constructs in the formation of BIs. It becomes evident that these two constructs should be part of the many factors that are likely to influence the formation of BIs in the minds of customers. Researchers in other fields have attributed the formation of behavioural intentions to a customer's perception of the fairness of a service recovery solution (Ha & Jang, 2009; Nikbin et al., 2012; Tsao, 2018; Ortiz et al., 2019). In the field of service recovery, many scholars (Gelbrich & Roschk, 2011; Aliman & Mohamad, 2016; Matikiti et al., 2018; Hurun et al., 2019) have attributed the formation of behavioural intentions to a customer's satisfaction with a service recovery solution (RSat). Although studies on the formation of behavioural intentions were conducted separately in different fields, the literature suggests that the formation of behavioural intentions is a complex process involving an evaluation of several factors simultaneously (Giovanis et al., 2016). Thus, modelling how each of the predictors would influence the formation of behavioural intentions when they are all considered together in one model has rarely been examined.

Despite their appearance as key determinants of behavioural intentions in several studies, perceived justice, service recovery satisfaction, service quality, and overall customer satisfaction are cannot sufficiently explain why customers stay with a service provider (Piaralal et al., 2014; Li, 2015; Aliman & Mohamad, 2016; Banda & Tembo, 2017). It has been observed that customers may stay with a service provider even if they are dissatisfied with the delivered service because of perceived or actual switching barriers (SBs) (Bansal et al., 2005; Giovanis et al., 2016). Switching barriers refer to any company made barriers that make it difficult for a customer to leave a supplier even though they may not be happy with the service delivery (Ghazali et al., 2016; Banda & Tembo, 2017; Vaerenbergh et al., 2019). Thus, for a better understanding and prediction, SBs must be included in modelling the formation of behavioural intentions.

By their nature switching barriers decrease the likelihood of customer switching and increase the chances of customer retention. They can be classified as push-back factors because they aim to extend the relationship by locking-in customers (Bansal et al., 2005; Giovanis et al., 2016). There are three views regarding the role of switching barriers in the formation of BIs. The first view is that they directly impact behavioural intentions (BIs) (Li & Petrick, 2010; Aliman & Mohamad, 2016; Chuah et al., 2017). The second view supports the notion that switching barriers moderate the relationship between a BIs and its direct determinant as a mooring factor (Banal et al., 2005; Nettet & Helgesen, 2014; Oviedo-Garcia et al., 2015). The third view is that switching barriers have no significant moderating effects in the relationship between BIs and their determinants (Nagengast et al., 2014; Nettet & Helgesen, 2014). The first two views would suggest that switching barriers (SBs) lead to passive customer loyalty where customers feel entrapped or locked-in even though their feelings may be that the service delivery is low. The third perspective represents a situation where the benefits of switching are equal to the costs of leaving the service provider such that the customer becomes indifferent (Bansal et al., 2005; Giovanis et al., 2016). Taken together, these perspectives suggest that SBs can affect BIs, both independently and in tandem with the service evaluation constructs. Thus, the impact of SBs on the formation of BIs may vary according to the degree to which they are perceived as constraints or facilitators of a customer's migration from one service provider to another in a particular situation or context (Bansal et al., 2005). According to Giovanis et al. (2016) and Oviedo-Garcia et al. (2015), SBs are intervening factors in the relationship between BI and its antecedents. However, no study in the reviewed literature has examined these relationships before in the context of the mobile phone industry.

One of the limitations of the current bivariate models of BIs is that they only provide some insights regarding the determinants of BIs for management. While these efforts are appreciated, today's digital world requires that the findings of a study should also provide a foresight of the required management actions. In order to be relevant (useful to managers), models of BIs need to offer actionable implications for managers and policymakers. The importance-performance matrix analysis (IPMA) is a tool widely understood to provide managers with a foresight of the strategic

decisions appropriate for the improvement of the service performance of the organisation (Martilla & James, 1977; Slack, 1994; Ringle & Sarstedt, 2016; Mintz & Stephen, 2017). The IPMA uses a plot of the importance of a construct and its performance on the same grid to identify the shortfalls of the service provider and areas that require improvement simultaneously (Hemmasi, 1994; Sarstedt & Mooi, 2014; Ringle et al., 2015; Hair et al., 2017). Against this background, this study included the IPMA to provide the foresight of the insights identified in the main study.

The mobile phone industry provides a suitable context for this thesis because it offers a situation where all the selected determinants of BIs in this study and switching barriers are present (Meuter et al., 2000; Pihlström, 2008; Giovanis et al., 2016).

## **1.2. BRIEF OVERVIEW OF THE MOBILE PHONE INDUSTRY IN LESOTHO**

The study was conducted in Lesotho, a developing country with around two million people, of which 99.7% are Basotho (Lesotho Communications Authority (LCA), 2018). Data from GSMA Intelligence shows that as at January 2022, there were 2.56 million cellular mobile connections in Lesotho, which is equivalent to 118.1 per cent of the total population. However, it is not unusual for mobile connection figures to significantly exceed the total population in a country, because many people around the world make use of more than one mobile connection in search of better prices, better connectivity or better network stability. For example, an individual may use one connection for mobile data bundles and another connection for other purposes like voice calls.

Like other countries in the Southern African Development Community (SADC) region, Lesotho's mobile services are largely based on the third Global System for Mobile Communication (GSM) (3G) standards. As December 2021, there were only two major mobile network operators (MNOs) companies in Lesotho, namely, Vodacom Lesotho (VCL), with a 73% market share and Econet Telecom Lesotho (ETL) with 23% market share (LCA, 2018). According to the LCA (2018) report, only four percent of the market share belonged to others. The industry has two types of subscribers consisting of 95% prepaid subscribers and just above four percent post-paid subscribers (LCA, 2018). About four percent of subscribers in the country

are connected to South African networks. Prepaid subscribers are generally not bound by any agreement, while post-paid subscribers are bound by the agreement between them and the MNO. The LCA (2017) survey showed that 30% of the subscribers had two SIM cards while about four percent had three. As in other SADC countries, subscribers often experience frustrating mobile network breakdown, which affects their connectivity. At a global level, network instability and price feature are among the top reasons why subscribers carry multiple SIM cards (Ali, Gilal & Shah, 2017: Spirent Communications, January 2018).

### **1.3. DEFINITION OF MOBILE CELLULAR SERVICES**

Since the term 'mobile' has different meanings in the mobile phone industry, it is important to explain the context in which it was used in this study. In this thesis, the term 'mobile' means fully portable and emphasizes the importance of real-time access to wireless telecommunication services in motion. For the sake of this thesis, the term 'mobile services' is an umbrella name referring to a bundle of wireless telecommunication services offered by mobile network operators (MNOs) that are only accessed through hand-held or portable mobile devices like cell phones, iPads or tablets. MNOs deliver the purchased mobile services directly to customers through their mobile network platforms or portals. The definition of 'mobile services' adopted in this thesis makes mobile services independent of time and physical location. The definition also positions cell phones as the gadgets through which these mobile services are accessed.

It is important to note that though cell phones were initially designed for wireless communication (voice calls), today, cell phones are used for accessing several mobile services. Some of these mobile services include short message services (SMS), multimedia messaging service (MMS), mobile banking, mobile payments, mobile money, social media networking, global positioning systems (GPS), e-services and others (Pura, 2005; Pihlström, 2008). In this study, all these services are bundled together under 'mobile services' umbrella. Other functions of mobile devices like calendar, camera, calculator etc., are not considered as part of mobile services in this study because they do not require interaction with the network platform of the MNO. The focus of the study is not on particular mobile services but the services accessed through a cell phone by interfacing with the network platform

of the MNO for connectivity. The scope of mobile services examined in this thesis primarily involves providing wireless mobile services to individuals for their personal use.

#### **1.4. MOTIVATION FOR THE STUDY**

This research was motivated by several problematic issues identified from reading literature on consumer behaviour from different disciplines. The first issue emanates from the fact that subscribers use multiple SIM cards simultaneously, enabling them to switch or defect from their current service providers frequently. Customer defection is a regrettable situation as customer defections shrinks the market share, sales revenue and profitability of the company, which overall threatens the future survival of MNOs in the wake of fierce competition and dwindling profit margins (Xiong, King & Hu, 2014; Ali et al., 2017). The problem has been exacerbated by the availability of smartphones, which enable subscribers to simultaneously use multiple SIM cards in one cell phone. At the time of the study, 30% of the estimated active subscribers in Lesotho held at least two different SIM cards, and about four percent held three SIM cards (LCA, 2018). While these behaviours of consumers have been observed, the psychological or cognitive processes that lead consumers to make decisions to stay or terminate their relationships with the current supplier, remain unclear. Given this scenario, managers will not be able to design appropriate mitigation strategies to reduce customer defection to ensure the survival of firms (Gallo, 2014; Min et al., 2016; Vijaya & Sivasankar, 2018).

The second issue comes from Hofman et al. (2017), Sarstedt et al. (2020) and Hair et al's. (2021) calls for researchers to test for mediation when their conceptual frameworks suggest a possibility of mediation. In particular, Sarstedt et al. (2020) contend that we are living in complex, multivariate world such that, evaluating the impact of one or two predictor variables on the dependent variable in isolation, would seem relatively artificial and inconsequential. Despite this truth, most of the existing models of behavioural intentions (BIs) have been based on the assessment of the direct effects of a smaller number of independent variables on the dependent variable in isolation. As noted by Hair et al. (2020), this approach is problematic for two main reasons. First, a piecemeal regression-based approach treats the causal relationships (e.g.  $Y_1 \rightarrow M_1 \rightarrow Y_2$ ) in a nomological network of interrelationships as



separate processes. Regression estimates derived from such a piecemeal approach, are inconsistent with the idea of contemplating the entire proposed model as a whole. According to Sarstedt et al. (2020), the piecemeal regression approach discourages researchers from thoughtfully puzzling over relations between variables, leaving them less open to plausible, informative modifications of the initial model.

Second, the piecemeal regression approach ignores other elements of the model, including antecedent constructs of the independent, mediating and dependent construct. Yet, Iacobucci et al. (2007) argue that such antecedent relationships can strongly impact mediation effects. Furthermore, the resulting bias in parameter estimates become more pronounced when considering complex sequential effects involving multiple mediators, particularly if the mediators are embedded in a large nomological network of causal relationships (Sarstedt et al., 2020). Thus, there is need to estimate all the interrelationships of the entire structural model simultaneously for a deeper understanding of the causal explanation for practical purposes (Hofman et al., 2017; Sarstedt et al., 2020).

Even after several attempts to model the formation of BIs (Zeithaml, Barry & Parasuraman, 1996; Cronin et al., 2000; Caruana, 2002, Brady et al., 2005), the complex formation of this latent construct has not been fully unravelled. Even though Brady et al. (2005) suggest that their model for the formation of BIs is comprehensive, the existence of BIs models based on other variables not considered in that modelling, like service recovery, shows that Brady et al.'s (2005) model has not captured all the key factors that may influence the formation of BIs. Furthermore, Hofman et al. (2017) argue that, BIs models that are based on one or two factors only (simple or bivariate models), may overstate the actual impact of the selected factors of BIs in the absence of other key determinants of BIs. As proposed by Kumar, Pozza and Ganesh (2013), for BIs models to be of better use practically, they must be more informative. This requires the incorporation of as many key factors that consumers consider when making defection decisions, which is, according to Giovanis et al. (2016) and Hofman et al. (2017), one of the current limitation of most of the existing BIs models found in consumer behaviour literature.

On the research side, the modelling of the formation of behavioural intentions (BIs) in the consumer's mind has not been fully explored (Hofman et al., 2017). The existing models on the formation of post-consumption BIs in service management and marketing disciplines offer very simple explanatory models that attribute the formation of BIs to one or two variables. Unfortunately, this assumption is not necessarily correct in the wake of new knowledge that the formation of post-consumption BIs is a complex process involving an appraisal of several experiential variables (Sotiriadis, 2017). This implies that the existing bivariate models for the formation of post-consumption BIs do not reflect what happens in a consumer's mind, and therefore will not be important to practitioners. Also noticeably lacking is the dedication by consumer behaviour researchers to graduate from only assessing the explanatory models of consumer behaviour to include the assessment of the predictive relevance of the same model. This stagnant consumer behaviour research has resulted in persistent cries for business schools to shift from offering only descriptive or explanatory models to provide predictive models of BIs that are practically relevant to real business situations (Malter et al., 2020).

The third issue concerns modelling the formation of BIs in consumer behaviour, service management, and marketing research. Previous modelling of the formation of BIs have been accused for placing greater emphasis on the evaluation of the explanatory power of a model, while the assessment of the predictive relevance of the model has been ignored (Hofman et al., 2017; Shmueli et al., 2019; Hair et al., 2021). Hair et al. (2021) challenge researchers to move beyond just explanatory evaluation and include evaluation of the predictive relevance of a model simultaneously. Specifically, Shmueli et al. (2019) and Hair et al. (2021) encourage researchers to clearly distinguish between the explanatory power of a model, its in-sample predictive relevance and its out-sample predictive relevance because they all are important. Hofman et al. (2017) hold the same view, arguing that researchers must apply methods that incorporate the assessment of both the explanatory power and predictive relevance of a model simultaneously, to bridge the apparent dichotomy between explanation and prediction modelling.

Furthermore, modelling of the post-consumption BI has been accused of being backward oriented rather than futuristic because they emphasise the importance of

explaining the relationships while ignoring the predictive assessments of the model (Söderlund & Öhman, 2005; Hair & Sarstedt, 2020). This makes their practical application to real-life business situations limited (Hofman et al., 2017). It is important to note that, while explanatory modelling of the post-consumption BIs is more important because they show which variables to be adjusted for intervention purposes, predictive modelling of the post-consumption BIs is an extrapolation of what the future will be like without those interventions (Shmueli et al., 2019; Hair et al., 2021). Both of these modelling approaches assist practitioners in making appropriate intervention decisions. This suggests that a model of BIs based on either explanatory or predictive approach alone without the other will not be sufficient and may not have much practical relevance for business management decision-making. This suggests that instead of being antagonists or substitutes, these two modelling approaches complement one another in forecasting the post-consumption BIs of a consumer (Hair et al., 2021). However, consumer behaviour literature is yet to provide a conceptual framework in which these two approaches are combined in a single model showing the formation of post-consumption BIs. It can be argued that the integration of predictive and explanatory modelling into one model for the formation of post-consumption BIs will be a big step towards closing this gap in the literature.

The fourth issue concerns the models' ability to form BIs to generate actionable management decision-making recommendations. The previous BIs were not specific in their recommendations, yet, according to Malter et al. (2020), the aim of studying consumers' intentions should be to guide policymakers in designing appropriate strategic interventions targeted at retaining customers.

This study was motivated by the desire to close these gaps in the literature. The research aims derived from the problematic issues highlighted in the literature were threefold. The first aim of the study was to develop an integrated explanatory-predictive conceptual model for the formation of BIs that incorporates perceived justice with service recovery (PJSR), service recovery satisfaction (RSat), service quality (SQ), overall customer satisfaction (OCS) and switching barriers (SBs) as its building blocks. The model was empirically validated using data from the mobile phone industry. The second aim was to determine the explanatory roles of these

constructs in the formation of BIs. The third aim was to identify which of these constructs customers considered important in the formation of post-consumption BIs and to assess their performance for management's attention.

## **1.5. RESEARCH QUESTIONS**

In order to achieve the overall aims of the study, a number of research questions (RQs), research objectives (ROs), and hypotheses were formulated, which led to the development of a conceptual framework for empirical validation. Five RQs were formulated as follows:

RQ1: To what extent do the causal relationships among evaluative variables, namely, perceived justice with service recovery (PJSR), service recovery satisfaction (RSat), service quality (SQ), overall customer satisfaction (OCS), predict and account for the variation in the formation of repatronage behavioural intentions.

RQ2: What are the explanatory roles of RSat, SQ and OCS in the formation of post-consumption BIs when they are considered simultaneously in a single model?

RO3: What is the extent to which switching barriers (SBs) moderate the relationships between BIs and their antecedents?

RQ4: To what extent do customers consider each of the evaluative variables (PJSR, SQ, RSat and OCS) important in determining their post-consumption BIs and what is the performance of these predictor variables in the formation of BIs?

## **1.6. RESEARCH OBJECTIVES**

This study's research objectives (ROs) were informed by the research questions and the study's aims.

RO1a. To synthesise the causal linkages among the predictor constructs for developing an integrated model for the formation of post-consumption BIs and determine its explanatory power in order to explore the proportion of variation of BI jointly explained by PJSR, RSat, SQ and OCS, when they are considered together in a single model.

RO1b. To determine the extent to which the proposed statistical model is able to predict the likely BIs of the mobile subscribers used in the survey (in-sample)

and those that were not used in the survey (out-of-sample) in the mobile telephone industry.

- RO2. To explore the underlying mechanisms by which perceived justice (PJSR) influences the formation of behavioural intentions (BIs) through service recovery satisfaction (RSat), service quality (SQ) and overall customer satisfaction (OCS).
- RO3. To examine the extent to which SBs will influence the strength and direction of the relationships between BI and its antecedents in the mobile phone industry.
- RO4. To evaluate the overall performance of PJSR, RSat, SQ and OCS in influencing the formation of BIs and the extent to which mobile subscribers consider them important for their future purchase decisions.

### **1.7. HYPOTHESES DEVELOPMENT**

In order to achieve research objective one (RO1a and RO1b) through to research objective three (RO3), a number of hypotheses were formulated from a detailed literature review in chapter three. These hypotheses are summarised in Table 3.2. Each of the hypotheses is at the end of the literature that leads to its formulation. Research objective four (RO4) did not require any hypotheses but required graphical plots of the importance-performance matrix (IPMA) to explain the contributions of predictor variables and their indicators in the formation of BIs.

### **1.8. SIGNIFICANCE OF STUDY**

A detailed discussion of the significance of this thesis is provided in section 8.3 of Chapter 8. However, at this point, it may be sufficient to state that the major contribution of the study lies in its originality to develop a model of BIs, which is both predictive and explanatory, giving it more practical relevance than previous models. In addition, the study makes a significant positive contribution to social life because findings from the importance-performance map analysis (IPMA) show how managers can improve the quality of service delivery in this important industry. The improvement of the quality of service in ICT has a unique significance in that it contributes to the achievement of Lesotho's five-year National Strategic Development Plan (NSDP) 2012/13-2016/17, which identifies improvement in ICT as the backbone of a modern economy.

## **1.9. METHODOLOGY**

A detailed methodology consisting of a philosophical approach, research design, target population, sampling method, data collection, and analysis is provided in Chapter 5 of this thesis.

## **1.10. LIMITATIONS OF THE STUDY**

The limitations of this study are provided in section 8.4 in Chapter 8 of this thesis.

## **1.11. DELIMITATION OF THE STUDY**

The scope of the research covered the mobile services accessed through cell phones only and was based on the business-to-consumer (B2C) social exchange model. Other business social exchange models like business-to-business (B2B), business- to-supplier and customer-to-customer were beyond the scope of this study. The focus of the study was on individual users of mobile services who make their own rational, independent choice of a mobile network operator (MNO). The choice of an MNO for a business subscriber is normally the employer's task who pays for the phone bills (Gerpott, 2001; Pura, 2005; Pihlström, 2008, Srinuan, 2012). For that reason, the use of mobile services by businesses (B2B) were outside the scope of this thesis. The study was strictly based on the formation of post-consumption or experiential intentions to repurchase and word-of-mouth (WOM) referrals and therefore excluded impulsive and inertia buying.

## **1.12. STRUCTURE OF THE THESIS**

Including this chapter, which presents the introduction and background to the study, the problematic issues motivating the study, the research questions and research objectives, this thesis comprises nine chapters. Chapter two presents a literature review of the conceptualisation of the behavioural intentions (BIs) construct, focusing principally on the literature regarding the tripartite nature of the BIs construct and explaining The Theory of Planned Behaviour as the underpinning theory for the study. Chapter three provides a literature review, focusing on providing the definitions, conceptualisations, and measurement issues of the service performance evaluation variables, namely, overall customer satisfaction, service quality, service recovery satisfaction, perceived justice. The chapter also presents literature on switching barriers as contingent factors in the formation of BIs. Chapter four explores

the interrelationships among the service evaluative variables to generate hypotheses, which are later synthesised to develop a conceptual framework for the study. Chapter five presents the philosophical stance, the research design, the target population, sample size determination and data collection approach, the analysis technique, and how the internal reliability and validity of the measurement scale was established. The results of data analysis are presented in chapter six, starting with the profiles of the respondents before presenting the findings of the PLS-SEM and hypotheses testing and their explanations. Chapter seven provides a detailed discussion of the study's findings regarding their convergence or divergence from previous studies. The study's conclusion is presented in chapter eight, which summarises the study's key findings, demonstrating their managerial and theoretical implications and explaining the study's limitations and recommendations for future research. The thesis concludes with chapter nine, which presents references and appendices. Appendix one comprises the questionnaire used for data collection. Appendix Two and three comprise the ethical clearance letters from the Central University of Technology and the National University of Lesotho.

### **1.13. CHAPTER SUMMARY**

The current chapter presented that the cellular industry plays a critical role in developing many markets in the world. The problems of this industry include the multiple loyalty of subscribers, the commoditisation of the mobile service and the fierce competition for survival. Taken together, these challenges demand that cellular companies must retain a critical mass of customers for business continuity. The need to retain customers puts pressure on managers to predict the post-consumption intentions of the consumer. However, the prediction of intentions is a complex process because it involves the evaluation of several service performance variables at the same time.

Historically, models of BIs have emphasised the explanation of BIs. Yet, without due consideration of the predictive relevance of BIs, these models would be of limited practical use. The solution is to develop an integrative model of BIs that considers both the predictive relevance and explanatory mechanism in a single model. However, despite the popularity of the view that consumers rely on service evaluative variables to determine whether to continue or terminate their social exchange relationships, some scholars have argued that the use of the service

evaluative variables such as service quality and satisfaction alone is not sufficient to explain the formation of BIs in highly competitive markets. Comprehensive models for the formation of BIs must include SBs to enhance their predictive relevance. One big gap identified in the literature is that the bivariate models of BIs did not include the importance-performance matrix (IPMA), a tool widely used to provide managers with foresight in strategy decisions.



## **CHAPTER 2: CONCEPTUALISATION OF BEHAVIOURAL INTENTIONS**

### **2.1. INTRODUCTION**

The previous chapter provided a broad orientation of the study by covering among other things, the introduction, context of the study, problems that motivated the study, research questions and objectives, brief contribution, and the structure of the thesis. The principal aim of this chapter is to review the literature relating to the definition, conceptualisation and operationalisation of behavioural intentions (BIs) from a service management and services marketing perspective. The chapter commences with a definition and meaning of the word “intention”, which has often been given a cursory mention and limited discussion in social science research. Later, the chapter concentrates on conceptualising behavioural intentions (BIs) as a tripartite construct before exploring literature on the intentions-behaviour relations.

Repurchase and word-of-mouth (WOM) intentions are the BIs construct's key dimensions. The researcher believes that repurchase and WOM intentions are outcomes of a post-consumption appraisal of several service evaluative variables and attempts to show the relationship between the cognitive process and the formation of intentions. The final part of the chapter provides an overview of The Theory of Planned Behaviour (TPB) as the main underpinning theory guiding the formation of post-consumption intentions as applied to social science research. The Social Exchange Theory (SET), the Multiple Attribute Decision Making (MADM) Theory, The Boundary Rationality and Expectancy-Disconfirmation theories are also discussed as complementary theories in this study. The chapter concludes with a summary of the key points emerging from the overall review presented.

### **2.2. APPROACHES USED TO STUDY CONSUMER BEHAVIOUR**

Consumer behaviour studies have been largely undertaken from the behavioural and cognitive psychology approaches (Rowley, 1999). The premise of the behavioural approach is that behaviour originates from and is influenced by external environmental factors that are completely outside the consumer's conscious mind. Thus, the behavioural approach avoids intentions being the origins of behaviour. In contrast, cognitive psychology argues that behaviour originates internal cognitive processes in the consumer's mind (Rowley, 1999). In that way, the cognitive

psychology approach considers a consumer as a processor of information much in the same way as a computer, and that behaviour results from such information processing or evaluation (Vermeir, Van Kenhove & Hendrickx, 2002). From the perspective of the cognitive approach, a consumer's repeat purchase decision is influenced by their preferences and attitudes toward the object. Although controversial, the cognitive psychology approach view intentions as proximal causes of behaviour. From the perspective of the cognitive approach, intentionality is related to the mentalistic import process that takes the planned behaviour of an individual to the future. In that way, intentions represent future behaviour.

The future behaviour of a customer can be explained from two aspects: the antecedent or pre-behaviour stimuli, which can assist in predicting the future behaviour and the consequences or post-consumption outcomes, which explains the consumer's selection of a service provider for repeat purchase (Foxall & Goldsmith, 1994). This thesis explores behavioural intentions from the context of repeat purchase behaviour. Based on Foxall and Goldsmith's (1994) explanation of the two aspects of stimuli (antecedent or consequences), the probability of a repeat purchase behaviour is not explained based on external environmental stimuli, but rather, on the internal mental or cognitive processes.

One of the terms linked with repeat purchase behaviour is a customer's behavioural intentions (Ajzen, 1991). In order to explain the formation of behavioural intentions for repeat behaviour, the cognitive psychology approach must be complemented with the learning theory. Based on the literature on learning theories, a customer's previous experience with a product or service can affect and change his/her knowledge, attitude and behaviour (Che, Erdem & Öncü, 2015). In that sense, the knowledge and experience gained from previous consumption become the basis for the formation of intentions to repeat purchase, which is an expression of the planned future behaviour of the consumer. That view suggests that consumer learning is conceptually connected to the formation of intentions. According to Che et al. (2015), changes in consumer perceptions, attitudes, and behaviour occur due to the consumption experience of a service or product.

Researchers identify two theories of how people learn: behavioural learning theories and cognitive learning theories. Behavioural theorists consider learning as an observable consumer response to external stimuli. According to Foxall and Goldsmith (1994), the behaviourist theory proposes that consumer behaviour is elicited by environmental stimuli and not by a cognitive evaluation process. In contrast, cognitive theorists consider learning to result from the mental processing of information from which consumer intentions and opinions are derived (Foxall & Goldsmith, 1994). In the context of repeat purchase behaviour, this view assumes that a consumer's re-selection of the same service provider in the future is evidence of a good performance rating from the consumer's cognitive evaluation. This view suggests that consumer behaviour or repeat behaviour can be predicted from the results of his/her cognitive evaluation process. Thus, repurchase decisions arise from a thought process, where, according to Mohanty et al. (2018), consumers analyse or evaluate all the potential suppliers available in their minds, in terms of the benefits to be received, before they show their preference.

### **2.3. MEANINGS OF THE WORD “INTENTION” IN CONSUMER BEHAVIOUR**

The use of the word “intentions” has a number of meanings and connotations in different contexts. For example, consumer intentions have been defined as an individual's commitment, plan or decision to carry out a specific action in the future to pursue a specific goal (Slors, 2019). In health behaviour research, Ajzen (1991) conceives a person's intention broadly as a self-instruction to perform a particular behaviour in the future. According to Ajzen (1991), behavioural intention indicates the effort a person plans to exert to enact stated intentional behaviour in the future. The connotations of these two definitions have been viewed differently. For example, intention as a plan literally implies a mental state of unfulfilled wishes with no action associated with it. By and large, Ajzen's (1991) definition has been viewed as encompassing (1) the motivation and (2) planned actions to be carried out in performing or executing the behaviour (Sheeran & Webb, 2016; Slors, 2019). The different connotations of the word intention have been attributed to the orientation of the researchers. For instance, in the context of health behaviour, Ajzen's (1991) human intentions refer to a person's plan or decision to take a specific action in the future (for example, leaving smoking) that affect his or her health. In such cases, it is not surprising that the motivation is strong, and the commitment will be high because

of the risk involved in health. In the context of social science, Chin, Soh, and Wong (2013) argue that the word “intention” has been used loosely to indicate the probability that a customer make a repeat purchase of a service or product. As a result, the behavioural intention has been studied as the ultimate dependent variable and as a proximal antecedent to actual repurchase behaviour in several renowned pioneering loyalty studies (Zeithaml et al., 1996; Cronin, Brady & Hult, 2000; Caruana, 2002, Kuo, Wu & Deng, 2009). In the context of loyalty studies in marketing, the word intention simply means a customer’s volitional decision to continue or discontinue a social exchange relationship with the supplier in the future (Giovanis et al., 2016). Such a definition does not necessarily indicate the amount of effort to be executed to fulfil the behaviour. Chin et al. (2013) shares the same view and describe intention as a customer’s psychological disposition (attitude) or planned decision to continue or terminate his or her social exchange relationship with the provider of a service or product in the future, which, on the surface, reflects a consumer’s behavioural loyalty. Consistent with this view, health behaviour researchers (Sheeran & Webb, 2016; Slors, 2019) associate the use of the word “intention” with volitional or free-will decisions or choices of actions or behaviour. Thus, this study adopts the view of Slors (2019) that external cues do not trigger self-initiated consumer behavioural intentions. Rather, intentions arise from internal cues (attitude), which in turn is an outcome of a customer’s appraisal of some performance indicators.

The word “intention” in loyalty studies distinguishes behavioural intentions from actual behaviour. Sheeran et al. (2016) view behavioural intentions as immediate predictors of subsequent behaviours. These authors view an understanding of behavioural intentions as a critical input to customer retention decisions for organisations. Similarly, Söderlund & Ohman (2005b) consider the study of behavioural intentions as an attempt to forecast a consumer’s behaviour before it becomes actual behaviour. These researchers argue that the study of actual behaviour is difficult because it involves longitudinal studies. This difficulty leaves researchers and practitioners to rely on stated behavioural intentions to predict actual behaviour (Söderlund & Ohman, 2005b).

## **2.4. CONCEPTUALISATION OF BEHAVIOURAL INTENTIONS**

Consumer behaviour literature is replete with several models and theories in which behavioural intentions are studied as the main target construct (Zeithaml et al., 1996; Cronin et al. 2000; Brady et al., 2005, Giovanis et al., 2016). Because of its popularity in consumer behaviour studies, one would expect that intention is a subject of careful conceptualisation. However, Söderlund and Ohman (2003) noted that the phenomenon of BIs suffers from a clear conceptualisation because researchers often concentrate on the use of the phrase “behavioural intentions” while paying little attention to the plurality of this phenomenon. By ignoring to explain the plurality of behavioural intentions (BIs), researchers have exposed this phenomenon to a wide variety of interpretations in different contexts. This becomes problematic because selecting a particular perspective of the intention variable may produce a different view of the role of intention as a predictor of behaviour in a specific context (Söderlund, 2002, 2003).

The notion of intentions as predictors of actual behaviour cannot be fully understood or appreciated without recourse to the conceptualisation of human intentions. Different perspectives of intention capture different aspects of the customer’s assessment of his or her future repatronising behaviour (Söderlund & Ohman, 2005b). Specifically, Söderlund & Ohman (2005b) state that different perspectives of intention are not equally correlated with (1) a customer’s overall satisfaction with a supplier and (2) repatronising behaviour in the service context. As Giovanis et al. (2016) emphasised, the main purpose of studying intentions should be to identify their causal factors for developing interventions before they are enacted. From that perspective, a description of the different intentions would be appropriate to suggest how this construct should be measured in empirical studies.

### **2.4.1. The tripartite nature of intentions**

The construct of intention has been conceptualised as a tripartite model consisting of: (1) intentions-as-expectations (IE), (2) intentions-as-plans (IP) and (3) intentions-as-wants (IW) (Söderlund, 2002, 2003). However, very little is known about these different perspectives of intention because empirical studies of this issue are scarce in literature (Söderlund & Ohman, 2005a). IE refers to an individual’s assessment of the subjective probability that he or she will perform a specific behaviour in the future

(Söderlund & Ohman, 2005b). In research related to satisfaction, IE has been measured with items like “*How likely are you to do a specific activity?*” (Gottlieb et al., 1994; Cronin et al., 2000). Söderlund and Ohman (2005a) note that the wording of these items suggest that IE is outcome-oriented, which may not necessarily reflect why the behaviour needs to be carried out. Rather, IE only signals an individual's preparedness to carry out an act but does not capture the motivation behind the action. For that reason, it can be argued that measuring intentions using IE items may not be suitable for designing appropriate interventions.

Intentions-as-wants (IW) is based on the premise that an individual's future behaviour can be predicted from his or her wants (Söderlund & Ohman, 2005a, b). The consumer wants to represent a gap between the current status and the desired state of an individual (Robert-Lombard & Parumasur, 2017). Söderlund and Ohman (2005b) state that IW is typically measured using items like “*I want to...*” For that reason, Söderlund (2002, 2003) argues that IW is problem-oriented in that they reflect the desire of an individual to close the gap between the current and desired future state of mind. However, IW does not involve an assessment of preparedness to take action and the motivation behind the action. For instance, impulsive purchases can be seen as being driven by IW more than other forms of intentions because they do not involve rational evaluation and appraisal for decision making and attitude formation (Perugini & Bagozzi, 2001). Since IW does not involve the formation of attitudes and does not show the motivation behind the action, conceptualising intentions-as-wants may not be suitable for identifying interventions.

The intentions-as-plans (IP) perspective holds that a person's future behaviour can be explained from his or her plans to carry out a specific behaviour in the future (Söderlund & Ohman, 2005a, b). In most empirical studies, IP measurement items are “*I plan to ...*” or “*I intend to...*” or “*Do you intend to ....*” According to Morwitz (2014), “*to intent*” means having a purpose or planning to do something in mind. In that sense, the act of planning captures the motivation and commitment to behaviour. Söderlund and Ohman (2005b) argue that items of IP capture the motivational factors that influence the formation of attitudes and the determination or commitment to performing the behaviour because they measure a person's intent. This parallels the definition of intentions in attitude theories, where intention has one

meaning, which captures motivational factors that influence behaviour and commitment (Ajzen, 1991). In that sense, IP involves making a rational choice or decision to act. Söderlund and Ohman (2005a) argue that because IP is an indicator of how hard a person is willing to try, which indicates the amount of effort to enact the behaviour, people do not compromise the assessment of why an outcome is desired. This argument suggests that intentions arise from a deliberate and cautious evaluation process about the plan's chances of success. As suggested by Söderlund and Ohman (2005b), it would be logical to conceptualise IP as a predictor of behaviour, given that this captures both the motivation and commitment to perform a particular action in the future.

#### **2.4.2. The three perspectives of intention and the prediction behaviour**

Although they are different, the three perspectives of intentions co-exist in an individual. However, Söderlund and Ohman (2005a) state that they are accessed differently depending on the situation or context. Similarly, Söderlund (2003) states that these three perspectives of intention affect other variables with different strengths. As alluded to by Söderlund and Ohman (2005a), a consumer's wants are short-term and therefore are not quite reliable for predicting consumer behaviour, which is motivated by a rational evaluation for decision-making. Rather, consumer wants would be more appropriate for predicting consumer reactions.

In contrast, Söderlund and Ohman (2005b) stress that consumer expectations and intents (plans) mediate the association between an overall evaluation variable such as satisfaction and behaviour. This implies that satisfaction acts as a motivating evaluative factor that influences the formation of intentions and subsequent overt repatronising behaviour. From the perspective of social exchange relationship management, what seems to be emerging is that a customer's overall judgment of the overall evaluative variable motivates the formation of intentions, which will lead to a decision to continue or discontinue a social exchange relationship with a supplier. This view suggests that global evaluation variables are antecedents of intentions. This implies that intentions arise out of a cognitive evaluation process in the consumer's mind. The next question to consider is the extent to which intentions can be relied upon as perfect predictors of behaviour.

## **2.5. ARE SELF-REPORTED INTENTIONS PREDICTORS OF BEHAVIOUR?**

The widespread use of behavioural intentions to forecast actual patronage in marketing studies is based on the assumption that intentions are good indicators of consumers' purchase behaviour (Ajzen, 1991). However, the assumption that self-reported intentions are reliable indicators of subsequent purchasing behaviour has been a subject of debate. While there is no space for a detailed discussion of the issues around this debate in this thesis, it is important to indicate the key propositions of this debate to show why researchers and practitioners continue to pay attention to behavioural intentions in loyalty research.

The contentious issue about intention as a predictor of behaviour arises from the question of how well intentions predict behaviour. The answer to this question has been ambivalent, with some researchers pointing that intention predicts purchase behaviour but do so imperfectly (Morwitz, 2014) while others believe that stated intentions predict behaviour reasonably well only under certain conditions (Web & Sheeran, 2009). For example, Morwitz (2014) attributes the poor intention-behaviour consistency to the existence of many uncontrollable impediments that may prevent a person from executing his or her plan despite the strong intentions. For that reason, intentions and behaviour are not substitutes for one another in consumer behaviour studies. In contrast, Sheeran, Norman and Orbell (1999) provided evidence that intentions based on attitudes are better predictors of behaviour than intentions based on subjective norms. Sheeran et al.'s (1999) argument is based on the self-determination theory (SDT) (Ryan et al., 1996), which provides a distinction between autonomous and controlled motivations. According to the SDT, autonomous motivations have an internal locus of control because they are self-chosen and emanate from them (Ryan & Deci, 2000).

In contrast, controlled motivations have an external locus of causality because they depend on the approval or disapproval from significant others (Sheeran et al., 2016). Because they are self-initiated, intentions that arise from autonomous motivations have a higher probability of enactment than intentions that are externally initiated and pursued because of pressures from others (Sheeran et al., 2016). Sheeran et al.'s (1999) empirical evidence that self-initiated plans or decisions result in stronger intention-behaviour consistency than externally-initiated decisions parallels Ajzen's



(1991) argument that intentions based on attitudes are more likely to be enacted than normatively controlled intentions. This view is also shared by other researchers (Webb & Sheeran, 2006; Sheeran et al., 2016), who contend that when intentions are motivated by desired goals, people take time to plan and deliberate about the feasibility of enacting them into behaviour. Ajzen (1991) assumes that intentions are the main drivers of behaviour and behaviour is linked to the desired outcomes of the consumer. Ryan et al. (1996) complement this view, stating that the source or impetus that gives rise to the intention directly impacts how much effort can be exerted to pursue the subsequent behaviour. Sheeran et al. (2016) add that factors that guide the formation of intentions and the perceived difficulty in performing the intended action also influence whether intentions are realised or not. The intention is likely to translate into action when the action is perceived to be easier to perform than when perceived to be difficult to perform (Sheeran et al., 2016). The perceived difficulty is a function of the perceived ability to execute the required action. Since customer switching is perceived not to be difficult in the mobile telecommunication industry, it is logical to assume that the stated customer behavioural intentions are likely to translate into actual behaviour.

Although there is enough evidence for the use of intentions as predictors of behaviour in literature, Webb and Sheeran (2006) pointed out that the findings of studies have been based on the correlational associations between intention and behaviour. For example, Armitage and Conner (2001) conducted a meta-analysis of 185 studies and found that, on average, the correlation between intention and behaviour was 0.47. In a related meta-analysis of 10 meta-analyses involving 422 studies and 82 107 participants, Sheeran (2002) reported that the correlation between intentions and behaviour was 0.53, suggesting that intentions have a reasonable effect on behaviour.

Although Sheeran et al. (2016) contend that how well intention correlates with another behaviour does not indicate how much behaviour change accrues from manipulating intention, they also suggest that the findings from these correlational studies seem to suggest that the formation of an intention is critical if practitioners are to alter behaviours that not desirable. Webb and Sheeran (2006) conducted a meta-analysis of 47 experimental studies that manipulated intention to determine its

effects on behaviour to test the causal impact of the intention-behaviour relationship. Their findings showed that a medium-to-large change in intentions led to a similar change in behaviour. Thus, Webb and Sheeran (2006) concluded that changing behavioural intentions leads to change in their subsequent behaviour. In line with this conclusion, researchers in marketing note that the drivers of a customer's behavioural loyalty are his or her stated intentions (Liao, Wang, & Yeh, 2014; Senić & Marinković, 2014). Liao et al. (2014) defined behavioural loyalty as the persistent actual actions such as repeat purchase decisions, word-of-mouth (WOM) (saying positive things about a service provider). Lee, Graefe, and Burns (2007), as well as Ramkissoon, Smitha and Weiler (2013), added that in recent years, researchers had included items such as willingness to advocate on behalf of the service provider, willingness to pay more and the customer's intent to refer others to the service provider as indicators of a customer's behavioural loyalty. In line with this definition of behavioural loyalty, Senić and Marinković (2014) contend that these behaviours indicate a customer's relationship with a service provider. Thus, the principal focus point in designing behavioural loyalty interventions is repeat purchase intentions and WOM intentions.

## **2.6. BEHAVIOURAL INTENTIONS AND CUSTOMER RETENTION**

Firms usually concentrate their marketing efforts on activities that increase the consumers' intentions for the desired behaviour. For that reason, the conclusion of Webb and Sheeran (2006) that a change in intentions will cause a behaviour change is critical to the design of customer retention interventions. Many intention models in service management and marketing (Zeithaml et al., 1996; Cronin et al., 2000, Caruana, 2002) were developed because changes in behavioural intentions, more often than not, lead to changes in consumer behaviour in high involving purchases. This view position behavioural intention as an outcome variable that translates into behaviour under specific conditions. That view is not wrong, but only that the antecedents of behavioural intentions as intervention variables for the customer retention was not emphasised. Thus, the formation of behavioural intentions is assumed to be central to designing interventions meant to change the behavioural attitudes of the consumer towards a service provider. Based on this assumption, several questions can be asked. For example, Webb and Sheeran (2006) state that it is not clear what factors should be targeted for interventions by practitioners for

customer retention. Customer retention is a defensive marketing strategy that emphasises that marketing resources may create better value to an organisation if they are spent on keeping or retaining the existing customers than on acquiring new ones (Bodey et al., 2017; Salem, 2021). The claim is that it costs five times to acquire a new customer than to retain an existing one (Balabanis, Reynolds & Simintiras, 2006; Min et al., 2016; Basaran & Askoy, 2017)) provides some support to that view. The need to retain existing customers led Webb and Sheeran (2006) to argue that if service providers need to develop appropriate intervention strategies for customer retention, there is a need to identify the conceptual factors or theoretically specified intervention variables that affect the formation of behavioural intentions. These authors argue that for the conceptual factors to produce the desired outcomes on the intention-behaviour relation, their identification must be based on strong theoretical grounds. Because behavioural intentions precede actions (behaviour), Giovanis et al. (2016) suggest understanding what motivates their formation is important for designing customer retention interventions.

The appraisal theory posits that a customers' relationship continuance decisions are based on evaluating whether the service provider's performance is above the expectations. Giovanis et al. (2016) contend that customers appraise the performance of a service provider against a number of attributes, which they reported as "evaluative factors or variables". It was highlighted in chapter one that perceived justice, service recovery satisfaction, service overall customer satisfaction, and switching barriers are the key evaluative factors that customers use when appraising the performance of a service provider. Since they are evaluative factors, these constructs can equally be considered appropriate intervention variables because, besides being controllable by managers, it is from the outcome of their comparative appraisal and judgments that behavioural intentions are formed.

## **2.7. MEASURES OF LOYALTY INTENTIONS**

There are two main measures of loyalty intentions: behavioural loyalty and attitudinal loyalty (Chin, Soh & Wong, 2013). These researchers view behavioural loyalty as repeat purchase behaviour, while on the other, brand recommendation or referral reflects a commitment to the brand or company called attitudinal loyalty. According to Chin et al. (2013), a holistic measurement of loyalty intentions, also called

behavioural intentions, consists of a customer's repeat purchase intentions and word-of-mouth (WOM) intentions. In line with this view, several empirical studies in service management and marketing have used a customer's self-expressed repeat purchase intention, word-of-mouth (WOM) communication intentions (Jalilvand et al., 2017; Foroudi, Palazzo & Sultano, 2021), and switching intentions (Bansal & Taylor, 2005; Cho & Song, 2012; Hino, 2017) as measures of behavioural intentions. Repeat purchase intention is described as an expression of the consumer's willingness or commitment to repurchase the same product or service from the same supplier in the future (Morwitz, 2014; Mpinganjira, 2014; Jalilvand et al., 2017). In its broad sense, WOM communication describes an informal, non-paid sharing of information about a product or service of a company between two or more customers (Podnar & Javernik, 2012; Sweeney, Soutar & Mazzarol, 2014; Tsai, Kuo & Tan, 2017). Huete-Alcocer (2017) subscribes to the emphasis put forward by Jalilvand et al. (2017) that the source of WOM should be independent of any commercial influence. The different facets of WOM include mutual conversations, passing a comment about a product or service provider, or giving free advice (Sweeney, Soutar, & Mazzarol, 2012). Switching intentions describe a consumer's expression of his/her intent to leave the current service provider temporarily or permanently for other competitors in the same industry (Bansal et al., 2005; Lin & Wang, 2017).

Literature suggests that researchers implicitly consider repurchase intentions and WOM intentions to be a consequence of consumer attitude. While it is clear that repeat purchase is a consequence of customer attitude or satisfaction, Jalilvand et al. (2017) argue that whether WOM is an input or output of attitude depends on its direction. As an input, WOM is asserted to affect the purchase decision and behaviour of customers, while as an output, WOM is asserted to be a consequence of attitude or satisfaction that affects the future purchase decision and behaviour of customers (Jalilvand et al., 2017; Ismagilova et al., 2020). However, many researchers have treated both repeat purchase and WOM intentions as an output of satisfaction with the consumption of a service or product. For example, Foroudi et al. (2021) contend that repeat purchase and WOM intentions arise from a consumer's favourable attitude, whereas switching intentions result from a consumer's unfavourable attitude towards a service provider (Zeithaml et al., 1996; Kundu & Rajan, 2017).

Similarly, Jalilvand et al. (2017) developed and empirically tested a model in which customer satisfaction was an antecedent of WOM intentions in the restaurant industry. The findings from this study revealed that indeed WOM intentions were a consequence rather than an antecedent of attitude (satisfaction). These findings parallel Cho and Song (2012), who reported that customer dissatisfaction was an antecedent of customer switching intentions.

The use of WOM as an input or output of a purchase process should not be confusing as it depends on the research perspective of the researchers. For example, Tsai et al. (2017) contend that WOM may be an output or consequence of the consumption experience of the sender (the generator of the information) but at the same time be input to the buying decision of the receiver (user) of WOM information. Hossain, Kabir & Rezvi (2017) hold the same view and add that consumers may develop favourable or unfavourable post-purchase attitudes towards a service provider after their first experience of a service encounter. Considered from the perspective of the sender of WOM, a favourable attitude, which arises from a post-consumption cognitive appraisal, may lead to repeat purchase intentions and the spread of positive WOM. In contrast, unfavourable attitudes, resulting from negative cognitive appraisal, may lead to negative WOM and consumer defection (Aslam et al., 2011; Tsai et al., 2017). In line with this view, Poose and Browne (2018) combine items of repeat purchase intentions and WOM intentions as measures of a single dependent variable of loyalty intentions. WOM and repeat buying intentions have also been combined into a single dependent variable loyalty intention in many models in marketing (Cronin et al., 2000; Brady et al., 2005; Ismail et al., 2017). However, there have been some arguments in consumer behaviour literature that the contributions of repeat purchase and WOM intentions to customer loyalty are not the same. For example, Dick and Basu (1994) make a distinction between attitudinal as a reflection of commitment and behavioural loyalty as action that reflects that commitment of the customer. They make further assertions that the extent to which repeat purchase and WOM intentions reflect these two types of loyalty needs to be explained. The next paragraphs provide brief reviews of the drivers and consequences of WOM intentions and repeat purchase intentions to show the extent to which they reflect attitudinal or behavioural loyalty.

### **2.7.1. Repeat purchase intentions as a measure of behavioural loyalty**

Researchers in service management and marketing argue that the repeat buying intentions of customers are at the centre of business survival because they forecast future sales and revenues. For instance, in service management literature, Sweeney et al. (2020) assert that repeat purchase intent reflects the commitment of a customer to purchase from the same service provider. Sain and Singh (2020) believe that the argument of Sweeney et al. (2020) is an over-exaggeration. They argue that although repeat buying intentions reflect overt behaviour, it is not necessarily a customer's expression of true commitment to relationship continuance. To support their argument, Sain and Singh (2020) distinguish between two types of loyalty: behavioural and attitudinal loyalty. Behavioural loyalty is measured as visible or observable repeat purchases of a customer or an increase in the use of a service or product (Dick & Basu, 1994; Sain & Singh, 2020). In contrast, attitudinal loyalty is a consumer's emotional or feeling of commitment to the company, which is not visible but can only manifest as repurchase intentions and/or willingness to recommend the company to others (Sain & Singh, 2020). That argument suggests that attitudinal loyalty measures covert behaviour, which can only be realised when a customer voluntarily talks good about a company to others.

Consumer behaviour literature suggests a relationship between attitudinal and behavioural loyalty. The suggested relationship is that because attitudinal loyalty (covert behaviour) is a psychological disposition of a customer towards a service or service provider, it is an antecedent of behavioural loyalty (overt behaviour) (Dick & Basu, 1994; Hussain, 2017). Such an argument implies that a consumer's favourable behavioural intentions can only be visible through their decisions to repurchase. In contrast, consumers may have WOM intentions without overt behaviour (Dick & Basu, 1994; Robert-Lombard & Parumasur, 2017). These arguments show that true customer loyalty is complex to measure since the proof of loyalty and the loyalty state cannot be judged only from the overt behaviour of a customer. It is, however, perceived that overt behaviour (repeat purchase intentions) can indicate loyalty intentions but not guarantee the full commitment of the customer (Dick & Basu, 1994). This shows how important it is to measure repeat purchase and WOM intentions in relationship continuance studies.

Arguably, service management and marketing researchers do not show whether they are measuring attitudinal or behavioural loyalty or both when developing behavioural intentions models. For example, most pioneering models of behavioural loyalty intentions in marketing (Zeithaml et al., 1996; Cronin et al., 2000; Brady et al. 2005) have implicitly combined repeat buying intentions and WOM intentions in one model measures of behavioural intentions. However, Sain and Singh (2020) contend that only repurchase intention is a true direct measure of behavioural loyalty because overt behaviour can manifest without covert behaviour, but covert behaviour cannot manifest without overt behaviour.

### **2.7.2. Word-of-mouth (WOM) intentions as a measure of loyalty expressions**

In the context of service management, word-of-mouth (WOM) communication refers to opinions and news shared by one consumer to another or others about a product, service or company (Jalilvand et al., 2017; Milaković, Anić & Mihić, 2020). Traditionally WOM used to be transmitted through face-to-face or in writing (Kundu & Rajan, 2017; Tsai et al., 2017), but the advent of the Internet (Yang, 2017; Ismagilova et al., 2020) and social media (Hussain et al., 2017) have given rise to electronic WOM (eWOM). However, Foroudi et al. (2021) claim that WOM in all forms has a greater impact on the consumer's purchase decision than any other form of advertising. Jalilvand et al. (2017) support that view and add that WOM impacts about 76% of all purchase decisions. These authors also reported that about 15% of daily conversations between people are based on discussing some brands, services or products. According to Jalilvand et al. (2017), to some customers, WOM is a necessary time saver as the customer avoids the process of a thorough search and evaluation of information about a product or service.

The impact of WOM on the loyalty decisions of customers has also been shown in other empirical studies. Jalilvand et al. (2017) contend that loyalty intentions differ from initial purchase intentions in that loyalty refers to the willingness to repeat buying the same service or product after a consumption experience. These authors argue that even though the degree of influence of WOM on initial and repeat purchase decisions and on high risk and low-risk purchases may differ, in general, WOM has been shown to influence the future purchase decisions

of a customer. In line with that argument, a number of empirical studies have explored the impact of WOM on the repeat buying decisions of customers. For instance, Mazzarol (2014) examined the impact of WOM on customers' repeat purchase behaviour and reported that 64% of consumers felt that their repeat purchase decisions were influenced by positive WOM they received from friends.

Similarly, Sweeney et al. (2014) established that 48% of consumers expressed that their decision to switch from a service provider was influenced by the negative WOM they received from friends and close relatives. Mehrad and Mohammidi (2017) found support for this view and reported that WOM positively influenced both attitude and intentions to continue using mobile banking in Iran. In a somewhat different industry of low-cost airlines in Indonesia, Soelasih and While Sumani (2021) reported that positive WOM encourages repurchase behaviour. That view gets support from Leon and Choi (2020), who contends that positive WOM is the primary reason for 20% to 50% of all services purchase decisions. Hussain et al. (2017) share the same view, stating that consumers trust information shared by other consumers, especially if the sender of the information has previous experience with the service provider.

In contrast, Nam, Ahmed and Goo (2018) assert that negative WOM reduces the repurchase propensity of the customer. Empirical studies have shown that extremely dissatisfied customers and those whose queries have not been satisfactorily resolved engage in greater negative WOM than those satisfied (Saleem, Zahra & Yaseen, 2017; Yang, 2017). Given the negative impact of negative WOM, Barari, Ross, and Surachartkumtonkun (2020) concluded that customer disappointments lead to customer defection (disloyalty decisions).

WOM is especially important for services because services' specific and complex characteristics make personal recommendations from those who have more effective experience with the service provider (Sweeney et al. 2020). Sweeney (2012) and Tsai et al. (2017) contend that WOM is more credible and authentic because the recipient considers it a gesture of sympathy given to them by the originator without any expectation for any financial gain. This makes WOM stronger in influencing consumers' BIs than commercial messages, which implies that WOM is an important



measurement metric to forecast the loyalty intentions of customers in service management and marketing. Not surprisingly, the implication of WOM intentions on loyalty decisions has attracted the attention of both researchers of consumer behaviour and business practitioners to the same extent (Leon & Choi, 2020; Foroudi et al., 2021).

### **2.7.3. Antecedents of repeat purchase and WOM intentions**

Most studies on repeat purchase and WOM intention have examined them as a consequence of consumer behaviour (dependent variable) while giving little attention to its antecedents. Yet, the view of other researchers (Ansary & Hashim, 2018; Milaković et al., 2020) is that without an understanding of what stimulates consumers to form repurchase intentions and generate WOM, practitioners may find it difficult to develop appropriate customer retention programs. Identifying the antecedents of these dimensions of behavioural intentions is important in that it reveals the extent to which marketers may be able to influence the formation of repeat purchase and WOM intentions in the consumer's mind.

Many empirical studies on behavioural intentions do not distinguish between first-time and repeat purchase intention. Yet, Qureshi et al. (2009) argue that because initial purchase intention and repeat purchase intentions are conceptually different, their antecedents are also not the same. For example, Chen et al. (2016) contend that traditional forms of advertising may be effective in persuading a new customer to purchase a service or product for the first time but may be less effective in persuading an existing customer to repurchase the same service or product. As reported by these researchers, the decision to repurchase for existing customers is informed mainly by their appraisal of their previous experience. That view suggests that one of the key antecedents of repurchase and WOM intentions is the judgment of the service evaluation of a service provider or a product.

Several studies on customer loyalty contend that repeat purchase decisions are influenced by the customer's positive attitude towards a product or service provider (Mokrysz, 2016; Stankevich, 2017; Hanaysha, 2018). Consumer behaviour literature considers repeat purchase intent to express a consumer's favourable attitude towards a service provider (William-livariren, 2017; Stankevich, 2017). In line with

the appraisal theory, Sweeney et al. (2012) suggest that the favourable attitude of a consumer arises from his/her evaluation of service performance factors. However, Giovanis et al. (2016) acknowledge that the list of service performance evaluative factors in literature is endless but argue that most of these factors converge at customer satisfaction as the ultimate reason for relationship continuance or termination.

Service management literature in marketing is replete with empirical studies that consider customer satisfaction as the main factor that informs a customer to continue with or terminate their relationship with their existing supplier (Chiu et al. 2014; Mainardes et al., 2017). For instance, Mpinganjira (2014) examined the causes of consumers' repeat purchase intentions in online purchasing in South Africa and reported that online repeat purchase intentions were strongly dependent on the customer's overall satisfaction (OCS). Similarly, Hussain (2017) examined the relationship between satisfaction and repeat purchase intentions of Generation Y consumers in Malaysia's luxury brands. The findings show that customer satisfaction was the strongest predictor of repeat purchase intention. The notion that overall customer satisfaction is the main cause of repeat purchase intentions was also established for online retail customers in Saudi Arabia (Abdul-Muhmin, 2011) and South Africa (Mpinganjira, 2014).

Although these findings suggest that customer satisfaction is the main reason for repeat purchase intentions, findings from other parallel studies show that perceived justice with recovery (Chen & Kim, 2019; Vaerenbergh et al., 2019) influence repeat purchase and WOM intentions. Similarly, studies on service recovery satisfaction (Urueña & Hidalgo, 2016; Abney et al., 2017; Han et al., 2019) and service quality (Taylor & Baker, 1994; Cronin et al., 2000; Ismail et al., 2017) also inform the decision of an existing customer to continue with or terminate a social exchange relationship. Besides the above evaluative factors, Giovanis et al. (2016) argue that contingent factors like switching barriers are also antecedent to the formation of repeat purchase intentions, although not necessarily true for the formation of WOM.

WOM has been recognised as a communication source that impacts consumers' attitudes, decision-making and purchases (Ansary & Hashim, 2018; Sweeney, 2018).

However, the main challenge is the lack of a consensus on the drivers that can lead to specific desired WOM outcomes. Milaković et al. (2020) note that studies on what stimulates the formation or generation of WOM are fragmented, are sometimes inconsistent and lack a sound theoretical framework. For example, Konuk (2019) identified that food quality, price fairness, perceived value and satisfaction stimulated the formation of a customers' revisit and word-of-mouth intentions towards organic food restaurants. Kundu and Rajan's (2017) literature review revealed that factors that stimulate the generation and spread of WOM include consumers' knowledge and satisfaction experiences with a product, service or firm. Other researchers, for example, Jalilvand et al. (2017), state that customers talk about service providers in relation to various aspects, including the quality of service offered, service recovery and perceived fairness. That view reinforces Giovanis et al.' (2016) argument that customer satisfaction is not the only antecedent of repeat purchase and WOM intentions.

Milaković et al. (2020) indicate that the valence of WOM is closely linked to consumer attitude towards the service, product or service provider. In their study of the drivers and consequences of WOM, these researchers reported that consumer satisfaction (enjoyment of) with the shopping experience motivated consumers to generate and spread positive WOM. The consumers' favourable attitudes in this study were attributed to their satisfaction judgments. In a study of several industries in Australia, Sweeney, Soutar and Mazzarol (2014) found that positive referral (positive WOM) was triggered when customers perceived the quality of service to be good quality. In the context of mobile services, Pihlström (2008) found that 20% of the positive text messages sent to friends influenced the repurchase decisions of more than two-thirds of customers in the mobile telecommunication industry. Milaković et al. (2020) note that the motivation to generate and spread WOM is stronger for negative WOM than positive WOM. These authors report that besides having a higher impact on the formation of consumer attitudes and buying decisions, negative WOM spread faster than positive WOM. It is estimated that most unhappy customers do not complain directly to the service provider, but they share their bad experiences with about 9-15 people.

The findings revealed in the reviewed literature in this study suggest that WOM is a trusted source of information that strongly influences the formation of a consumer's repurchase intentions to the receiver of the message. Consistent with the reviewed literature, it is logical to suggest that customer satisfaction, or lack of it, predominantly informs the formation of repeat purchase and WOM intentions. However, other equally important factors trigger the formation of repeat purchase and WOM intentions in the consumer's mind. Therefore, a comprehensive analysis of how these factors influence repeat purchases and WOM as measures of behavioural intentions when they are all considered together will guide how management can manipulate them to change the behaviour of consumers. An acknowledgement of this view is crucial as it informs the direction of this thesis.

## **2.8. THEORIES OF BEHAVIOURAL INTENTIONS APPLIED TO THIS STUDY**

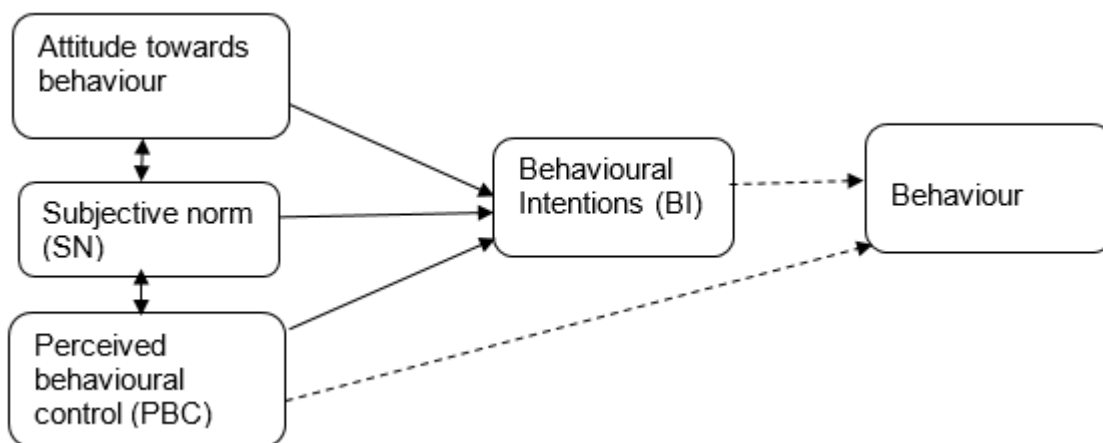
The need to compare the drivers and consequences of the formation of behavioural intentions in one model has an important bearing on selecting the main grounding theory for the study. Various consumer behaviour theories have been used to predict the behaviours of consumers in service management and services marketing. However, the most popular theory that is solidly grounded in the prediction of drivers, contingent and consequences of consumer behaviour is Ajzen's (1991) Theory of Planned Behaviour (TPB). Other theories that were selected to complement the TPB in this thesis include The Social Equity Theory (SET) (Sierra, & McQuitty, 2005) and the Multiple Attribute Theory (Burkie, Eckert & Sethi, 2019) and the rational choice theory (Salhieh, 2019). A brief description of each of these theories is provided in the next sections.

### **2.8.1. Theory of Planned Behaviour (TPB).**

It is generally believed that consumer intentions lead to purchase behaviour, and therefore the formation of intentions plays a critical role in purchase decisions (Ajzen, 2015). Many researchers subscribe to the view that the TPB model is a widely applied theory for predicting human behaviour and explaining what might cause customers' behaviour to change in many contexts (Madan & Yadav, 2016; Farah, 2017; Sun, 2020). The TPB theory posits that consumers' purchase actions or buying behaviour are based on planned and deliberate intentions, which

simultaneously considers the restriction and inducement of behaviour, as shown in Figure 2.1.

The TPB model can be applied to first-time purchases and repeat purchases. The only difference is that intentions to buy a service or product are stimulated by the marketing efforts of the service provider, while for repeat purchases, intentions are seen as consequences of the consumption experience of the consumer.



**Figure 2.1:** The Theory of Planned Behaviour (TPB)

**Source:** Ajzen (1991)

**Note:** The dotted lines show relationships not considered in this study.

This view aligns with the cognitive psychology approach of studying consumer behaviour. The TPB model can also analyse customer retention, which is largely determined by the post-consumption experience (Wiid, Cant & Makhitha, 2018).

The explanation of the TPB model on repeat purchases differs from its explanation for first-time purchases. Whereas behavioural intentions to purchase are stimulated by information from the organisation or others, behavioural intentions to repeat purchase are stimulated by the perceived functionality and economic incentives gained from using the product or service. That process is demonstrated in the “Evaluation Process Abstraction” framework (Iacobucci et al., 1996). The framework conceptualises the psychological road to forming behavioural intentions as a cognitive, evaluative process similar to the purchase decision process (Roberts-

Lombard & Parumasur, 2017). The “Evaluation Process Abstraction” framework has five key highlights that apply to this thesis. From a service management perspective, the “Evaluation Process Abstraction” framework is based on the following assumptions: 1) customers hold some expectations or standards about specific attributes of service evaluative factors, 2) customers make perceptions regarding the performance of the service provider against each service evaluative factor, 3) customers compare their perceptions to their expectations, 4) this comparison results in the evaluations of the attributes, 5) the outcome of the evaluation is either customer satisfaction or dissatisfaction leading to favourable or unfavourable behavioural intentions (Iacobucci et al., 1996). This model suggests that previous experience with a product or service is essential for explaining consumer retention or the future repeat behaviour of the consumer. In that view, the cognitive psychology approach can be employed to explain the behaviour of the consumers when they plan to renew or switch mobile network operators.

The “Evaluation Process Abstraction” framework suggests that previous experience with a product or service is an antecedent to a customer’s intentions to repeat the behaviour. Because the study is focused on the customer’s behavioural intentions to renew his/her relationship with the same service provider, the process can be explained from cognitive theories such as the TPB. Applying the cognitive evaluation model such as the TPB will highlight the main drivers (antecedents) of customer retention and their effects (consequences) on relationship continuance.

The premise of the TPB model is that consumers are rational actors whose choice of purchase actions is motivated by their attitude towards that behaviour, the influence of others (subjective norms) and perceived behavioural control (PBC). Thus, the TPB model is designed to capture an individual’s attitude towards behaviour or action concerning an object rather than the attitude towards the object itself. According to Ajzen (2015), the model’s appeal seems to correspond closely to actual behaviour than the attitude towards the object model. A consumer performs a specific behaviour only when the expected outcomes of that behaviour benefit him or her.

In the context of repurchase literature, the TPB model predicts that a customer’s decision to relationship continuance or termination is a function of the behavioural

intentions of a consumer. TPB is a descendant of the Theory of Reasoned Action (TRA), which posits that, under conditions of complete volitional control, an individual's future behaviour can best be predicted from his/her self-expressed behavioural intentions (Ajzen, 2002; Humbani & Wiese, 2018). Although the manifestation of intentions into behaviour has been a subject of continuous debate, it is important to note that the purpose of this literature review is not to go into that debate. Rather, the aim is to show how the TPB model fits the most appropriate theory underpinning the study.

Many scholars have employed the TPB model as a theoretical base for explaining consumer behaviour in many marketing studies (Cronin et al., 2000; Caruana, 2002; Brady et al., 2005). Although these studies stress the traditional view of the original TPB that consumers develop attitudes before they act, they do not link the three components of the TPB model to their antecedents. Using the original TPB model without modifying it to suit the field of study is problematic because it originated from studies on health behaviours (Ajzen, 1991).

#### ***2.8.1.1. Service evaluative factors as antecedents of attitude in marketing***

According to Ajzen (1991, 2002), consumer attitude can be before buying (perception) or after consuming a product or service. Under the latter condition, consumers develop a positive attitude towards a company if they find the consumption of a product or service encounters to be satisfactory. Muhammad et al. (2016) support the view that attitude towards a company is a customer's predisposition to respond either favourably or unfavourable towards the company's products or offered service. Similarly, from a marketing perspective, Fernandes et al. (2020) consider attitude towards a company to reflect a customer's satisfactory post-consumption appraisal of that company along different dimensions. In the context of repeat buying, a repurchase decision is considered a positive attitude towards a brand or company (Muhammad et al., 2016) due to satisfaction (Amoako, Doe & Neequaye, 2021). Customer satisfaction serves as a critical building block to the formation of repurchase intention (positive attitude) (Amoako et al., 2021). In a similar vein, Fernandes et al. (2020) recognise customer satisfaction as a predictor of the positive attitude of a customer. Other researchers in marketing (Yadav, Chauhan & Pathak, 2015; Farah, 2017; Amoako et al., 2021) share the view that

explicit attitudes towards a company arise from conscious evaluations people make about that company exert a strong influence on their repurchase decisions. This view expounded by Amoako et al. (2021) suggests that a customer's attitude towards continuing or termination of an exchange relationship is facilitated by direct personal experience and influenced by the cognitive appraisal, family members or exposure to other forms of advertising. In the context of service management, these reviewed literatures suggest that a customer's favourable or unfavourable attitude towards a company arises from a cognitive appraisal of various service performance factors. This implies that these service evaluative factors can be employed in place of direct attitude measurements. Brady et al. (2005) and Giovanis et al. (2016) acknowledge that view adding that for services, consumer attitude can be changed by manipulating the service performance factors used by customers in their evaluation. This implies that improving the service performance factor can lead to a favourable attitude towards the service provider.

#### **2.8.1.2. Subjective norms**

In society, individuals may be influenced by other people they perceive to be close to them. Such people may include family, friends or acquaintances, who could exert psychological pressure in selecting a mobile network operator. In the TPB, the social pressure exerted by friends, family, or colleagues on customers' purchase decisions is called subjective norms (SN) (Ajzen, 2002, 2015). The influence of SN depends on the context and how it is operationalised (Passafaro, Livi and Kosic, 2019). For example, in the context of the mobile phone industry, subscribers may have a psychological pressure to subscribe to the same network as their family members and friends because of the benefits associated with the use of the same network (Grzybowski & Pedro, 2011; Czajkowski & Sobolewski, 2011, 2016).

#### **2.8.1.3. Perceived behavioural control**

The third antecedent of BIs in the TPB model, the PBC, arises from a realisation that not all behaviours are volitional or free from controls (Ajzen, 2015). Ajzen (2002) reported that PBC comprises separable components that reflect self-efficacy and controllability. Self-efficacy is defined as a judgment by the customer about the extent to which he or she can execute or perform the behaviour. Self-efficacy captures a customer's self-confidence in performing the behaviour, including the



availability of resources needed to engage in the behaviour (Ajzen, 2002). The original PBC refers to a customer's anticipation of the difficulties or challenges that make behaviour performance impossible. From the perspective of social exchange theory and relationship marketing, Giovanis et al. (2016) used PBC as constraints or contingent factors. The existence of constraints implies that customers make choices within a set of constraints or switching barriers set by service providers to protect themselves against customer attrition (Bansal et al., 2005; Nagengast et al., 2014; Dawi et al., 2018).

#### **2.8.1.4. Appropriateness of the TPB to the study**

The overall purpose of this study was to develop and test a comprehensive model for the prediction of BIs in a service industry where service failure and service recovery occur. This makes the TPB or its modified version an appropriate grounding theory for this study. The other factor that supports the appropriateness of the TPB model is that it allows the addition of new variables and modification of the existing dimensions in line with the focus of the study (Ajzen, 1991). Ajzen (2011) provides a guideline for selecting variables that can be added to the modified TPB if the model is intended to predict consumer behaviour. The qualities mentioned by Ajzen (2011) include that the variable should (1) be a measurable determinant and evaluation criterion of the BIs construct and (2) be conceived of as a causal factor in the determination of behavioural and action. Ajzen (2011) further notes that the additional variables should also (3) be conceptually independent of other existing predictors of BIs, (4) potentially apply to the formation of BIs in the context of the study and (5) improve the prediction of BIs if it is included in the model. Consistent with these requirements, Giovanis et al. (2016) developed a service evaluation model to predict BIs for service organisations which holds that BIs arise from a cognitive evaluation of service performance factors. The current study applied a similar principle to develop a model that predicts consumers' BIs in a service setting where service failure and service recovery occur.

#### **2.8.2. Other theories used in this study to complement the TPB theory**

Besides the TPB, other complementary theories were also incorporated into the study.

### **2.8.2.1. The Social Exchange and Equity Theories**

The social exchange theory (SET) and equity theory (Rawls, 2014) are concerned with the justice or fairness in a social exchange relationship. Social exchange theorists conceive that the perceived outcome of a social exchange process determines the future purchasing behaviour of the parties involved in that exchange process. Therefore human behavior can be explained from the psychology underpinning the SET and equity theories. That view considers the buying behaviour of a consumer in an exchange as voluntary behaviour. The SET theory holds that people go into a social exchange relationship because each party has something that the other party values but does not have. The social equity theory is based on the principle of a balanced exchange of values in a social exchange relationship such that what is received is presumed to be equal to what is given away (Adams, 1965). What is given away is conceived as the contribution of the party in the social exchange process and that party expects a just return for it (Rawls, 2014). This theory implies that if the past purchasing behaviour has been the occasion of a equitable exchange, then the more similar the present exchange resembles the past, the more likely the consumer will repeat the same behaviour. This implies that a consumer's cognitive evaluation of the previous exchange process motivates the future purchase behaviour of the consumer toward the supplier.

The SET and equity are closely linked to one another. The equity theory provides informative rules of the SET in that people feel obliged to reciprocate what they perceive as a fair return on their investment in a social exchange process. This implies that it is the behaviour of one party in an exchange process that determines the reaction or reciprocal actions of the other party. In that sense, repeat buying behaviour is based on perception of a fair exchange. Taken together, the SET and equity theories imply that a social exchange relationship is sustained by perceived fair rewards from the other party involved in the social exchange. It is no wonder why the most popular topic in SET is justice.

From the perspective of service management, a service company provides a service to the customer in exchange for money. When applied to service management, the concept of social equity implies that the customer expects the benefits from the

service provided to be equal or match his or her level of input (price paid for the service). The behaviour of consumers is motivated by perceived social inequity or the disparity between equity expectations in social exchange relationships and the actual state. If the benefits are perceived to be below the customer's expectations, social inequality arises, and the customer will try to balance in one way or another. However, social equity cannot sufficiently account for observed consumer buying behaviour because consumers sometimes make some sacrifices and do not maximise benefits as implied in the social equity theory if they are constraints. Despite that, the concept of equity is useful in explaining consumer behaviour because the perception of inequity in the seller-buyer social exchange process gives rise to consumer dissatisfaction and the motivation to restore equity. On the other hand, an equitable social exchange is a necessary but not a sufficient prerequisite for consumer satisfaction (Rawls, 2014). In this study, the SET explains the influence of perceived justice on the satisfaction constructs.

#### ***2.8.2.2. The Multiple Attribute Decision Making Theory (MADM)***

One of the theories traditionally applied to consumer decision-making is the Multiple Attribute Decision Making Theory (MADM) (Mohanty et al., 2018; Burkie, Eckert & Sethi, 2019; Wang, Zhan & Zhang, 2021). According to Wang et al. (2021), this theory refers to making preference decisions over the available alternatives that are characterised by multiple, usually conflicting attributes. Essentially, the MADM theory explains how individuals select the most desirable alternative from a collection of those available, in line with what is perceived to be the ultimate benefit. Mohanty et al. (2018) elaborate this point, adding that, basically, the multi-attribute decision-making involves evaluating and prioritizing a limited set of alternatives based on multiple attributes. When applied to the field of consumer behaviour, the MADM recognises that one of the problems faced by consumers is to select the most appropriate supplier from a consideration set of alternatives. In that context, the MADM theory guides the consumer to make an optimal decision, using more than one criterion or attributes (Wang et al. 2021). In the context of the mobile telephone industry, consumers use several evaluative attributes to appraise the performance of MNOs when selecting their preferred supplier of mobile cellular services (Kim et al., 2004; Pihlström, 2008; Awa et al. 2015). This suggests that the

final decision about which MNOs to use reflects an aggregated solution of the cognitive evaluation process of the subscriber. Several factors are considered before settling on a particular MNO.

The MADM theory fits very well with the context of this study because it contains two important points worth noting. The first point is that, from a purchaser's perspective, each MNO should be viewed as a basket comprising of different features or attributes of interest to subscribers. These attributes constitute the different ways of evaluating and ranking the MNOs. The second point is that, consumers subject all MNOs to the same cognitive evaluation process and aggregate the scores to come up with a decision about the most preferred MNO. In this study, it was assumed that the various predictor variables selected for this research (e.g. service quality, service recovery, perceived justice etc.), constitute the different criterion by which MNOs are evaluated for repurchase decisions. According to Grzybowska-Brzezińska et al. (2020), the evaluative scores of all these features or attributes are then merged or aggregated into one outcome judgment in the customer's mind, to give what is observed as the behaviour of the subscriber. The significance of understanding the MADM theory to MNOs is that, the ranking of the different attributes considered important for purchase decisions by subscribers, determine their competitiveness.

### ***2.8.2.3. Bounded rationality and the Expectancy-disconfirmation theories***

The rational choice theory holds that consumers make rational purchase decisions that maximise the benefits and minimise costs (Hernandez & Ortega, 2019). The theory assumes that the customer has perfect information on which to base his/her choice, the customer has measurable criteria of selection, and the customer has the cognitive ability, time, and resources to evaluate the alternatives. Hernandez and Ortega (2019) state that critics of the rational theory state that people do not always make rational decisions. They argue that people rarely have full information and have limited capacity to process information to make decisions. Despite this criticism, Hernandez and Ortega (2019) still think that, to some extent, customers employ some rationality in their purchasing. The choice of customers can be explained by the bounded rationality theory. The bounded rationality assumes that customers act rationally within the constraints of 1) limited information they have, 2) cognitive limitations of their minds, and 3) within the finite amount of time and

resources (Hernandez & Ortega, 2019). Because decision-makers lack the ability and resources to arrive at optimal solutions, they often seek a satisfactory solution rather than an optimal one. Applying the boundary theory in the context of the mobile phone industry, Salhieh (2019) states that customer rationality is manifested by selecting the service provider capable of delivering the highest satisfying service. According to Salhieh (2019), a subscriber's choice of an alternative mobile network operator always involves rationality. In this study, boundary rationality was employed. It was assumed that in selecting the mobile operator to subscribe to, customers practice some cognitive evaluation within the limited information they have and within their limited capacity to decide the preferred mobile network operator.

The expectancy-disconfirmation theory holds that the customer compares the actual performance of the service provider to the expected outcomes. This theory has four components, the expectations, perceived performance, disconfirmation and satisfaction (Yüksel & Yüksel, 2001; Pizam, Shapoval & Ellis, 2016). An illustration of how these factors relate to each other is provided in Figure 3.1 and a detailed explanation of the diagram is provided in section 3.2.2 of this thesis.

Expectations refer to what customers anticipate about the performance of a service provider. According to Oliver (2015), customer anticipations can be based on their previous experience with the service provider or on the promises made by the service provider. The expectancy-disconfirmation theory also implies that customers always have a standard against which actual performance is compared to (Oliver 2015). Hemais, De Almeidas (2017) add that, these standards consist of a customer's anticipations, which can arise from common sense about the service expected from all players in that industry or it may be based on feedback received from other friends or colleagues. From the perspective of service delivery, a customer would be dissatisfied if the service delivered is perceived to be below the expected levels or below the expected quality. According to Qazi et al. (2017), such a situation leads to negative disconfirmation of a customer's anticipations. Negative disconfirmations lead to customer dissatisfaction if the service provider is perceived to have locus of control and is blamed for the suboptimal performance.

The expectancy-disconfirmation theory fits very well in this study for two main reasons. First, customers come up with expectations (anticipations) about the performance of the MNO in their minds. Second, customers compare the actual outcome or performance of the MNO to their anticipations. Any negative deviations (negative disconfirmation) leads to customer dissatisfaction, which may lead to their defection. This theory was used to operationalise and explain the service quality construct in this study. The other theories associated with specific constructs are provided in the respective sections explaining the phenomenon.

## **2.9. CHAPTER SUMMARY**

The purpose of this chapter was to explain the phenomenon of BI and how it has been measured in the previous studies, and to provide its definitions and conceptualisations. The concept of BI can be defined as the likelihood that a consumer will perform a specific behaviour in the future. The use of the word intention is associated with volitional choices of actions. BIs have been conceptualised as IP, IW and IE. The IP and the IE perspectives capture both the planning and the commitment of the consumer to perform a specific action in the future. Conceptualising BIs as IW is problematic because it is difficult to separate spontaneous wants from long-term aspirations. Intentions are usually measured using the repeat purchase intentions, WOM intentions and switching intentions. In this study, BIs refer to repeat purchases and WOM intentions, which arise from favourable intentions.

The most dominant driver of both repeat purchase and WOM intentions is overall customer satisfaction. Overall customer satisfaction is, in turn, determined by many other factors that include attitude. The effects of WOM depends on its valence. Positive WOM is associated with favourable BIs, while negative WOM is associated with unfavourable BIs such as discouraging other customers.

The main grounding theory in this thesis is the TPB, which assumes that BI is an immediate and best predictor of actual consumer behaviour. The TPB also posits that BI is, in turn, determined by attitude towards the behaviour, subjective norm (SN) and perceived behavioural constraints (PBC). Other complementary theories

include the SET and the MAT. These theories collectively explain how BIs are formed in the consumer's mind.

The next chapter provides a literature review of the definitions, conceptualisations and measurements of evaluative factors (i.e. predictors) identified as key determinants of BIs.

## **CHAPTER 3: DETERMINANTS OF THE BEHAVIOURAL INTENTIONS**

### **3.1. INTRODUCTION**

Chapter 2 provided a review of the concept of behavioural intention as the dependent variable in this study. This chapter reviews the definitions, conceptualisations and measurements of overall customer satisfaction, service quality, service recovery, perceived justice and switching barriers as the building blocks of the model. Elshaer (2014) noted that it is not possible to develop a coherent theory and valid measures of these concepts without providing precise conceptual definitions, meanings, and conceptualisations. It is important to clarify the concepts in quantitative studies to show how they are connected to empirical indicators, used to operationalise them (Elshaer, 2014). Explaining how concepts/constructs are defined, conceptualised and measured, especially where there is a lack of consensus, is critical for model building (Van der Waldt, 2020; Borsboom et al., 2021) and questionnaire design (Suchánek & Králová, 2018). Thus, the purpose of this chapter is to review the literature on how the determinants of behavioural intentions have been defined, conceptualised and measured by previous researchers. The chapter commences with a review of customer satisfaction, followed by service quality, service recovery, perceived justice, and finally, switching barriers. The last section of the chapter summarises the key points emerging from the reviews.

### **3.2. DEFINITION, CONCEPTUALISATION AND MEASUREMENT OF CUSTOMER SATISFACTION**

Many researchers have identified customer satisfaction as critical to business continuity (Kouser et al., 2012; Leon & Choi, 2020). However, this construct's precise definition, conceptualisation, and measurement have remained fragmented in literature. Therefore, it is necessary to show the different views and debates about the definitions, conceptualisation and measurement of this construct found in the literature.

#### **3.2.1. Debates about the definition of customer satisfaction**

Customer satisfaction has attracted the attention of many researchers such that studies on customer satisfaction are very popular because of its importance to an



organisation. It is widely believed in consumer behaviour that customer satisfaction is a significant determinant of repeat purchase, word-of-mouth (WOM) communication (Leon & Choi, 2020), and customer loyalty (Kouser et al., 2012) and, therefore, customer retention (Yeung & Ennew, 2001; Mittal et al. 2005; Lim, Tuli & Grewal, 2020). Other researchers (Saeidi et al., 2015; Suchánek & Králová, 2018) emphasise that customer satisfaction strongly influences competitiveness. However, Giese and Cote (2000) contend that many people understand the meaning and implications of customer satisfaction but cannot define it. It is not surprising that researchers need to be clear about the definition, conceptualisation, and measurement of customer satisfaction in modelling behaviour.

The definition of customer satisfaction has been very pervasive (Suchánek & Králová, 2018). Even to date, there does not seem to be an accord regarding the definition of customer satisfaction among social science researchers. Giese and Cote (2000), who identified 20 different customer satisfaction definitions, provide evidence of this inconsistency. Similarly, Palaci, Salcedo and Topa (2019) meta-analysis shows that satisfaction literature is yet to establish a generally agreed definition of customer satisfaction among the researchers.

Customer satisfaction is a concept does not have a single universal meaning, and thus its determinants are also varied and diverse. For example, Fourie (2015) states that satisfaction occurs when a product or service meets the needs and expectations of a customer. This definition emphasises the fulfilment of the desired wants, needs or goals, which results from comparing the perceived performance of a product or service provider against the customer's expectations. That definition implies that customer satisfaction results from evaluating the conformity of a product or service provider to predetermined customer expectations. Comparing customer expectations implies that customers conduct both satisfaction criteria and performance comparisons.

Suchánek and Králová (2018) defined satisfaction as an effective customer response to a product or service provider's perceived performance compared to their predetermined expectations. Similar to Oliver (1999), this definition stresses the feeling of fulfilment as the main determinant of customer satisfaction. However, this

definition has received criticism from literature. One of the criticisms raised pertains to whether customers always hold predetermined expectations. For example, Teas (1993) argues that consumers may not have predetermined expectations in the health care industry for some reason. One key reason advanced is that customers may lack to ability and understanding of how to evaluate the functionality of a drug or medication.

Satisfaction literature is also not clear about what causes researchers to be so divergent in their definition of customer satisfaction. Parker and Mathew (2001) contend that the inconsistency arises from the issue regarding whether satisfaction is an emotional response or an outcome of a cognitive process. Considered from that view, satisfaction is an outcome of consumption or utilisation of a product, the experience of a service encounter, or it can be viewed as a process. Researchers who view satisfaction as an emotional response (Oliver, 1981; Westbrook, 1987; Palaci et al., 2019) support the definition that emphasises customer satisfaction as a pleasurable feeling. That view presupposes that customer feelings are derived from consuming a product or experience of a service encounter. When customer satisfaction is regarded as an emotional outcome, attention is devoted only to the final judgment, leading to customer satisfaction or dissatisfaction but not the process itself (Palaci et al., 2019).

In contrast, those who view satisfaction as a process (Tse & Wilton, 1988; Oliver, 1999, 2015) argue that it arises from evaluating what is received against predetermined expectations. That view considers satisfaction as a summary judgment of an appraisal or comparative process of the actual performance against predetermined expectations. That view suggests that satisfaction is a post-choice evaluative judgment of a specific purchase situation. This underscores the view of Parker and Mathew (2001), who contend that much of the research efforts in social science have considered satisfaction as a cognitive process. However, Giese and Cote (2000) note that the definition of satisfaction as an appraisal process does not hold for all service delivery contexts.

The debate about whether satisfaction is associated with emotions or cognitive process suggests that it depends on the context. In the context of cellular service

delivery, there is no logic to assume that affective variables would have a stronger impact on customer satisfaction and repeat purchase intentions because of minimal contact between the buyer and the employees of the mobile network operator (MNO). In line with that view, customer satisfaction responded to the cognitive evaluation process that influences consumers' repurchase and WOM decisions.

While the literature contains the significant difference in the definition of customer satisfaction, Giese and Cote (2000) identified that the commonalities among the definitions included: 1) that customer satisfaction is a response (cognitive or emotional), 2) that the response pertains to a particular referent point (needs, expectations, consumption experience etc.) and 3) that the response occurs at a particular time (after consumption/ service encounter experience). According to these authors, a good definition of customer satisfaction should include these three aspects. Following this argument, Oliver (1999, 2015) was among the first to integrate the cognitive and affective aspects in his definition of customer satisfaction. He described customer satisfaction as a consumer's pleasurable fulfilment of the consumer's expectations, goals, needs, or wants, derived from utilising a product or experience of a service encounter. This definition is consistent with the value perfect disparity theory (Westbrook & Reilly, 1983), which does not only recognise satisfaction as an emotional response but goes further to state that a cognitive, evaluative process triggers it. The word fulfilment in the definition of Oliver (1999) is consistent with the application of the motivation theory (Roberts-Lombard, 2017). According to this theory, the purchase behaviour of people is either driven by the desire to satisfy customer needs or their behaviour, which is directed at the achievement of set goals. Either way, satisfaction can be viewed as a customer's response to fulfilling the desired goals or needs (Parker & Mathew, 2001).

There are subtle differences regarding the point at which satisfaction is evaluated. Even though it is generally considered that customer satisfaction is a post-purchase phenomenon, it has also been argued that customer satisfaction may occur prior to the purchase of a product or even in the absence of purchase (Giese & Cote, 2000). For example, a mobile phone subscriber may be disappointed for not accessing his or her mobile network because he or she is out of network coverage area. However, customer satisfaction can occur without consumption is in contrast with consumer

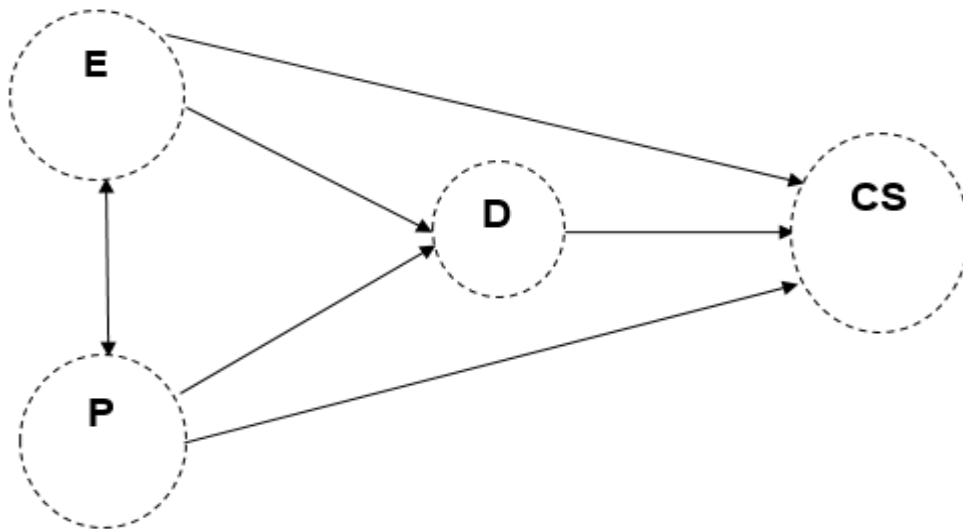
behaviour literature (Roberts-Lambard & Parumasur, 2017), where customer satisfaction is considered an outcome of a post-purchase evaluation process influences the repurchase intentions and behaviour. Following that view, the current study focuses on the existing customers' propensity to repurchase mobile services from the same mobile network operator (MNO). It was assumed that customer satisfaction, though not the only factor, is a major post consumption evaluative factor that motivates the formation of repurchase and WOM intentions. That view is important because it regards customer satisfaction as reflecting how well a company is delivering on its promises to the target market. Consequently, following the cognitive psychology view, customer satisfaction was considered the response of a customer's overall assessment of an MNO against his or her expectations, which triggers the formation of repurchase and WOM intentions.

### **3.2.2. Conceptualisation of customer satisfaction: The disconfirmation model**

The lack of a consensus definition of customer satisfaction creates a problem of its conceptualisation and selecting an appropriate measurement method. The conceptualisation of customer satisfaction was derived from the definition adopted in this study, which suggests that customer satisfaction depends on the difference between actual service experience and a customer's referent points, in this case, the customer's expectations.

Service management literature has traditionally suggested that customer satisfaction is always conceptualised in relation to predetermined referent standards (Oliver, 2015). Consequently, a number of different competing theories based on various standards have been postulated to conceptualise and explain customer satisfaction. Yüksel and Yüksel (2001) list the Expectancy-Disconfirmation Paradigm, commonly referred to as the confirmation-disconfirmation (C/D) paradigm, the Value-Precept Theory, the Attribution Theory, the Equity Theory, the Comparison Level Theory, the Evaluation Congruity Theory, the Person-Situation-Fit model, the Performance-Importance model, the Dissonance, and the Contrast Theory, as the most common competing models for conceptualising and explaining customer satisfaction. In general, these theories suggest that consumer satisfaction is a relative concept, which arises from a cognitive evaluation process in which performance is compared to some standard in the consumer's mind (Yüksel & Yüksel, 2001; Pizam, Shapoval

& Ellis, 2016). Oliver (1997) and other researchers (Qazi et al., 2017) have singled out the C/D framework, shown in Figure 3.1, as the most promising theory that conceptualises customer satisfaction as a response to a cognitive, evaluative process. Other authors (Isac & Rusu, 2014; Grimmelikhuijsen & Porumbescu, 2017) also believe that the C/D paradigm arguably provides the most plausible conceptualisation of customer satisfaction as an evaluative response.



**Figure 3.1.** The Confirmation-Disconfirmation (C/D) model

**Source:** Adapted from Oliver (2015: 196).

**Notes:** **D**= disconfirmation; **E** =expectations; **P**= performance; **CS**= customer satisfaction

The confirmation/disconfirmation model consists of four variables, namely, expectations (**E**), performance (**P**), disconfirmation (**D**) and customer satisfaction (**CS**) as the outcome variable. The premise of the C/D model is that customers make a conscious evaluation and judgment about the performance of the product or service provider against their pre-established expectations (Yi, 1990; Szymanski & Henard, 2001; Lee & Lung-Yu, 2013; Grimmelikhuijsen & Porumbescu, 2017).

According to the C/D model, customers have predetermined standards or expectations (**E**) in their minds to which they will compare the outcome of the service delivery (**P**) against. Consequently, in theory, the level of customer satisfaction

reflects the magnitude of the gap between the perceived service outcome and the customer's expectations (Oliver, 2015). The C/D model suggests that customers anticipate how they expect it to work or perform before purchasing a product or a service. The difference between the anticipations and actual performance is usually realised after consumption (Oliver, 1980, 1997).

The literature points to a number of factors that can lead customers to anticipate in their minds prior to using a product or service. For example, Qazi et al. (2017) contend that customers' anticipations arouse pre-purchase expectations in their minds. These expectations become the referent standards against which performance will be compared. This view suggests that expectations are an important element underlying customer satisfaction (Grimmelikhuijsen & Porumbescu, 2017). In the context of service delivery, customer expectations arise from many sources, but Oliver (2015) suggests that they are strongly motivated if the claims and promises made by the service provider are aligned to the needs, wants or desires of a customer. Once a customer receives a service for the first time, the strongest sources of their expectations become their experience and what alternative suppliers promise to offer (Wiid, Cant & Makhitha, 2016).

The explanation of the C/D model follows the same argument. Overall customer satisfaction with a service provider occurs when in general, the performance of a service provider is perceived to match or exceed the customer's expectations. Oliver (2015) describe a situation where perceived performance matches the expected outcomes as service performance confirmation. Service performance disconfirmation occurs when perceived performance does not match the customer's expectations. A negative disconfirmation occurs when service performance is perceived to be below the expected outcome. Oliver (1999, 2015) argues that negative disconfirmations are the main sources of customer dissatisfaction and subsequent defections. If the performance exceeds the expected outcome, positive disconfirmation occurs, motivating customers to continue their relationship with the same service provider (Oliver, 2015; Ali et al., 2021). However, that point has been challenged by Jones and Sasser's (1995) claim that even satisfied defect, Ali et al. (2021) noted that the weight of empirical evidence suggest that it is not possible to have loyal customers who are not satisfied.

Several empirical studies have confirmed the relationships between expectations, performance disconfirmation and customer satisfaction. For example, Hemais & De Almeida's (2017) used the disconfirmation model to explain the determinants of customer satisfaction in the mobile telecommunication industry in Brazil. These researchers established that the difference between performance and expectations significantly influenced the customer's satisfaction/dissatisfaction levels. Recent empirical studies (Grimmelikhuisen & Porumbescu, 2017; Prayaga, Hassibia, & Nunkoob, 2018) reported that generally, scholars agree that customer satisfaction is an outcome of the discrepancy between perceived performance and pre-consumption expectations.

A number of important points emerge from the review on the conceptualisation of customer satisfaction. First, customer satisfaction is an evaluative or appraisal construct that relates to a customer's judgment about the performance of a product or service. Second, customer satisfaction is by default an experience-dependent variable since customers evaluate their satisfaction after using a product or service experience. Third, customer satisfaction is a relativist term as customers may have different psychological benchmarks (expectations) to which they compare actual performance. This point aligns with the definition of customer satisfaction as a response to a cognitive evaluation process (Oliver, 2015). Fourth, the customer determines their satisfaction, while the company contributes to that satisfaction through its actual performance. Based on these emerging points, it becomes apparent that service organisations need to know how well they satisfy the needs or expectations of their customers in order to translate them into strategic decisions.

### **3.2.3. Measurement of customer satisfaction**

Customer satisfaction measurement is closely related to its definition and its conceptualisation. Even though customer satisfaction measurements originated from Total Quality Management (TQM), behavioural theorists have also explored it from different scientific perspectives (Grigoroudis & Siskos, 2010; Pizam, Shapoval & Ellis, 2016). Today measurement of customer satisfaction is critical as it is used as an indicator to estimate purchase intentions, customer retention and customer loyalty (Vavra, 1997, 2002, Ganguli & Roy, 2011).

Several approaches are used for measuring overall customer satisfaction in marketing research. Grigoroudis and Siskos (2010) mention two practical approaches to measuring overall customer satisfaction: the direct and the indirect methods. Generally, the direct measurement uses one global question to determine the customer's overall satisfaction with a service provider. Using this approach, customers are asked to indicate how satisfied they are with the overall performance, product, service delivery, or particular attributes of a product or touchpoints of service. Another way of directly measuring customer satisfaction involves asking customers how they are likely to recommend the service provider to friends and colleagues. This approach produces the net promoter score (NPS) as a direct measure of WOM.

The direct approach of measuring satisfaction assumes that overall customer satisfaction is a unidimensional construct. One important shortcoming of the direct approach is that it does not explain the psychological intricacies of the customer's overall satisfaction. Yet, overall satisfaction reflects an aggregate judgment of several evaluations (Grigoroudis & Siskos, 2010). Thus, from a behavioural model perspective, the direct method of measuring overall satisfaction does not make it possible to determine the reasons for the customer's judgment. The use of global statements to measure overall customer satisfaction will not reveal the triggers of purchase decision-making (Ngo, 2015). Similarly, Manolitzas, Grigoroudis and Matsatsinis (2014) contend that unidimensional measurements of multidimensional constructs like overall customer satisfaction conceal important information about what satisfies or dissatisfies customers. Because such an approach does not provide much information for management actions, it has not been widely used in consumer behaviour research (Oliver, 1997).

In contrast, the indirect method of measuring overall customer satisfaction involves measuring overall customer satisfaction through its antecedents. This approach considers overall customer satisfaction as an outcome of a customer's assessment and evaluation of several indicators (Ngo, 2015). In this method, overall satisfaction is considered a latent variable and the measuring of the indicators aims to provide a



clearer understanding of how and why satisfaction is created rather than to provide a quantitative measurement framework.

Arguably, the most common indirect method of measuring satisfaction is the Multicriteria Satisfaction Analysis (MUSA method). This method was first introduced by Grigoroudis and Siskos (2002). The MUSA method is a customer-based tool for service/product quality evaluation, which measures customer satisfaction based on the customer's preferences. The MUSA assumes that a customer's overall satisfaction depends on a number of criteria or variables representing service characteristic dimensions. In that view, the method considers overall customer satisfaction as the aggregation of individual judgments of several dimensions into a collective value function. Thus, the MUSA method follows the principles of multicriteria analysis mainly focused on determining the critical service dimensions to prioritize improvement actions or aid service quality decision process. Grigoroudis and Siskos (2002) noted that the MUSA method provides an in-depth analysis of customers' preferences and expectations. The required data for the MUSA method is collected through a questionnaire in which customers are asked about their perceptions about the set of pre-defined criteria.

Ngo (2015) states that researchers must recognise that overall customer satisfaction is a latent construct to understand customer satisfaction in-depth. This implies that it can be measured, not only based on overall consumption experience but also indirectly, through its antecedents. Such an approach recognises that customer satisfaction is based on the customer's judgment of multiple indicators. Palaci et al. (2017) support that view stating that overall customer satisfaction is a complex construct that reflects an aggregate of several variables. This is also in line with Oliver's (2015) claim that overall customer satisfaction is an additive judgment of the firm's performance. Therefore, the direct measurement of customer satisfaction only shows the final response of a customer's overall evaluation of the performance of a service provider. Grigoroudis and Siskos (2010) explained that using antecedents to measure overall customer satisfaction provides a deeper insight into how different indicators may predict their relative importance to the customer's overall satisfaction.

Existing literature suggests several evaluative variables that customers include in their weighted average judgment of overall satisfaction with a firm. For example, Grigoroudis and Siskos (2010) state that customer satisfaction can result from equity comparison from a consumer behaviour perspective. These authors referred to equity as comparing the actual to the expected fairness of perceived justice, whether real or imaginary. The assertions by Maxham and Netemeyer (2002) and Nikbin et al. (2012) that overall customer satisfaction may arise from a customer's perceptions of the fairness of a service recovery solution complement that view. This implies that perceived justice (Chen and Kim, 2017) and service recovery (Ali et al., 2021) are determinants of overall satisfaction. On the other hand, several studies have cited service quality as a precursor to overall customer satisfaction (Cronin et al., 2000; Zhao et al., 2012; Ismail & Yunan, 2016; Gong & Yi, 2018; Ali et al., 2017; Prayaga, Hassibia & Nunkoob, 2018). Consequently, as stated in Chapter two, perceived justice, service recovery satisfaction and service quality were considered key evaluative determinants of overall customer satisfaction/dissatisfaction. Admittedly, the list of factors that affect overall customer satisfaction is far from being exhaustive. Also, as Oliver (2015) noted, it would not be practically possible to capture all the predictors of overall customer satisfaction in a single study. However, the selected factors offer a comprehensive set of evaluative criteria for predicting this concept, especially in service failure situations.

In summary, the reviewed literature on measuring overall customer satisfaction suggests that the indirect approach provides a deeper understanding of satisfaction triggers for management action (Suchánek & Králová, 2018). However, global measurement is also important. Consequently, both approaches were adopted in this study.

### **3.3. DEFINITION, CONCEPTUALISATION AND MEASUREMENT OF SERVICE QUALITY**

Although Chien and Chi (2019) state that service quality has been extensively studied in the literature, there is a consensus that this construct is an elusive and abstract concept that its definition, conceptualisation and measurement is yet to be standardised. The abundance of industry-specific service quality models in the literature, for example, 19 different models of service quality (Seth, Deshmukh &

Vrat, 2005) and the several dimensions used to measure it, for example, three (Gronroos (1984) and five (Prasuraman et al., 1988), provide empirical evidence to suggest that, in general, there is no consensus in the understanding of this construct among researchers, industries and practitioners. This section reviews the definitions, conceptualisations, and measurements of the service quality construct to enhance understanding the service quality concept and its determinants as used in this thesis.

### **3.3.1. Debates on the definitions of service quality**

Many authors spend a lot of time on issues of service quality management, but Jain and Jain (2015) note that little time is devoted to defining this concept. Garvin, (1984) share the same view with Elshaer (2014) that the difficulty in defining service quality is attributed to the fact that generally, the words “service” and “quality” themselves have no precise definitions in the literature. Kasper, Helsdingen, and Gabbott (2006) concur with this view stating that a precise definition of service quality will be difficult because the two words have their roots in two differently focused industries in literature. According to these authors, the word “service” has its roots in marketing, while the word “quality” has its roots in Total Quality Management (TQM) processes. Martin, Elg and Gremyr (2020) contend that both terms have numerous meanings and perspectives in their fields of origin, making the definition of service quality more complex. Accordingly, Martin et al. (2020) described the words “service” and “quality” as slippery terms whose meaning depends on the situation or context it is applied and measured. It is evident from those remarks that an explanation of the connotations of these two terms is necessary.

#### *3.3.1.1. Definition of a service*

The word *service* transcends various activities ranging from tangible dominant to completely intangible dominant (Jain & Jain, 2015). Martin et al. (2020) also admit that describing service always relates to a perspective because they cover an array of different and often unrelated activities. Edvardsson, Gustafsson and Roos (2006) contend that most researchers describe services as a set of activities, deeds or processes, and interactions, which are meant to benefit someone else. These authors also consider service as a wider view of a product. From that view, Grönroos (2000) defined service as providing customers with a solution to their needs, wants, desires, or problems. However, Edvardsson et al. (2005) argue that Gronroos’

(2000) definition of service does not distinguish between a service and a physical good.

The definition, description and understanding of what services refer to are always related to a perspective. According to Edvardsson et al. (2005), there are two categories of service; services as a category of a market offering (e.g. health care service and police services) and services as a value creation perspective. Researchers are requested to be clear about which category of service their studies are focused on. This study focuses on the concept of service as a perspective of value creation through the lens of a customer.

Even when considered from the perspective of value creation, the service concept has been defined in different ways in the service research literature. Most scholars consider service as a process of creating intangible customer value. Such scholars define services as a series of activities, deeds or processes that normally but do not necessarily involve an interaction with a customer but are targeted at solving a customer's problems (Edvardsson et al., 2005). Other scholars (Grönroos, 2001; Gustafsson & Johnson, 2003; Zeithaml & Bitner, 2003) adopt a similar definition but prefer to emphasise that service activities are targeted at creating customer value instead to say they are targeted at solving customer problems. This difference in semantics does not make the preferred definitions to be viewed as different from one another.

The definition provided by Edvardsson et al. (2005) captures a number of important issues worth highlighting. The definition portrays that services are created in and during a process. Creating service involves a series of activities in which the customer may or may not be involved. The word "series" implies that the activities are somehow coordinated. The phrase "customer value creation" seems to emphasise that, even though a service may not be visible or tangible, the output of a service must be perceived as adding value to the customer or solving a customer's problem. It must be noted that "customer involvement" in this definition should not be interpreted to mean the simultaneous production and consumption condition of a service. As Edvardsson et al. (2005) argue, a number of services (especially Internet

services, self-service technologies or technology-delivered services) are partly or largely produced independently of the customer.

The idea of customer involvement implies that the concept of a service is experiential (Lovelock & Gummesson, 2004). That view is consistent with Wiid, Cant and Makhitha, (2018), who adds that a customer's experience of a service is created during a customer-service provider interface, which they call service encounter experience. The idea of customer value creation stressed in the definition of Edvardsson et al. (2005) is consistent with modern marketing. According to Wiid et al. (2018), modern marketing recommends a paradigm shift from focusing on customer satisfaction as the ultimate goal of a service provider to customer value creation. They argue (p.354) that customer value creation entails a global evaluation of an organisation's service creation and delivery systems. Therefore, it is inextricably linked to unique customer experiences, which lead to post-consumption feelings of satisfaction or dissatisfaction.

A slightly different approach to defining the concept of service is suggested by Vargo and Lusch (2004a, b). They consider services to apply specialized competencies through deeds, processes and performances for the benefit of another entity or customer. They argue that their definition is more inclusive because it encompasses all the fundamental economic activities offered by all business enterprises. This definition is consistent with that of Edvardsson et al. (2005) in that it stresses that the purpose of engaging in service activities should be to create benefits or value for the customer. This definition is similar to that of Fonseca and Pinto (2014), who view a service as a process of ordered activities in which people, technology, internal and external systems are connected to create value for the customer.

From the preceding reviews, it is clear that service entails the creation of value for the customer. Therefore, the definition of a service should have a customer orientation. Consequently, in this study, we emphasise the customer's perspective of a service to portray the value creation perspective instead of the service provider's point of view.

### 3.3.1.2. *Definition of quality*

Similarly, the term *quality* is associated with several meanings and connotations in literature. For example, Elshaer (2014) contends that there are five major perspectives described by quality. Rivera, Becker and Olsina (2016) identify these five quality perspectives as transcendent-based, product-based, manufacturing-based, value-based and user-based. Because different perspectives yield different meanings of quality, these authors concluded that a useful definition of quality is dependent on the context in which it is applied.

The transcendent perspective of the term “quality” assumes that the quality of a good or service can only be understood after one is exposed to several objects that display its characteristics. Applying this perspective to services would imply that a customer can evaluate the quality of a service as better or worse than the next service experience after the first experience (Kasper et al., 2006:177). According to this perspective, the comparative reference point of the customer is his/her previous experience. However, the transcendent perspective of quality does not address the unique attributes of a service, and therefore it was deemed inappropriate for this study.

Contrary to the transcendent-based view, the product-based perspective view of quality measures the number of specific components or attributes of a product or service in relation to the levels of these attributes required in a product or service to be usable (Kasper et al. 2006:177). In this view, quality is inherent to product or service such that any deficiencies from the quantities of attributes will lower the quality of a product or service. In the view of Parasuraman et al. (1985, 1988), this approach is not suitable for measuring service quality in a service encounter context.

The manufacturing-based perspective views quality as the ability of a product or service outcome to conform to the predetermined specifications (Jain & Jain, 2015). At the core of this approach is the notion that any deviation from predetermined specifications would reduce quality. This approach of defining quality is inappropriate for this study because of its assumption that there must be a standardised specification prior to assessing quality, which is not applicable to service delivery

(Jain & Jain, 2015). Still, this perspective of quality was deemed inappropriate for services.

According to Elshaer (2014), the value-based perspective was opined to augment the product-based perspective, which was perceived to inadequately capture the definition of quality. The value-based perspective defines quality in terms of costs and prices such that a quality product or service provides performance at an acceptable price or conformance at an acceptable cost. This approach renders itself inappropriate for this study because subscribers cannot assess the financial worthiness of the mobile services they receive. Rather, the prices of mobile services are regulated by Lesotho Communication Authority (LCA), and subscribers just pay the gazetted price.

The user-based approach defines quality as the extent to which a product or service successfully serves the user's purpose during its usage (Rivera et al., 2016). Elshaer (2014) maintains that this definition suggests quality is the degree to which the attributes of a product or service satisfy the user's requirements. In that way, quality lies in the eyes of the beholder. That suggests that goods or services are of quality when customers say they are, not necessarily because they conform to specific technical specifications (Rivera et al., 2016). Elshaer (2014) further points out that quality is determined by comparing the inherent characteristics of a product or service to a set of requirements from the user-based perspective. For that reason, the user-based definition of quality can be said to be more customer-oriented than the other perspectives.

In summary, the reviewed literature so far suggests that quality is related to the offer's value, which could evoke customer satisfaction or dissatisfaction.

### *3.3.1.3. Service quality defined*

Given the numerous perspectives by which both the service concept and quality concept are defined, it is not surprising that researchers have failed to agree on a standard definition of service quality. However, a proper conceptualisation and accurate measurement of service quality require that a specific definition of this phenomenon be developed for the study. Taken together, the reviews on the definitions of a service and quality suggests that both should be viewed from a customer or user-based perspective. The main point about the definition of a service

is that delivering a service entails creating value for the customer, and therefore should be defined from a customer perspective. The main point from the definition of quality is tied to customer satisfaction, and therefore, should also be defined from the perspective of the user or customer. Both are comparative evaluations relative to predefined requirements or expectations of the user. In line with the user-based perspective of these two terms, service quality was defined as the extent to which the service provider's overall performance (actions or activities) have consistently met and/or exceeded the changing requirements or expectations of the customer.

### **3.3.2. Conceptualisation of the service quality construct**

The problems in its conceptualisation evidence the difficulty of defining service quality. For example, Seth, Deshmukh and Vrat (2005) provided 19 different service quality models. For the sake of this thesis, no attempt was made to provide a detailed list and descriptions of any of these models. However, it is important to note that most of the models in Seth et al.'s (2005) review are just modifications of the Nordic (Scandinavian or European) and American conceptual definitions of service quality. The conceptualisations of service quality from the Nordic school of thought, opined by Grönroos' (1984) and the American school of thought (Parasuraman et al., 1985, 1988), are discussed next.

#### *3.2.2.1. Nordic school of thought*

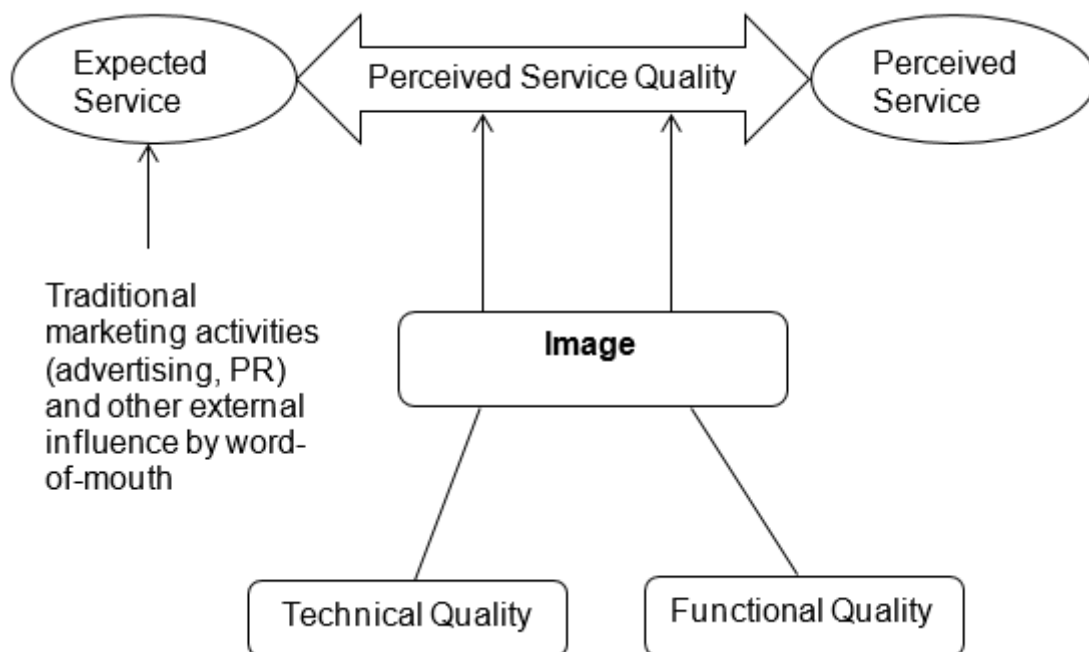
The Nordic school of thought conceptualises the service quality construct based on three dimensions: technical, functional, and company image (Grönroos, 1984). The model (Figure 3.2) portrays that technical and functional quality influence service quality through the company's image. According to Grönroos (1984), technical quality refers to “what” consumers eventually receive from the delivered service (outcome), while the functional aspect of service quality refers to “how” the service was delivered. As argued by Grönroos (1984), in evaluating the service quality, consumers consider not only the outcome of a delivered service but also the process by which the service was delivered.

According to Grönroos (1988), technical quality represents the instrumental performance of the firm while functional quality represents the expressive



performance of the firm. Grönroos (1988) further notes that technical quality is necessary but not sufficient for favourable service quality evaluations. This implies that even if the service meets the technical quality expectations of the customer, if the process of delivering it is flawed, theoretically, customers will not be satisfied. This implication is in line with the conclusions of Grönroos (1984) that both technical quality (the outcome of a service process) and functional quality (the processes by which the service is delivered) are equally necessary.

The meaning of technical quality and functional quality dimensions differ according to the context of the study. For example, in the mobile telecommunication industry, technical quality measures the network performance of a mobile network operator (MNO) in terms of call drop rate, network accessibility, call congestions, voice call clarity (Kim et al., 2004; Seth, Momaya & Gupta, 2008). For mobile Internet services, Vlachos and Vrechopoulos (2008) refer to technical quality as the reliability of network connectivity, downloading and uploading speed, system response time and availability of the network.



**Figure 3.2:** Three factor service quality model

**Source:** Adapted from Grönroos (1984)

According to Seo, Ranganathan and Babad (2014), call quality refers to the connectivity and audibility of calls and network connectivity was considered more important than call clarity in the US mobile telecommunication industry. Network connectivity is closely linked to the stability and maintainability of the infrastructure used to deliver mobile services (Seo et al., 2014). This suggests that network connectivity is the main quality characteristic that customers consider when deciding to stay or switch. Consequently, Seo et al. (2014) concluded that network connectivity was wireless's most important technical characteristic for customer retention.

On the other hand, functional quality measures how the service is delivered in terms of customer convenience (Seth et al., 2008) and the smooth operation of the mobile network (Ojiaku & Osarenkhoe, 2018). In other words, a subscriber's perceptions of a stable mobile network and staff responsiveness reflect good functional quality. Grönroos (1988) concurs with this view and adds that the responsiveness of staff suggests that the service recovery process of an organisation is part of the functional quality.

Empirical studies on the relative importance of technical and functional quality dimensions have produced mixed results. For example, in the cellular industry, Ojiaku and Osarenkhoe (2018) reported that technical quality (network quality) was the key factor for evaluating the performance of an MNO. Similar results were reported by Meuter et al. (2000) and Pihlström (2008) for electronically delivered services and in the mobile telecommunication industry, respectively. Other scholars provide empirical support that technical quality (network quality) had a large influence on the subscriber's switching intentions (Kathuria & Jain, 2009) and service quality (Kim & Yoon, 2004, La, Gaffin & Babin, 2009). Specifically, Kathuria and Jain (2009) reported that network quality (technical quality) positively influenced satisfaction, and network problems led to dissatisfaction and switching among rural users. In contrast, Seth et al. (2008) found that, in general, customers gave importance to both technical quality and functional quality in judging service quality. However, functional quality was marginally rated higher in importance than technical quality.

The role of corporate image is portrayed as a cushion to the service provider in the event of minor mistakes (Grönroos, 1984). Literature provides empirical evidence in support of that view. For example, Chien and Chi (2019) found that corporate image mediated the relationship between service quality and customer satisfaction. They concluded that customers tolerate a service provider making minor mistakes if its reputation is in good standing. However, if the mistakes become very frequent, the image of the service provider becomes negative. Because corporate image does not have a significant role in the evaluation of service quality, it was not deemed necessary for the conceptualisation of service quality in this study.

Scholars are divided on whether service quality should be conceptualised based on technical and functional quality or functional quality alone. For instance, Ozer, Argan, and Argan (2013) contend that customers with limited technical knowledge and expertise may not make technical judgements. As such, they argue that there is no need to include the technical quality dimension in the conceptualisation of service quality. Seth et al. (2008) concur with that view and add that perhaps that is why the technical quality dimension is unpopular than the functional quality dimension in the conceptualisation of service quality in the mobile telecommunications industry. In contrast, Kang and James (2004) reported that Grönroos' model represented service quality more in the Cellular industry than the American perspective. Later, in 2006 Kang examined the conceptualisation of service using technical quality and functional quality. The structural equation modelling (SEM) results revealed that the two-component model had a better fit than that of functional quality alone. Kang (2006) then concluded that it was always important to include technical and functional quality dimensions in conceptualising service quality.

#### *3.2.2.2. Criticism of Grönroos' (1984) model*

Grönroos' (1984) conceptualisation of service quality is not without criticism. The model has been criticised for lack of empirical application and also that it is not specific about which of the two between technical and functional quality is more important when consumers evaluate the quality of a service. As noted by Grönroos (2001) and Polyakova and Mirza (2015), the Nordic model lacks operationalisation because it does not offer a practical measurement tool. The second issue was that Grönroos (1984) did not indicate his model's technical, functional and image dimensions. As such, the model was difficult to operationalise empirically. The model makes a generic assumption that customers can evaluate the technical and

functional qualities of a service they receive, which is not always the case. For example, Singh and Sirdeshmukh (2000) report that evaluating the technical competencies of the doctor may be difficult for patients.

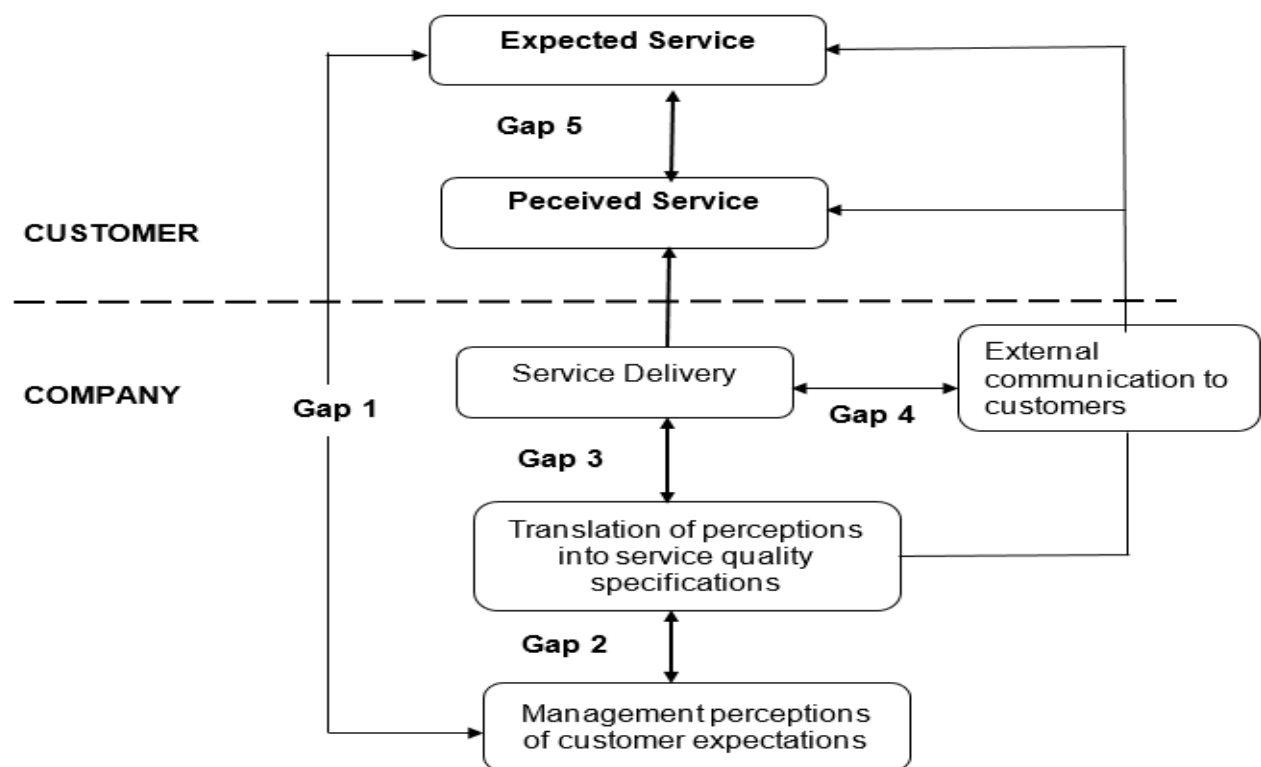
Later, Grönroos (1988) improved his service quality model and identified six components of technical quality, functional quality, and corporate image. The six components consisted of 1) professionalism and skills, 2) attitude and behaviour, 3) accessibility and flexibility, 4) reliability and trustworthiness, 5) recovery and 6) reputation and credibility. According to Grönroos (1988), professionalism and skills are related to the outcome of a service delivery and therefore influence the technical quality dimension of the service quality. Reputation and credibility are related to the filtering (image) function. The other four (attitude and behaviour, accessibility and flexibility, reliability and trustworthiness, and recovery) represent the functional quality dimension (Grönroos, 1988). The empirical results of Grönroos (1988) revealed that more than one-third of the respondents in the study considered functional quality so important that high levels of this dimension may even compensate for temporary problems with technical quality. Even though the functional quality was considered more important in service quality evaluations, Grönroos (1988) stressed that technical quality should be satisfactory to the customer. Grönroos (1988) then concluded that functional quality was more important service quality evaluation than technical quality as long as the latter is at a minimum satisfactory level. As such, the role of technical quality in the evaluation of service quality should not be ignored.

### *3.2.2.3 The American school of conceptualising service quality*

The American researchers of service quality had a different approach to the conceptualisation of this construct. The early studies of Parasuraman et al. (1985, 1988) (the American school of thought shown in Figure 3.3). The American school of thought emphasises that service quality can be conceptualised as a gap between customer expectations and the actual service performance of the organisation, which is the customer gap (popularly known as gap 5). The gap model shows how the salient activities pertinent to satisfactory service quality are connected to jointly influence a customer's perception of service quality. As the model shows, the links

are described as gaps or discrepancies that represent a significant hurdle to achieving a satisfactory level of service quality (Seth et al., 2005; Jain & Jain, 2015).

Gap 1 (see Figure 3.3) is the knowledge gap. It arises when management does not correctly perceive or understand what customers need, want, or expectations (Parasuraman et al., 1988; Parasuraman, Zeithaml & Malhotra, 2005; Bitner et al., 2010, Shahin & Samea, 2010). It is a sign of “marketing myopia” (November 2008; Smith, Drumwright & Gentile, 2010; Ng, 2016). Ng (2016) when management pays attention to their internal systems and what they are selling, at the expense of customer needs or expectations (Parasuraman et al., 2005). The definition of service quality adopted in this study suggests that the extent to which customers’ expectations are met will influence their satisfaction and hence their future purchase decisions.



**Figure 3.3:** Gap model

**Source:** Adapted from Parasuraman et al. (1988)

Gap 2 arises where management’s perceptions of consumers’ expectations are correct, but they set improper policies, service quality standards, or specifications (Ghotbabadi, Feiz & Baharun, 2015). For that reason, gap 2 is commonly referred to

as the policy gap. The reasons for this gap include: 1) lack of customer service standards, 2) poorly defined service levels and 3) failure to regularly update service level standards (Parasuraman et al., 1988; Ghotbabadi et al., 2015). Gap 2 is a sign that service-quality standards are not aligned with customer expectations.

Gap 3 is the performance or delivery gap. It shows the difference between what is delivered against the set delivery policies, standards, or specifications (Shahin & Samea, 2010; Ghotbabadi et al., 2015). According to Parasuraman et al. (1988), this gap arises from a number, which may include deficiencies in human resource policies, failure to match supply to demand, employees' lack of knowledge of the product, and/or a lack of cohesive teamwork to deliver the product or service. Gap 3 reflects the interactive nature of service delivery. Unlike in gap 2, the issue in performance gap 3 is not the lack of correct service policies and procedures but failed to meet expectations because of unsuccessful execution of the specified procedures consistently a reliably (Seth et al., 2005; Ghotbabadi et al., 2015). Because it is dependent on human skills and competencies, Shahin and Samea (2010) argue that it should be under total management control.

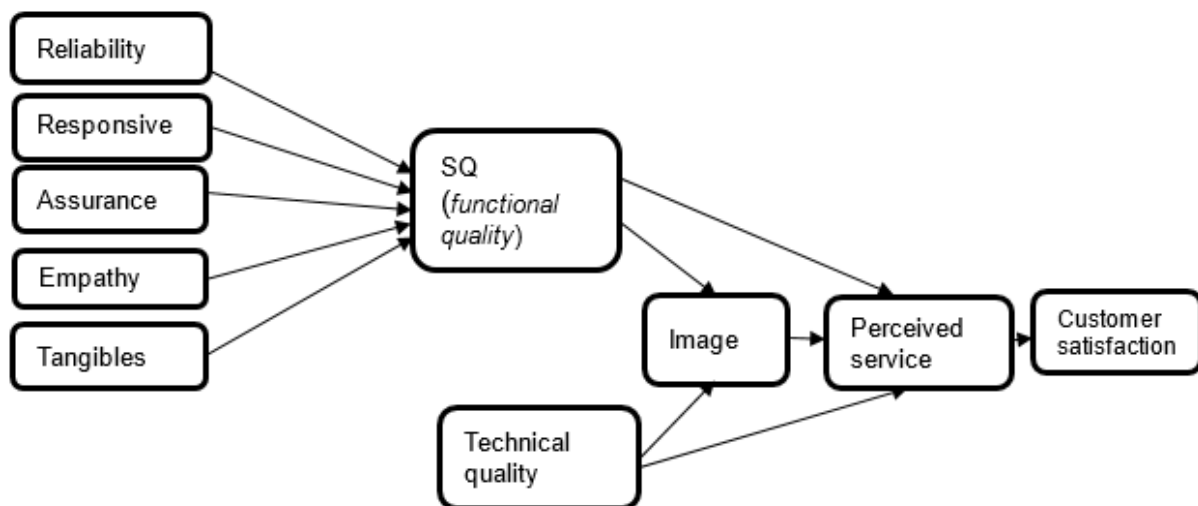
Gap 4 is the communication gap. This gap assumes that customer expectations are influenced by the promises made by the service provider (Bitner et al., 2010). Shahin and Samea (2010) contend that the source of customer disappointment is when the actual service performance falls below what was promised. The communication gap arises from various sources but researchers (Parasuraman et al., 1988; Bitner et al., 2010; Shahin & Samea, 2010) mention overpromising by the firm, insufficient or lack of communication between the operations and advertising teams, as the most cited reasons.

The customer gap (gap 5) represents the overall discrepancy between the quality of service received and expected service quality. Parasuraman et al. (2005) agree with Ghotbabadi et al. (2015) that this is the most important gap because it interrogates the mind of the customers. Both the expectation and actual quality of service arise from subjective cognitive evaluation in the customer's mind.

#### **3.2.2.4. Integrated service quality model**

A literature review revealed that there had been debates as to whether the conceptualisation of service quality should follow the Grönroos (1984) model or the Gaps model (Parasuraman et al., 1985, 1988). Both of these conceptualisations have their own benefits and limitations. Kang and James (2004) claim to be among the first scholars to conceptualise service quality as an integrated model of the Grönroos' (1984) model and Parasuraman et al.'s (1994a) gap model in a single study (Figure 3.3). Kang and James' (2004) model suggest that the five dimensions from Parasuraman et al.' (1988) SERVQUAL model measured functional quality of service quality. The technical quality dimension was measured using three items.

They tested and validated their model in an empirical study in the mobile phone industry in Korea. Their results revealed some issues important to this study.



**Figure 3.4:** Integrated model of service quality

**Source:** Adapted from Kang and James (2004)

**SQ** = service quality

As discussed in the previous section, Kang and James (2004) reported that technical and functional quality were considered critical, but the functional quality was rated more important than technical quality.

### 3.3.3. Measurements of service quality

Researchers seem to agree that there is no generally agreed single model that is comprehensive enough for measuring service quality across all industries. For that view, Seth et al. (2005) and Ghotbabadi et al. (2015) conducted meta-analytic

reviews of service quality models. Their results revealed several industry-specific models for the measurement of service quality. However, Rauch et al. (2015) state that most scholars believe that the SERVQUAL and SERVPERF instruments are the most famous generic models for measuring service quality. Others are modifications, mainly of the SERVQUAL model or instrument. The differences between these two instruments will become apparent in the next sections, which discuss their debates.

Robinson (1999) states that scholars generally agree that the SERVQUAL instrument is the most popular instrument for measuring service quality in its original form or modified versions. However, its conceptualisation and operationalisation have remained contentious issues among researchers (Cronin & Taylor, 1992; Parasuraman et al., 1994a; Teas, 1993, 1994). Robinson (1999) list the contentious areas as; 1) the purpose of measuring service quality, 2) the definition of service quality, 3) the role of expectations, 4) the dimensionality of service quality, and 5) the format of the measurement instrument.

Although the debate about these issues may be considered old, current researchers cannot ignore them because some scholars continue to question the use of this approach and the SERVQUAL instrument. Irrespective of the researcher's inclination, the bottom line is that the purpose of measuring service quality should be to provide an accurate service quality gap that is actionable by management (Ghotbabadi et al., 2015).

The definition of service quality was discussed in the previous sections. The other four contentious issues will be discussed in the next sections. However, the purpose of the discussions is not to go deeper into the scholarly debates about these issues but only to show the diverse opinions and viewpoints.

### *3.3.3.1. The purpose of measuring service quality*

The appropriateness of the SERVQUAL model as an instrument for measuring service quality has been viewed from different perspectives by scholars. In general, the study's main purpose influences the choice of an instrument to measure the constructs. There are different views about the importance of measuring service quality. Parasuraman et al. (1994b) emphasise the diagnostic ability, that is, the



ability of the instrument to identify specific reasons for shortfalls in quality. They believe that organisations are more interested in identifying service quality shortfalls than in its accurate measure. In contrast, Cronin and Taylor (1992) contend that the primary reason for selecting an instrument for measuring service quality should be based on its predictive ability. As such, they consider the ability of a measuring instrument to provide accurate service quality scores more important than its diagnostic ability.

Parasuraman et al. (1994b) favour the SERVQUAL instrument for its diagnostic nature, while Cronin and Taylor (1992) condemn it for its poor predictive ability. As such, Cronin and Taylor (1992) developed to recommend using the SERVPERF instrument, which they believe has a better predictive capacity than the SERVQUAL instrument. Parasuraman et al. (1994b) concede to the superiority of the SERVPERF over the SERVQUAL instrument in terms of the predictive power. However, they make a counter-argument that the diagnostic power of the SERVPERF instrument is very inferior to that of the SERVQUAL instrument, while the difference in the predictive powers of these two instruments is very small and negligible. This implies that the SERVQUAL instrument would be more appropriate for researchers interested in diagnostic and predictive power than the SERVPERF instrument. Perhaps this is why the SERVQUAL instrument has been popularised as the most preferred instrument for measuring service quality in many studies in the literature.

#### *3.3.3.2. The role of expectations in service quality measurements*

The next point of debate concerns the role of expectations in the measurement of service quality. Parasuraman et al. (1985) opined and introduced the SERVQUAL instrument (Parasurama et al., 1988) for operationalising the gap model. The instrument is based on the discrepancy theory, which considers service quality as a discrepancy between perceived performance and customer expectations (Amin et al., 2013; Dortyol, Varinli, & Kitapci, 2014; Ali et al., 2017). The SERVQUAL instrument assumes that customers hold some expectations, to which they compare the actual performance of the service provider.

Robinson (1999) states that there is confusion over the definition of customer expectations. He argued that Parasuraman et al. (1994a) themselves do not have a

single definition of customer expectations. As argued by Teas (1994), Parasuraman et al. (1988) define expectations as the desires, wants, what should be offered, normative expectations, ideal expectations, what is hoped for, and adequate service. Robinson (1999) states that Parasuraman et al. (1988) distinguish expectations related to satisfaction and expectations related to service quality. Expectations related to satisfaction are viewed as predictions concerning what is likely to happen during a service encounter.

In contrast, expectations refer to the desires or wants or what the service provider should offer in service quality. Parasuraman, Berry and Zeithaml (1991) make the definition of expectations more ambiguous by replacing the word “*should*” with “*will*” when describing expectations as what should be offered. They argue that the word “*should*” leads to unrealistically high expectations than “*will*”.

Many authors (Zeithaml & Bitner, 2003; Phiri & Mcwabe, 2013; Wilson, Zeithaml, Bitner & Gremler, 2018) define customer expectations in the SERVQUAL instrument as beliefs customers have about delivery and quality of service, which function as a reference point against which actual performance is evaluated. Parasuraman et al. (1994a) then argue that if the purpose of measuring service quality is to identify the service quality shortfalls/gaps, both expectations and actual performance must be measured. They proposed that the magnitude of the shortfall/gap is the difference in scores between perceived performance (P) and expectations (E), expressed as P-E. As such, Parasuraman et al. (1994a) strongly believe and defend the idea of measuring expectations and performance separately to compute the P-E scores.

Scholars who support the P-E notion (Parasuraman et al., 1994; Grimmelikhuijsen & Porumbescu, 2017) generally agree that expectations are used as referent points, standards or specifications. Phiri and Mcwabe (2013) have a slightly different view of customer expectations. They consider expectations as indicators of what customers wish to receive. Following that argument, failure to fulfil expectations may result in customer frustration or dissatisfaction, which may lead to defection.

Parasuraman et al. (1994a) and Zeithaml et al. (2018) contend that expectations occur at two levels. Both Parasuraman et al. (1994a) and Wilson et al. (2016) refer to

the highest level of expectation (what customers hopes for) as the desired service and the lowest level of expectation (what customers will accept without defection) as the adequate service. According to Zeithaml, Bitner & Gremler (2018), the desired service is a combination of what customers believe “can be” or “should be”.

According to Zeithaml et al. (2018), customers understand and generally accept that receiving the desired service consistently is not always possible in real life. As such, they put an allowance that the service provider may fail to deliver adequate service. Such customers then lower their expectations of the service. Zeithaml et al. (2018) describe adequate service as the minimum service delivery acceptable to customers without disappointment. The gap between the adequate service and the desired service is called the zone of tolerance. The zone of tolerance is important in that customers will tolerate the service provider for any level of service delivery between the adequate and desired levels. The wider the zone of tolerance, the more tolerant customers are, but the narrower the tolerance zone, the stricter customers are. Zeithaml et al. (2009) state that customers’ service tolerance also varies for different service dimensions. The more important the service dimension, the less tolerant customers become towards bad or unreliable service (Phiri & Mcwabe, 2013).

If service quality drops below the adequate level, customers become frustrated and complain, spread negative WOM or switch (Phiri & Mcwabe, 2013). In contrast, when service delivery is above the desired level, customers become delighted and may retaliate the good service they receive by continuing their relationship with the service provider.

Although scholars seem to agree that customers’ expectations occur at the adequate and desired levels, the challenging part is that these levels are ever-changing for a number of reasons (Parasuraman et al., 1994a). According to Grimmelikhuijsen and Porumbescu (2017), customer expectations are influenced by new information that they receive. The sources of such new information can be anything, including advertising, word-of-mouth (WOM) communication, reference groups, and experience and/or customer innovativeness (Grimmelikhuijsen & Porumbescu, 2017).

Empirical evidence for the existence of adequate and desired levels of expectations has been provided by Parasuraman et al. (1991). They conducted a study to understand customer expectations of a service in six different contexts in the USA. Their results established that expectations occur at the desired service and adequate service levels. If good service is predicted, the adequate level will be higher than if poor service is predicted.

A number of empirical studies have supported the idea of the P-E method of determining the service quality gaps. For example, prior to Parasuraman et al.'s (1988) SERVQUAL instrument, the empirical studies by Grönroos (1982) as well as Lehtinen and Lehtinen (1982) showed that customer's hold expectations prior to the service delivery. Later, Parasuraman et al. (1994a) conducted a qualitative study on company executives in four USA service organisations and their customers to validate their P-E method of establishing the service quality gap. Parasuraman et al. (1994a) used findings from that study as empirical evidence supporting their 1985 assertion that customers evaluate service quality by comparing the actual performance of the service firm to their prior expectations. This is the position, which has been held in service management over the years.

A number of researchers have questioned the role of expectations in the measurement of service quality. For example, Cronin and Taylor (1992) argued that there is little theoretical and empirical evidence to support the P-E approach as a basis for measuring service quality. They make further arguments that there is no need to measure expectations because service quality depends on performance only. Thus, they developed the SERVPERF, an instrument based on performance only measurements, which they claim to be superior to the SERVQUAL instrument (Cronin & Taylor, 1992).

#### *3.3.3.3. Dimensionality of service quality*

One of the contentious issues about the measurement of service quality concerns its dimensionality. Robinson (1999) states that generally, the number of service quality dimensions depends on the context. A single dimensionality is appropriate when perceived service quality is measured as a global service provider evaluation (Abd-Elrahman, 2018). In that case, customers are asked to express their feelings about

the quality of service they received from a service provider. However, the global evaluation approach is not diagnostic and, therefore, is not very effective in identifying service shortfalls/gaps (Abd-Elrahman, 2018).

Many scholars believe that service quality is a multidimensional construct, but there is no consensus regarding the actual number of dimensions. The dimensionality of service quality cannot be dissociated from its measurement instrument. In this study, the dimensionality of service quality depends on the dimensionality of the SERVQUAL used to measure it. Different studies have identified a different number of dimensions of SERVQUAL as an instrument for measuring service quality. For example, Robinson and Pidd (1998) proposed 19 dimensions for the SERVQUAL instrument for management science projects, while Seth, Momaya and Gupta (2008) identified seven dimensions in the mobile telecommunication industry in Korea. In the same industry, Abd-Elrahman (2018) identified eight dimensions; the five traditional dimensions of the SERVQUAL instrument plus three additional ones.

Akroush et al. (2019) identified eight service quality dimensions in the Jordanian and Yemeni mobile service markets. They replicated the original SERVQUAL dimensions but included three additional dimensions to investigate the quality of service. Samen, Akroush and Abu-Lail (2013) and Abd-Elrahman (2018) also reported contrasting results. While Samen et al. (2013) found three dimensions of the SERVQUAL instrument in the mobile phone industry in Jordan, the meta-analysis of Abd-Elrahman (2018) on the use of the SERVQUAL instrument in telecommunications from 2001 to 2017 found that the dimensions varied between three and thirteen. Similarly, Aora and Aora (2015) identified four dimensions of SERVQUAL in the commercial banks of India, while Jun and Palacuios (2016) reported 17 dimensions for mobile banking in the same country. In the retail banking sector of India, Roy, Paul, Quazi and Nguyen (2018), the SERVQUAL instrument was characterised with seven dimensions of service quality. The variations in the number of dimensions of the SERVQUAL instrument reviewed show that specifying the dimensionality of service quality is problematic. The SERVQUAL was employed as the measurement instrument in the current study, and therefore the discussion on the dimensionality of service quality focuses on the dimensionality of the SERVQUAL instrument.

Parasuraman et al. (1988) developed the SERVQUAL instrument as a five-dimensional instrument for measuring service quality. The original dimensions of the SERVQUAL instrument used in most marketing and management studies consist of reliability, assurance, tangibles, empathy and responsiveness (Parasuraman et al., 1994a). These dimensions have also been employed to measure service quality in the previous mobile telecommunication studies (Lai et al., 2007; Dahiyat, Akroush & Abu-Lail, 2011). Despite its popular application, Cronin and Taylor (1992) argue that the five-component structure of the SERVQUAL instrument is incorrect. They argue that service quality is a unidimensional construct. However, Parasuraman et al. (1994a) state that Cronin and Taylor's (1992) conclusion was incorrect because they did not consider the intercorrelation between the five dimensions' variables. Following that convincing argument from Parasuraman et al. (1994a), many scholars adopted the five dimensions of the SERVQUAL instrument for measuring service quality. A brief description of each of the original five dimensions is provided in the next paragraphs.

### **Reliability dimension**

The reliability dimension of service quality describes the ability of a service provider to deliver the right quality of services in their right quantities timely consistently (Parasuraman et al. 1988; Ismail & Yunan, 2016; Khan et al., 2020). This dimension is the most important determinant of service quality in the mobile telecommunication service industry (Meuter et al., 2000; Pura, 2005; Pihlström, 2008; Akroush et al., 2019). This view gets support from studies in telecommunication in South Africa (Van der Wal et al., 2002; Govender, 2013).

### **Responsiveness dimension**

While many researchers (Seth, 2008; Bitner et al., 2010; Mallik, 2014; Belwal & Amireh, 2018) characterise responsiveness as the willingness of the employees to attend to customers' requests, Akroush (2019) characterises it as promptness to deal with subscribers' requests, questions, complaints and/or problems. From a customer's perspective, being responsive could include listening to customers' requests and taking actions to satisfy their needs.

### **Assurance dimension**

The assurance dimension is invariably defined in different industries. For instance, in the banking industry, it is characterised as the knowledge of the employees about the services they are offering that inspires the trust and confidence of the customer (Ladhari, Ladhari & Morales, 2011; Coetzee, Zyl & Tait, 2013; Ananda & Devesh, 2017). However, in the context of mobile services, the assurance dimension is demonstrated when employees provide answers to subscribers' queries either over the phone or if they meet face-to face (Akroush et al., 2019).

### **Empathy dimension**

Many words have been used to characterise the empathy dimension of service quality in the literature. While Abd-Elrahman (2018) refers to empathy as the friendliness of the purveyor during their interactions with the customer, some researchers use words like politeness, courtesy to refer to the same thing. In the mobile telecommunication industry context, Akroush et al. (2019) conceived empathy as the subscribers' feelings about how employees treated them of the MNO during their interaction. Giving subscribers special attention, Akroush et al. (2019) argue, create an impression that the company treats its customers as equals in a social exchange relationship. Customers feel important if they are acknowledged by the service provider (Seth et al., 2008; Govender, 2013; Abd-Elrahman, 2018). The empathy dimension would be more important when there is an intimacy between the purveyor and buyer.

### **Tangible dimension**

In the original SERVQUAL model, Parasuraman et al. (1988) characterised the tangible dimension as the physical appearance, design and layout of the facilities (buildings, equipment and communication symbols) from which the service is delivered and the appearance of the person offering the service. All these provide cues to customers about the quality of service offered by a firm. Hence, this dimension is important as modern equipment, appealing facilities and neat employees may lure customers to the mobile network operator (Pihlström, 2008).

#### *3.3.3.4. Format of the measurement instrument*

There is a debate among researchers about the actual format of the SERVQUAL instrument for measuring expectations and performance. Robinson (1999) identified

three alternative formats for the measurement instrument; the difference, non-difference, and semantic-difference scales. The premise of the difference score approach is that service quality is calculated as the difference in scores between performance and expectations (Parasuraman et al., 1994a, b). This entails listing and measuring indicators of expectations and performance separately and then computing their differences.

Notwithstanding its diagnostic attractiveness, theoretically sound conclusions, and empirical evidence about the difference score approach, the shortcomings of the SERVQUAL have caused some disagreements and attracted a fair share of criticism from a number of researchers (Cronin & Taylor, 1992; Teas, 1993; Cronin & Taylor, 1994; Teas, 1994). The original SERVQUAL instrument requires two sets of questions consisting of 22 items for expectations (E) and 22 items for performance (P) (Parasuraman et al., 1988). The averages of these sets of items are then used to compute the P-E score for each dimension. Meanwhile, Cronin and Taylor (1992) argue that there is little theoretical or empirical evidence to support using the difference score method. They also demonstrated the efficacy of the difference score approach and developed their measurement method. Parasuraman et al. (1994b) highlighted that the diagnostic benefits of the difference score method give it a significant advantage. However, Cronin and Taylor (1994) and Teas (1994) made counter-arguments that the two sets of statements for performance and expectations make the questionnaire too long. They further argue that expectations are not necessary, as service quality can be based only on performance. Parasuraman et al. (1994b) responded to this criticism by revisiting their SERVQUAL model and suggested that theoretically, the performance and expectations can be combined into one performance question to reduce the number of statements in the measurement of service quality from 44 to 22.

Another point of disagreement about the difference score method arises from the computation and interpretation of the P-E scores. For instance, Seth et al. (2005) noted that the P-E formula does not make much logic as its focus is on the absolute magnitude of the P-E value and disregards the meanings of the scores being used to compute the P-E scores. For example, the result of  $3-2 = 4-3 = 5-4 = 1$ . Seth et al.



(2005) state that the values from which the gap is calculated cannot be ignored as they communicate different performance levels of the service provider.

Robinson (1999) advises that in order to address the shortcomings of the difference score approach, a non-difference score approach can be employed. In that approach, the statements for expectations and performance are combined into one statement. For example, customers may be asked to indicate the extent to which they agree that the performance of an organisation is below, equal to or exceed their expectations on a Likert scale of 1-strongly disagree to 7 -strongly disagree. Brown et al. (1993) note that not only does the non-difference score approach perform better, but it does so at half the number of statements. Parasuraman et al. (1994b) conducted an empirical comparison between the difference score and a non-difference score approach. They reported that the two approaches had the same diagnostic ability, but the non-difference score had a higher predictive power. Consequently, they recommended the adaptation of the non-difference score approach in studies focused on establishing the service quality instrument's predictive power and diagnostic ability. This thesis is one of the first to employ the non-difference score approach by asking the respondents the extent to which the service provider's performance meets their expectations.

According to Teas (1993a), the semantic-differential scale consists of two opposing statements to measure the same dimension. For instance, the statement "ABC has modern equipment" could be placed on the extreme left, and the statement "ABC does not have modern equipment" on the extreme right. The respondents are then requested to indicate where their feelings lie within that range. However, this format was not considered appropriate for the study because it is not diagnostic in nature.

Despite the diverging views about the application of SERVQUAL as an instrument for measuring service quality, there are a number of agreements among the researchers that are worth summarising here. First, the number of contentious issues regarding the conceptualisation and operationalisation of the SERVQUAL model as an instrument for measuring service quality suggests that many issues need to be considered before its use. However, the SERVQUAL instrument remains popular as a diagnostic instrument for measuring service quality in various contexts.

Second, in general, the application of the SERVQUAL instrument for measuring service quality depends on whether the interest in measuring service quality is for predictive or diagnostic purposes (Robinson, 1999). It is largely accepted (Cronin & Taylor, 1994; Parasuraman et al., 1994b; Teas, 1994) that the SERVQUAL instrument is preferred when the primary interest in measuring service quality is for diagnostic purposes. But Robinson (1999) argues instead of developing separate instruments for predictive and diagnostic purposes. The SERVQUAL instrument can still be employed where service quality measurement is for both predictive and diagnostic purposes. What has emerged from the review of the possible form of the SERVQUAL questionnaire is that the non-difference score format has the same diagnostic power as the difference score format, but its predictive power is superior to that of the difference score format. What is also apparent from the reviewed debates is that the number and definitions of the service quality depend on the context (Robinson, 1999).

### **3.4. SERVICE RECOVERY SATISFACTION**

Service recovery is one of the important variables identified to affect the formation of behavioural intentions in literature (Van Vaerenbergh et al., 2019). An appreciation that service recovery exists implies that service failures are real in business operations (Pai, Yeh, & Lin, 2015; Köcher & Paluch, 2019). As alluded to (Meuters et al., 2000; Tsohou, Siponem & Newman, 2020), even technology delivered services are not spared from service failures despite designed systems to avoid them. Van Vaerenbergh et al. (2019) state it is not disputed that a service failure is always a precursor and prerequisite to service recovery. Because it offers a service provider a second chance to recover a customer after a service failure, service recovery has attracted practitioners and researchers' attention (Liao, 2007; Sengupta, Balaji & Krishnan, 2015; Hurun et al., 2019). Hence, the definition, conceptualisation and measurement of service recovery are important for a deeper understanding of this construct.

#### **3.4.1. Definitions of service failure and service recovery satisfaction**

Service failure and service recovery are closely interconnected such it is difficult to talk about one without the other. However, the focus of this thesis is primarily on service recovery satisfaction. In order to understand the conceptualisation and

measurement of service recovery satisfaction, the review must show how it is linked to service failure and service recovery. The next sections will review the definitions of service recovery, service failure and service recovery satisfaction.

#### *3.4.1.1. Service recovery defined*

Scholars describe and define service failure and service recovery in different ways. From a service management perspective, Grönroos (1988) defines a service recovery as comprising all the corrective actions taken by a service provider in response to a service failure, poor service delivery, or poor service quality. This definition implies that service recovery is always a response of the service provider to a failure in delivering a service to the customer. The phrase “comprises of all organisation's actions” suggests that it is not an event but a process.

Grönroos' (1988) definition was repeated by McCollough, Berry, and Yadav (2000), stating that service recovery describes all the recovery efforts or actions performed by the service firm to return a customer to the original satisfied status with that firm, which even could either destroy or enhance their future behavioural intention toward that particular service firm. This definition seems to be more complete as it includes the consequences of a service failure to the service provider if it is addressed or not addressed.

Other scholars (Andreassen, 2000; Gohary et al., 2016; Jung & Seock, 2017) contend that service recovery comprises of all strategies and tactics that a service provider carries out as a response to a service failure that is aimed at restoring a customer's original satisfaction level, at least to retain him/her. Nikbin et al. (2014) share the same view that service recovery comprises all the efforts and actions taken by the service provider to rectify the problem of service failure. However, Nikbin et al. (2014) extend their definition, stating that the service recovery actions are service recovery strategies practised by the service provider to regain customer satisfaction after dissatisfaction caused by the service failure.

Zemke and Bell (1990) use different semantics in their definition of service recovery. They define a service recovery as a thought-out process for returning an aggravated customer to the normal state of satisfaction with the service provider after a service

breakdown. This definition is similar to that of Grönroos (1988) but also points out that a service recovery must be a plan (thought-out process), not a haphazard process on addressing the frustrated customer. Boshoff (1999) confirmed Zemke and Bell's (1990) definition but added that a service recovery must be proactive rather than reactive. Boshoff (1999) concurs with Zemke and Bell's (1990) view that a service recovery is a planned (thought-out or proactive) process and not a haphazard (reactive) process. Boshoff's (1999) emphasis on "proactiveness" should not be interpreted to suggest that service recovery can occur prior to a service failure. Rather, the interpretation is that service providers must anticipate that anything can go wrong (service failure) and take initiatives to prepare for such eventualities before they occur and before customers complain. The emphasis on "before customers complain" is not surprising considering that most studies on service recovery (Tax, Brown & Chandrashekar, 1998; Choi & La, 2013; Park & Park, 2016) were conducted on customer satisfaction with complaint handling.

#### *3.4.1.2 Definition of service failure*

The definitions of service recovery reviewed so far suggest, and rightly so, that service recovery is a response of a service provider to a service failure, which seeks to re-establish customer satisfaction or restore the damaged relationship. Different scholars define and describe the concept of service failure in different ways. For example, Van Vaerenbergh et al. (2019) define service failure as a temporary or permanent interruption to the customer's regular service experience. This definition suggests that service failure should be viewed from customers' perspective about how they feel or view the interruption to the normal service provision. Oliver (2015) shares the view of what a service failure constitutes, stating that it occurs when the service provider fails to deliver the expected service or the customer receives a flawed service that they did not expect. The point emphasised in Oliver's (2015) definition is that the customer does not expect a service failure. Customers are not aware of it until it happens to them.

The description of a service failure is relative to the context. For technology-delivered services, a service failure occurs when a technical fault in delivery equipment or a system failure results in a total or partial loss of a service to the customer (Tsohou et al., 2020). Meuter et al. (2000) confirm that definition, adding that a technical or

system failure can be due to human error or can arise from a catastrophic natural disaster like a storm or lightning. In the mobile telecommunication industry, mobile network failures or mobile network malfunctioning, a poor or congested network that makes connectivity impossible, are classified as technical failures (Awa, Ogwo & Ukoha, 2014; Ndidi, 2020). Irrespective of their sources, Ndidi (2020) conceives service failures as unexpected events that make customers feel short-changed in a social exchange process.

Prasongsukarn and Patterson (2012) contend that what constitutes a “service failure” differs from one customer to the other. They allude that not all instances where the received service fails to meet customer expectations can be classified as a service failure. A number of researchers (Matikiti et al., 2018; La & Choi, 2019; Van Vaerenbergh et al., 2019) share the view that a service breakdown should only be considered a failure if, by its occurrence, the core service becomes totally or partially unavailable. These scholars contend that the characteristics of a service failure are that the customer must be unexpectedly inconvenienced or must experience some economic setback (monetary or otherwise) due to its occurrence. This view suggests that service failures inflict psychological pain on the customer when attributed to the service provider. Therefore, service failures are a source of customer dissatisfaction and switching.

The definitions of service failure reviewed so far imply that service failure is attributed to the service provider and not to the customer. Consequently, in this study, service failure was conceived as an unexpected interruption of a service delivery process that deprives customers of a fair share or benefit in a social exchange relationship. Since the service provider is perceived to be at fault for service failure, customers expect the service provider to take remedial actions to restore equity.

#### *3.4.1.3. Definition of service recovery satisfaction*

The definition of service recovery suggests that when a service failure occurs, customers expect the service provider to rectify the problem to normalcy. Service recovery satisfaction (RSat) is defined as a customer’s satisfaction with a service recovery solution provided by a service provider following a service failure (Boshoff & Staude, 2003; Río-Lanza, Vázquez-Casielles & Díaz-Martín, 2009; Cheung & To, 2016). Others consider service recovery satisfaction as a customer’s favourable

evaluation that his/her complaint has been handled fairly by the service provider (Choi & La, 2013; Park & Park, 2016). Such a perspective implies that recovery satisfaction reflects the extent to which the service provider is perceived to have dealt with a service failure fairly.

Cheung and To (2016) have phrased their defined service recovery satisfaction differently. They view service recovery satisfaction as a customer's feelings and attitude about the fairness of the service provider's actions to restore a failed service. This definition concurs with one coined by other authors (Wang, Hsu, & Chih, 2014; Ibrahim, Abdallahamed & Adam, 2018), who consider service recovery satisfaction as a customer's feeling of pleasure with the outcome of the service recovery efforts to a specific service failure problem. The specificity of a service encounter in the definition of service recovery satisfaction implies that service recovery satisfaction is a transaction-specific satisfaction (Jones & Suh, 2000; Veloutsou et al., 2005).

There are a number of common things in the way service recovery satisfaction has been expressed. Taken together, the definitions suggest that service recovery satisfaction is a feeling of the customer about the extent to which the remedial actions of the service provider managed to meet their recovery expectations. All the definitions consider service recovery satisfaction as a post-recovery assessment of a specific recovery event. All the definitions suggest that the main objective of service recovery is to regain lost customer satisfaction. The next section looks at the conceptualisation of service recovery satisfaction.

### **3.4.3. Conceptualisation of service recovery satisfaction**

It is important to remind that in this study, the occurrence of a service breakdown (service failure) was considered the service provider's fault. Van Vaerenbergh et al. (2019) note that very few scholars attempt to conceptualise the service recovery satisfaction construct. They conceptualise service recovery satisfaction as an outcome of the service recovery journey. The service recovery journey was considered to be made up of the pre-recovery, recovery and post-recovery stages. The pre-recovery stage occurs soon after a service failure, and the recovery and post-recovery stages refer to the recovery efforts of the service provider and the customer's evaluation of the outcomes, respectively (Van Vaerenbergh et al., 2019).

These stages mirror the confirmation-disconfirmation (C/D) paradigm's expectation, performance, and satisfaction stages (Oliver, 1997, 2015). The satisfaction/dissatisfaction of the customer is the overall equity fairness of the whole service recovery process. Although the C/D and equity are conceptually distinct theories (Oliver, 2015), they can be considered complementary drivers of service recovery satisfaction. Building upon this logic, service recovery satisfaction has been conceptualised based on C/D (McCollough et al., 2000; Oliver, 2015) and the equity theoretical paradigms. In accordance with the C/D paradigm, satisfaction with a service recovery is a function of expectations, performance and disconfirmation. In the context of technology-delivered services, the disconfirmation theory (Oliver 2015) holds that when service failure is attributed to the service provider, customers expect the organisation to resolve the problem and satisfactorily restore the service. Customers will compare the actual service recovery solution of the organisation with their expectations.

In accordance with the equity theory, satisfaction with a service recovery is an equity judgment (Andreassen, 2000). The occurrence of a service failure causes inequity in the social exchange relationship. Thus, following a service failure, customers expect the service recovery efforts of the service provider (recovery performance) to restore equity in the social exchange relationship. Customers evaluate or assess the outcomes of the service recovery process (post-recovery evaluation) and make judgments about whether the outcome of that process was fair and acceptable to them or not. The service recovery efforts of the service provider are judged to be fair if customers perceive them to match or exceed their pre-recovery equity expectations (De Matos et al., 2007). This implies that customers evaluate the service recovery efforts of the service provider and develop an attitude that influences their satisfaction with a company. When the service recovery solution exceeds the recovery equity expectations of a customer, positive disconfirmation occurs, and when they are below the customer's expectations, negative disconfirmation occurs (Andreassen, 2000; Oliver, 2015).

The outcomes of the service recovery solution have been interpreted differently. In service recovery literature, a positive disconfirmation occurs when there is overcompensation for the service failure, which creates a service recovery paradox

(McCollough, 2010; Krishna, Dangayach & Sharma, 2014). The concept of service recovery paradox (recovery paradox) occurs when post-failure satisfaction exceeds pre-failure satisfaction (Díaz et al., 2017). As expressed by Maxham (2001) and De Matos et al. (2007), the recovery paradox concept holds that if a customer complaint is handled exceptionally well, customers are likely to rate the service provider higher than they did prior to service failure. From that perspective, Krishna et al. (2014) contend that the service recovery paradox may lead to increased customer retention.

Scholars do not universally accept the occurrence of a recovery paradox. While De Matos, Henrique & Ross (2007) believe in the recovery paradox concept, others (McCollough, 2000; Maxham & Netemeyer, 2002) are opposed to it. Similarly, Oliver (2015) states that empirical evidence on the service recovery paradox is controversial. In his meta-analysis of 24 studies on service recovery paradox, Oliver (2015) found that 19 of them revealed the occurrence of a service recovery paradox, while others did not. Other scholars refute the existence of a recovery paradox, arguing that the displeasure associated with the losses incurred due to a service failure is always greater than the pleasure associated with the benefits offered by a service recovery solution (Basso & Pizzutti, 2016). In such cases, it is assumed that satisfaction from a service recovery process will not exceed the initial satisfaction if things have gone wrong. According to Basso and Pizzutti (2016), once customers experience a service failure, they will not fully regain the original trust they had with a service provider even after a successful service recovery. This debate seems to perpetuate, as there are no signs that the opposing views will be reconciled soon.

Meanwhile, another group of scholars do not dismiss the occurrence of a service recovery paradox outright. Rather, they believe that it occurs under specific conditions. For instance, Maxham and Netemeyer (2002) assert that the recovery paradox only occurs when customers perceive the service failure as unique or perceive the cause of failure to have been beyond the service provider's control. However, they further state that the chances of recovery paradox diminish with an increase in the frequency of failures. Magnini et al. (2007) join that debate, stating that a service recovery paradox only occurs under specific conditions. They suggest that the recovery paradox is likely to occur in situations of severe service failure or if it is the first time for the customer to experience a service failure and service



recovery. They also added that a recovery paradox could also occur when customers consider the cause of the failure to be unstable or externally caused (where the firm is perceived to have little control over the cause of the failure). In light of this discussion, the two extreme opposing views about whether the recovery paradox does or does not exist may be described as somewhat myopic in their outlook and applicability. The view that the recovery paradox occurs under specific conditions seems to be more logical.

In contrast to the idea of a recovery paradox, De Matos et al. (2007) introduced the concept of double deviation effects, which is the opposite of a service recovery paradox. Simply expressed, a double deviation occurs when a customer perceives the outcome of the service recovery efforts to be unfair or to be below the equity expectations (negative disconfirmation of service recovery) (Li & Fang, 2016; Ellyawati, 2017). Both Mattila (2001) and Ellyawati (2017) consider the causes of a double deviation as a customer's dissatisfaction with a service recovery process. Mistakes in service delivery are bound to happen, but it is how the service provider deals with the service failure that has double deviation consequences (Ellyawati, 2017). Andreassen (2000) joins that debate, adding that a double deviation signals the failure of the service provider to make things that had gone wrong right or to offset the negative impact of the service failure.

The conceptualising of service recovery satisfaction construct as a post-recovery transaction-specific outcome has been contested by a number of scholars. For example, Patrício, Gustafsson, and Fisk (2018) conceptualise service recovery satisfaction as multiple accumulated connected service encounters. Similarly, Lemon and Verhoef (2016) conceptualize service recovery satisfaction as an outcome of a customer's service experience journey with an organization over time, during which there are several multiple touchpoints. Van Vaerenbergh et al. (2019) subscribe to this view adding that the service recovery journey consists of three phases, namely, the prepurchase, purchase, and post-purchase. They make further arguments that rather than measuring service recovery satisfaction at one discrete point (the post-recovery phase) as researchers typically do (Voorhees et al., 2017), service recovery satisfaction should be determined at all three phases. Voorhees et al. (2017) contest that view, suggesting that service recovery satisfaction should be restricted to

measure a customer's satisfaction with a discrete service recovery solution related to a specific service failure. That is the view shared by several other service recovery scholars (McCollough et al., 2000; Nikbin et al., 2014; Li & Fang, 2016; Roschk & Gelbrich, 2017). Consequently, in this study, service recovery satisfaction was conceptualised as a post-recovery customer feeling or attitude about how the service provider handled the service failure.

#### **3.4.4. Measurements of the service recovery satisfaction**

The measuring of service recovery has been an area of different views. Some researchers who agree that service recovery satisfaction is a multidimensional construct (Zhao et al., 2012; Mostafa, Lages & Sääksjärvi, 2014; Han et al., 2019) do not seem to agree on the standard dimensions that should be used in its measurement. Having been unsatisfied with the paucity of comprehensive scales for measuring service recovery, Mostafa et al. (2014) developed the Customer Recovery (CURE) index. The CURE scale is based on nine dimensions (apology, compensation, explanation, follow-up, facilitation, speed of response, courtesy, effort, problem-solving) as the determinants of service recovery satisfaction. They argued that the CURE scale has the potential to point to specific actions for a successful recovery solution. As Mostafa et al. (2014) state, the scale facilitates the building of a long-term relationship. It also captures the real-world failure and recovery situations that companies face more accurately (Mostafa et al., 2014). However, despite these claims, the CURE scale has not been popular in service recovery studies.

In 1999, Boshoff et al. developed their six-dimension recovery satisfaction (RECOVSAT) scale for measuring a customer's satisfaction with a service recovery process and solution. The six dimensions of the RECOVSAT scale consist of atonement, communication, feedback, empathy, tangibles, and explanation. In brief, atonement refers to equitable compensation given to the customer, while communication refers to the timing and how the service provider communicates the problem to the affected customers (Boshoff & Staude, 2003). Empowerment refers to the authority given to front line employees to make decisions, whereas feedback involves a service provider's communication about the actions taken. Explanation refers to the communication from the service provider explaining the possible

reasons why the problem occurred. As a dimension of service recovery, tangibles refer to the employees' appearance and equipment to rectify the problem.

In summary, the RECOVSAT scale suggests that for a customer to be satisfied with a service recovery solution, all these must be effectively executed. Despite the advantage that the RECOVSAT scale can point to managerial actions, Boshoff and Staude (2003) argued that it cannot be generalised across diverse industries. The explanation they gave is that because service recovery strategies are situation or context-specific, and therefore customers respond differently.

Several studies of service failure and service recovery have examined service recovery satisfaction from the perspective of perceived justice (Malhotra & Malhotra, 2013; Nikbin et al., 2014; Wang, Hsu & Chih, 2014; Cheng et al., 2019). The logic behind the use of the justice theory is that customers' perceptions of the extent to which their service recovery expectations are met have a considerable influence on their satisfaction with a service recovery solution (Malhotra & Malhotra, 2013; Nikbin et al., 2014; Cheng et al., 2019). Nikbin et al. (2014) note that customers evaluate the fairness of a service recovery process against four dimensions of justice. These scholars then emphasise that service providers should comprehend the major dimensions of the justice theory if successful recovery strategies are to be formulated and executed. They list the major dimensions of justice as distributive, procedural, interactional and informational justice. Distributive justice is related to tangible compensation, while procedural justice relates to policies and procedures of complaint handling (Wang et al., 2014; Berezina et al., 2016). Nikbin et al. (2014) state that interactional justice relates to the treatment of the customer by the employees during the service recovery stage, while informational justice relates to the explanations given by the service provider to the customer concerning the service failure. It is believed that the RECOVSAT scale is already embedded in the four dimensions of perceived justice.

The measurement of customers' satisfaction using the justice dimensions is not a deviation from the conceptualisation of this construct based on the disconfirmation and equity theoretical frameworks. From the perspective of justice, customers' evaluation of the service recovery process based on the four justice dimensions

leads to their satisfaction/dissatisfaction with the process. Once customers experience a service failure, they form recovery expectations based on the four dimensions of justice. Perceived justice represents the overall perception of fairness of the service recovery process, which is the aggregated score of all the dimensions of justice. In summary, customers will be happy if they perceive the service recovery process as fair (Wang et al., 2014).

In contrast, Berezina et al. (2016) note that customers will be unhappy if they perceive the whole recovery process as unfair. Awa et al. (2015) provide empirical evidence of that view in the mobile telecommunication industry in Ghana. They found that satisfaction/dissatisfaction of customers with a service recovery depended on their judgments of fairness of the service recovery actions of the service provider.

Building on empirical evidence from previous studies, service recovery satisfaction was measured by asking customers the extent to which they were satisfied with a service recovery solution and indirectly through the four dimensions of perceived justice.

### **3.5. PERCEIVED JUSTICE AND EQUITY THEORIES**

The concepts of perceived justice with service recovery and the equity theoretical framework originated from organisational justice studies (Colquitt, Lepine & Wesson, 2019). Studies of justice and equity were originally focused on how employees' treatment and compensation would affect their job satisfaction and commitment (Klein, 2008; Robbins et al., 2017; Colquitt et al., 2019). Some scholars (Choi & Choi, 2014; Yeh & Lin, 2015; Nguyen et al., 2020) believe that the same principle of justice applies in marketing where service recovery is involved. However, there are many differing viewpoints and interpretations of what constitutes justice in organisational justice, making it difficult to apply it in other disciplines without explaining its contextual interpretation. Researchers need to be specific about what constitutes justice in the context of their study.

#### **3.5.1. Interpretation of perceived justice in this study**

The term “justice” covers have a variety of connotations in different fields of study or disciplines. For instance, in philosophy, “justice” implies “rightness”, while in

organizational justice research, it means fair (Colquitt et al., 2001). Klein (2008) states that there are a number of justice theories making its definition complex. Klein (2008) states that the five justice theories include distributive justice, commutative justice, legal justice, social justice and procedural justice. Each of these theories has a different connotation, but there is no space for a detailed discussion in this thesis. The justice theory applied in marketing and service management was first propounded by Adams in 1965. It has been rephrased in marketing to imply that parties involved in every social exchange relationship weigh their inputs against the outcomes and compare them with those of others in similar situations (Adams, 1965). However, the aspect of comparing with others in similar situations in this definition has been relaxed in marketing. From a social exchange perspective, customers can compare their input/output ratio to the other party in the same exchange relationship, to individuals with no relationship to the specific transaction that the consumer is involved in or to an imaginary consumer in another geographic region (Oliver, 2015). This implies that the input/output comparison of the customer is not restricted to other known customers or customers of the same service provider, but they can include customers from competitors as well. For example, studies have found that customers are sensitive to the knowledge that other consumers from other service providers (real or hypothetical) receive better deals or compensation than them (Oliver, 2015). These studies illustrate that equity comparisons can involve standards that can exist as imagined interpersonal norms.

A complete definition of perceived justice cannot be achieved without showing the intersection of the justice and equity theories. Oliver (2015) states that the pursuit of justice in marketing implies that something is unjust. The sense of justice or injustice in marketing generally refers to perceptions of fairness/unfairness. Oliver (2015) contend that consumers cannot have a sense of unjust/unfairness without reference to something. Most of the time, attention to justice/fairness is paid to when it is perceived that there is some inequity in a social exchange process (Chen & Kim 2017; Jung & Seock, 2017). The concept of equity in marketing applies the principle of to each according to an individual's effort or input. That principle supports the necessity of considering equity in the definition of perceived justice to account for customers' satisfaction/dissatisfaction judgments.

In service recovery literature, perceived justice and equity have been considered to be two distinct constructs. In simple terms, equity refers to a fairness, rightness, or deservingness comparison, whether real or imaginary, which is contained in the rule of justice (Oliver, 2015). Putting these two words (justice and equity) together, perceived justice was defined as a customer's subjective judgment (perception), real or imaginary, that what is received from a social exchange or transactional relationship is commensurate with or proportional to the investment/efforts (what is given away), compared to the benefits gained by the service provider (other party), relative to its contribution (input). Such a definition properly captures the concepts of justice/injustice and equity/inequity in the context of purchasing and consumption of a service as applied in this study.

### **3.5.2. Conceptualisation of perceived justice with a service recovery**

The definition of perceived justice provided in this study portrays service recovery as a process of restoring equity in a social exchange transaction. This has a bearing on how this construct will be conceptualised and measured. Colquitt et al. (2019) contend that as applied to the workplace, any perceived inequity motivates people to think about coping strategies. Robbins et al. (2017) concur with that view adding that people are motivated to behave in ways that restore or maintain equity in their situations. This is in conformance with the equity theory, which posits that people will act to eliminate any felt inequity in the rewards received for their work in comparison with others (Colquitt et al., 2019). According to this view, the basic foundation of equity theory is social comparison.

Colquitt et al. (2019) state that the concept of justice is applied to a settlement of a dispute or conflict in organisational behaviour. Researchers in the field of service recovery (Roschk & Gelbrich, 2014; Matikiti et al., 2018; Han et al., 2019) argue that the same logic applies equally well to marketing situations where service failure and recovery are involved. According to Han et al. (2019), a service failure is an example of a contractual dispute where a customer would feel inequitably treated. The feeling of being short-changed (inequity) in an exchange relationship makes the customer to be frustrated. Consumers who feel prejudiced perceive the other party in the relationship (service provider) to be benefiting at the expense of their expense. A customer's perceptions of inequity are driven by the theory of proportionality, which

posits that one's rewards should be proportional to the costs and other inputs to the reward (Oliver, 2015). When a customer buys a service, he/she expects specific benefits from the transaction. Scholars in marketing (Maxham, 2001; Río-Lanza et al., 2009; Babin et al., 2021) believe that if the delivery of a service is interrupted, the customer will perceive a sense of inequity, which provokes him/her to look for ways to eliminate it by restoring justice. That view resonates with that of Singh and Crisafulli (2016) as well as Jung and Seok (2017), who purport that customers expect adequate compensation for the loss they suffer due to a service failure.

In a bid to serve the customer, the service providers take appropriate actions to rectify the problem of service failure. However, Matikiti et al. (2018) and Han et al. (2019) contend that whether or not a customer will be satisfied, is a function of whether or not the service recovery solution is perceived a fair. That view suggests that satisfaction with a service recovery solution is a function of how a customer evaluates rewards received relative to what is perceived to be the gains of the other party (service provider).

Oliver (2015) correctly conceptualises perceived justice with a service recovery (PJSR) as a discrepancy of the service provider's solution against the customer expectations following a service failure. Applied to service recovery literature, this discrepancy leads a negative disconfirmation paradigm, which suggests that customers perceive inequity or feel short changed if they think they have been inadequately compensated for loss incurred due to the service failure (Zhao et al., 2012; Siu, Zhang & Yau, 2013; Petzer, De Meyer-Heydenrych & Svensson, 2017).

The preceding discussion on inequity suggests that customers can quantify their inequity following a service failure. However, Oliver (2015) seems to have some reservations about that view. He argues that it is not in all situations where customers can quantify what they have been deprived of by the service failure. He further argues that customers bring several inputs into an exchange process, such as cash, effort and time, making the quantifying the loss incurred very complicated. However, when customers cannot quantify the inequity, they estimate the inequity and, therefore, the expected compensation based on the magnitude of the deviation from the goal or need caused by a service failure. If the customers feel heavily

inconvenienced or consider the service very important, they expect high compensation following a service failure. Oliver (2015) describes such expectations as passive expectations because they are not activated unless the service provider violates the norms of a social exchange relationship. He concluded by adding that even though the inequity may be difficult to quantify, customers have the potential to recognise inequity when they see it.

Because of the reasons presented on the possible inability to quantify the inputs and inequity, it is useful to relax the assumption of a strict mathematical quantification of the interpretation of inequity in the cognitive appraisal of the service recovery solution. The reason is that customers know what is fair or unfair to them based on how they interpret the situation. Those who attempt to estimate the inequity may use one input type like price or cost and leave out other input dimensions.

Similarly, Söderlund and Colliander (2015) believe that, in general, judgments about the fairness of a service recovery solution can be explained from the expectancy-disconfirmation theory. They suggest that customers expect that the resources they lose due to service failure should be equal to the gains they will obtain from a fair service recovery solution. Like the ordinary disconfirmation model of satisfaction, Söderlund and Colliander (2015) use the word inequity to imply a deficit where a customer is not compensated or receives less than what they perceive they deserve. That creates a negative disconfirmation of the service recovery expectations, which, as stated by Oliver (2015), may lead to double deviation. It can also happen, though Oliver (2015) says it is not common, that a customer may be compensated above what he/she thinks he/she deserves for the service failure. Such a situation creates a positive disconfirmation, leading to a situation, which Oliver (2015) calls a service recovery paradox explained in the previous section. Situations where the compensation matches the expected equity creates a condition of confirmation. While negative inequity will be perceived as unfair, both the return to equity and over compensation, will be perceived as fair by the customer. Thus, as in the C/D paradigm of satisfaction, equity exists as a continuum bounded by negative disconfirmation (inequity), through equity (confirmation or justly compensated), to positive inequity, where outcomes are greater than what the customer thinks he/she deserves. According to Söderlund and Colliander (2015), inequity leads to



dissatisfaction, which may lead to unfavourable behavioural intentions. On the other hand, positive inequity leads to satisfaction and possibly to favourable behavioural intentions. In summary, the consequences of a customer's equity comparisons will affect a customer's satisfaction with service recovery. Equity comparisons will also have an effect on a customer's complaint behaviour, intention to repurchase, word-of-mouth (WOM), which have been discussed in Chapter two.

Oliver (2015) conceptualised perceived justice with service recovery (PJSR) as a multidimensional construct. He claims that customers do not evaluate the fairness of a service recovery solution against one expectation but they base their evaluations on several attributes. Earlier researchers (Bitner et al., 1990; McCollough, 2000) conceptualised the dimensions of perceived justice as distributive, procedural and interactional justice. In the recent marketing literature, Lee, Joshi and Kim (2011), Nikbin et al. (2012, 2014) as well as Colquitt et al. (2019), have conceptualised perceived justice as a four-factor construct consisting of distributive, procedural, interactional and informational justice. These authors subdivided the interactional justice dimension into two: interpersonal and informational justice. Specifically, Lee et al. (2011) and Colquitt (2019) state that their unbundling of the interactional justice was based on Greenberg's (2006) argument. Greenberg (2006) regarded the respect aspect of interactional justice as interpersonal justice and the explanation aspect of interactional justice as informational justice. This view considers informational justice to be outside the purview of interactional justice. As stated by, the four-factor structure conceptualisation of perceived justice with service recovery is not only common in organisational behaviour (Colquitt et al., 2019), but it is also common in the service recovery literature in marketing (Nikbin et al., 2014).

Several authors (Lee et al., 2011; Matikiti et al., 2018; Han et al., 2019) associate distributive justice (DJ) with the notion of fairness in whereby individuals get what they deserve based upon their efforts/inputs. According to these authors, the more customers perceive the tangible compensation to be lower than what they deserve, the higher the perceived unfairness. Procedural justice (PJ) refers to procedural fairness, which explores the manner in which the outcomes of a service recovery were delivered. The customers evaluate the processes, procedures or rules used to resolve a service failure (Choi & Choi, 2014). Some scholars (Pai, Yeh, & Lin, 2015;

Nguyen et al., 2020) suggest that distributive and procedural justices and might be complementary in that, when one is lacking or is unattainable, customers look to the other as a means to achieving equity. A number of scholars (Maxham & Netemeyer, 2002; Nikbin et al., 2012, 2014; Matikiti et al., 2018; Esen & Sonmezler, 2017) have described interactional justice (IJ) as a customer's perceived feeling about how he/she was treated by the employees of the company during the service recovery process. Oliver (2015) concur with the description of IJ above adding that interpersonal fairness cannot be standardised as it depends on a customer's perception. Even if customers are given the same treatment or dignity during the service recovery process, their IJ ratings may differ because they are not the same. This implies that employees need to be sensitive to the preferences of each customer they deal with him/her during the service recovery process.

Many scholars (Pai, Yeh, & Lin, 2015; Jung & Seock, 2017; Nguyen et al., 2020) consider informational justice (InfJ) as consumers' perceptions that a fair, adequate and honest explanation provided to them about the cause of the service failure what is being done to restore the customer to normalcy situation. Again researchers have not come up with a standard of what can be called fair and adequate explanations, except the emphasis that customers feel that it is the responsibility of the supplier to provide an explanation of what caused the failure and what the company is doing to restore the customer to normalcy.

The literature provided so far about the justice theory suggests that the PJSR construct is a summation of all the forms of justice, in the consumer's mind. In the context of this study, the additive nature of overall perceived justice (PJSR) is consistent with the Multi-Attribute Decision Making Theory (MADM) (Mohanty et al., 2018). Applied to service recovery, this theory suggests that perceived justice is an aggregate of a customer's evaluation of the fairness of all the forms of justice. Nguyen et al. (2020) concur with the MADM theory by stating that a good explanation does not substitute adequate reimbursement for the loss suffered by the customer due to a service failure. Rather, it only acts as a "softener" (i.e. customer feels comforted) by reducing the customer's anger while the company is working on the reimbursement solution. Thus, even though the forms of justice are additive in nature, Nguyen et al. (2020) argue that they are not compensatory in nature (i.e.

they do not compensate for each other). These assertions by Nguyen et al. (2020) had implications on the measurement or operationalisation of the PJSR construct in this study.

### **3.5.3. Measurement of perceived justice**

The measurement of perceived justice (PJSR) revolves around its conceptualisation. Perceived justice can be measured as a unidimensional or multi-component construct. When measured as a unidimensional construct, respondents can be asked to indicate the extent to which they perceive the company to be fair. This approach is not diagnostic and has not been popular in service recovery research.

Most of the management and marketing researchers have traditionally measured perceived justice as a three-component or four-component second-order construct. For example, a number of researchers (Siu et al., 2013; Cheng & Kim, 2017; Ortiz et al., 2017; Petzer et al., 2017) measured perceived justice as an aggregate score of distributive (DJ), procedural (PJ) and interactional (IJ) justice. The assumption of this approach is that customers consider these components as separate ways evaluating the fairness of a service recovery solution.

DJ involves measuring a customer's perceptions about the extent to which they feel fairly compensated by the service provider for the loss suffered due a service failure (Kuo and Wu, 2012; Nguyen, McColl-Kennedy & Dagger, 2012; Gohary et al., 2016; Jung & Seock, 2017; Ali et al., 2021). In the mobile telecommunication industry, DJ refers to the refund of airtime, data bundles or loyalty points lost due to network breakdown or wrong billing (Awa et al., 2015). Hence, DJ was considered an important component of perceived justice in this study.

Measures of PJ refer to the extent to which customers perceive the procedures used in rectifying the failure (Söderlund & Colliander, 2015). In the mobile telecommunication industry, PJ may include refund policies (full or part refund), the time it takes to refund the customer, the responsiveness and flexibility of the service provider during the service recovery process and the time it takes to rectify the problem (Wang et al., 2011; Singh & Crisafulli, 2016). Previous researchers (Roschk & Gelbrich, 2014; Ortiz et al., 2017), have argued that policies and procedures must

be perceived as being consistent, unbiased and impartial for them to be judged as satisfactory and fair by the customer. Given this explanation, PJ was considered an important component of perceived justice in this study.

Interpersonal justice (IJ) measures whether or not customers were treated fairly in the service recovery process (Orsingher, Valentini, & de Angelis, 2010; Singh & Crisafulli, 2016; Han et al., 2019). Items of IJ include a customer's perception about whether employees were empathetic, polite, trustworthy, concerned, courteous or sensitive to the customer's problems during the service recovery process (Gelbrich & Roschk, 2011; Choi & Choi, 2014; Petzer et al. 2017). Even though mobile services are generally delivered through technology, often customers visit the shops of mobile network operators (MNOs) or make contacts with them if they encounter technical problems, which they cannot solve. This justifies why IJ was included as a component of perceived justice in this study.

According to Greenberg (1993), informational justice (InfJ) is a measure of the extent to which customers feel that the problem that caused the delivery of service to fail or fall below expectations was adequately communicated and explained to them. Even though service breakdowns (failures) in the mobile telephone industry are so common, Nikbin et al. (2012, 2014) and Awa et al. (2015) emphasise that subscribers still expect some explanation from MNOs for severe service failures. Hence, InfJ was considered an important component of perceived justice in the current study.

Existing management and marketing literature does seem to have a standard way of measuring perceived. While some authors have used three-component (DJ, PJ and IJ) (Río-Lanza, Vázquez-Casielles & Díaz-Martín, 2009), others, (Nikbin et al., 2012, 2014) have employed the four-factor model for measuring perceived justice. It seems as if the choice between a three-component and four-component model of measuring perceived justice depends on the researcher, context and research objective. Recently, Bahri-Ammari and Bilgihan (2019) used three components of perceived justice (DJ, PJ, IJ) to investigate its influence on mobile phone customers in Tunisia. Their results revealed that the three components of perceived are distinct and have differential effects on satisfaction with recovery solutions. In contrast,

Nikbin et al. (2014) used the four components of perceived justice (DJ, PJ, IJ, InfJ) in the mobile telephone industry. Their results proved that the four components of perceived justice were distinct. Of particular interest to this is the fact these authors showed that, the IJ and InfJ were distinct measures of perceived justice with distinct effects on the customer's perception of service recovery fairness. Similarly, Lee et al. (2011) investigated the dimensionality of perceived justice using small-sized retailers and their customers in Korea. In a related study, Nikbin et al. (2012) adopted Greenberg (1993) model and measured perceived justice as four-component construct in the mobile telecommunication industry in Malaysia. Though they established that perceived justice was a four-component construct in this industry, they did not combine them to form a second-order overall fairness construct. Rather, they established that the separate components of justice had different effects on the behavioural intentions of the customer. Recently, Ding and Lii (2016) measured perceived justice as a four-component construct in their investigation of how perceived justice influenced satisfaction with service recovery and behavioural intentions (e-WOM and repurchase intention) in online games in Taiwan. Their results revealed that the four components of perceived justice were distinct and had a differential influence on satisfaction with service recovery and behavioural intentions of consumers. The empirical findings provided in this literature review, suggest that these four-component structure of perceived justice is also common in marketing studies. Following these arguments, the four-component structure of perceived justice was adopted in this study, where perceived justice was considered a second-order construct, computed as an average score of the four components of justice.

### **3.6. SWITCHING BARRIERS AS CONTINGENT FACTORS**

Customer switching describes a situation in which a customer terminates a relationship with a supplier to open another one with an alternative supplier providing a similar service or product (Julander & Soderlund, 2003; Bansal, Taylor, & James, 2005; Chuah & Tai., 2017). Switching barriers (SBs) provide a mechanism for preventing customers from switching, especially for services or products of a commodity nature (Hsieh et al., 2012; Bansal et al., 2005; Chuah & Tai., 2017). Jang, Cho, & Kim (2013) state that the number and nature of reasons for customer switching cited in the literature vary according to the context of the study, but they

are all attributed to the desire of a customer to change the current supplier for one reason or another (Jacob, 2018; Grigoriou, Majumdar, & Lie, L. 2018).

Various studies have implied that evaluative factors are the only key determinants of behavioural intentions (Giovanis et al., 2016; Chuah et al., 2017). Switching barriers have been investigated as a complimentary construct to the key determinants of behavioural intentions, specifically switching intentions (Kim et al., 2004; Qiu et al., 2015; Ghazali et al., 2016). However, the literature is not very clear about the definition, conceptualisation and measurement of this construct.

### **3.6.1. What are switching barriers?**

Switching barriers (SBs) have been defined in as many ways as there are researchers. For example, Fornell (1992) describe SBs as any costs, financial or otherwise, associated with a customer deserting a supplier for another. Bansal and Taylor (1999) consider SBs from a different perspective, preferring to describe them as the constraints that prevent consumers from switching to another supplier. This definition implies that customers assess and consider the resources needed to perform the switching act to determine its feasibility. If the resources are prohibitive, then the idea of switching is dropped, but if the requirement is management, the customer may switch.

The most dominant definition in management and marketing literature describes a switching barrier as any factor that will make it difficult or costly to inhibit, prohibit, prevent or block customers from leaving their current supplier for another providing the same service within the proximity, even if they are not happy (Malhotra & Malhotra, 2013; Nagengast et al., 2014; Dawi et al., 2018). In the service industry, Chuang and Tai (2017) state that this definition of SBs does not include technical replacements and technical improvements. In addition to having multiple definitions, Chuah et al. (2017) state that there is confusion between the application of the term 'switching barriers' and 'switching costs', such that these terms have been used interchangeably. In their meta-analysis of studies on the concept of switching costs, Kim, Byon and Choi (2020) provide a table that shows that 'switching barriers' and 'switching costs' have been used interchangeably in several studies in the

management and marketing disciplines. These authors claim that the reason for this confusion is that the differences between these two terms are only subtle.

One of the most featuring definitions of SBs in the business to customer (B2C) context is the one provided by Burhan et al. (2003). These authors describe SBs as a customer's perception and quantification of the additional costs associated with the termination of the current relationship for another, which prohibit him or her from switching. In the context of mobile telecommunication, Pihlström (2008) add that SBs constitute additional constraints deliberately and strategically erected by the service provider that makes switching difficult or impossible. This definition makes it apparent that SBs make customer defection to competitors difficult and costly. Thus, according to Pihlström (2008), SBs are recognised as key factors for customer retention.

Two issues emerge from the above definitions of SBs. First, to qualify as a switching barrier, a factor must make the cost of switching reasonably high such that they become prohibitive to the customer. Second, both the current service provider and the alternative supplier must be providing the same service. This excludes situations where a customer leaves the current supplier because they want to change the type of service. Switching barriers are also called customer exit barriers because they lock in customers to a service provider even if they have the intentions to exit the relationship (Burnham, Frels & Mahajan, 2003; Malhotra & Malhotra, 2013; Chuah et al., 2017). Giovanis et al. (2016) state that the exit barriers should not be restricted to mean negative barriers. Positive barriers may also have the same effect, but the customer is prevented from switching for different reasons.

Given the variations in the definition of SBs, in this study, Jones, Mothersbaugh and Beatty's (2000) definition was extended. Switching barriers were defined as any factor(s) (negative or positive, psychological, physical, economic, monetary or nonmonetary) that make customer switching difficult and economically and/or psychologically costly to the customer.

### **3.6.2. Conceptualisation of switching barriers**

The existing literature reveals that switching barriers (SBs) suffer from multiple conceptualisations and operationalisations (Kim, Byon & Choi, 2020). For instance, Sharma and Patterson (2000) categorised SBs into social (interpersonal bonds) and switching costs. In the context of hair saloon and offline bank customers, Jones et al. (2000) conceptualised and validated SBs as strong interpersonal relationships, high switching costs and attractiveness of alternatives. Building on Jones et al.'s (2000) categorisation but applying it to the online retail context, Holloway (2003) conceptualised SBs as switching costs, attractiveness alternatives and online relationship quality. In his studies, Ping (1993, 1997, 1999) favoured the term “structural commitment” to refer to what Julander and Soderlund (2003) referred to as SBs. The classification Ping (1993, 1997, 1999) uses to conceptualise SBs include the attractiveness of alternatives, investment in a relationship and switching costs. In contrast, Colgate and Lang (2001) identify four components of SBs in the financial services, which they listed as switching costs, relational investments, service recovery and attractiveness of alternatives.

Even though the points emerging from the studies reviewed portray the SBs construct as a multidimensional construct, other researchers adopted the unidimensionality approach in conceptualising it. For example, Ranaweera and Prabhu (2003) conceptualised SBs as a global measure in the fixed-line telephone industry in the US. Shin and Kim (2008) followed a similar approach and conceptualised SBs as a global construct for mobile number portability. Against this practice, Burnham et al. (2003) argue that SBs covers a range of complex dimensions, which cannot be conceptualised as a single global measure. In their argument, Burnham et al. (2003) state that when customers say “*its just not worth it to switch providers*”, they may be perceiving impediments or difficulties imposed on them due to the exorbitant or additional search, transaction, learning and emotional costs involved when one switches a service provider. These authors further argue that the list of perceived impediments customers anticipate include the additional financial costs, the time and effort involved in evaluating whether the decision to be made is appropriate and social and relational benefits like the loyalty discounts that the customer is likely to forfeit. The argument of Burhman et al. (2003) is that these are explicit SBs that must be considered and measured separately to determine their effectiveness for management investment decision making.



According to Bagozzi and Edwards (1998), conceptualising SBs as a unidimensional construct is not diagnostic enough as it does not sufficiently capture the richness in this construct required for making decisions.

Burnham et al. (2003) introduce their own conceptualisation of SBs and class them into procedural, financial and relational switching costs. Blut et al. (2015) conducted a meta-analysis of studies on SBs and found that Burnham et al.'s (2003) conceptualisation of SBs is the most popular approach in management and marketing studies. Kim et al. (2020) describe procedural barriers as the efforts and time taken by the consumer to search, evaluate alternatives, and other hassles and inconveniences associated with learning about new things. In general, these authors agree that financial switching costs refer to the economic losses to be suffered by the customer for terminating their current relationship with a service provider. On the same principle, if the additional financial switching costs are lower than the total benefits to be gained, the customer will switch. Although not mentioned explicitly, this argument implies that customers apply the principle of marginal costing in the cost-benefit analysis of their switching intentions.

In their study of consumer switching costs, Burnham et al. (2003) describe relational switching costs as the psychological and emotional discomfort customers anticipate if they terminate their relationship with the current service provider. This definition implies that relational barriers customers voluntarily stay with a service provider for fear of losing special privileges offered by the service provider. Julander and Soderlund (2003) complement this view stating that there is a need to distinguish between customers "having to be" and "wanting to be" in a relationship. Customers may remain in a relationship because of the good interpersonal relationships they enjoy with the current service provider. This view is shared by Chang and Chen (2007), who suggest that good relations with customers have the potential to make them stay because of the perceived relational benefits they envisage. Previous studies have demonstrated that consumers will stay with their service provider because of their strong interpersonal relationships with the employees of the service provider even when sometimes service delivery may be less satisfactory (Kau & Loh, 2006; Shah & Schaefer, 2006; Kruger & Mostert, 2012). However, this view should

be correct where there is employee-customer contact but not for technology-delivered services.

Julander and Söderlund (2003) conceptualised SBs as negative and positive SBs. Their study is popular for being one of the first to consider the simultaneous impacts of negative and positive SBs in a single study. Negative SBs make customers feel they have to be in a relationship, whereas positive SBs make customers want to be in a relationship (Valenzuela, 2012). Being in a relationship is associated with negative reasons while wanting to be in a relationship is associated with positive ones.

Recent research by some researchers (Chuah et al., 2017; Humbani & Wiese, 2018) has conceptualised positive SBs as the relational benefits (social benefits, special treatment benefits, confidence benefits, loyalty program benefits), which the customer enjoys. In this study, SBs were conceptualised as relational and economical.

### **3.6.3. Switching barriers in the cellular industry**

The nature of switching barriers in the mobile telecommunication industry is not the same as in other industries. Malhotra and Malhotra (2013) contend that SBs used by mobile network operators (MNO) can be classified as “hard” and “soft” lock-in barriers. Calvo-Porrall, Faina-Medin and Nieto-Mengotti (2017) occur with this classification, adding that the term “lock-in” refers to restrictions that bind (locks) a consumer to the same mobile network operator (MNO) willingly or unwillingly. They also add that the word “hard” refers to formal contractual agreements where the company dictates the terms and conditions of the relationship. In contrast, Malhotra and Malhotra (2013) state that the word “soft” refers to conditions where the customer has some control of switching.

#### **3.5.3.1. Hard lock-in switching barriers**

Hard lock-in strategies refer to situations where the MNO design long-term contractual agreements, which detract a subscriber from switching a service provider (Jones et al., 2000; Balabanis et al., 2006; Malhotra & Malhotra, 2013). Hard lock-in strategies include the contractual agreements between the MNO and a post-paid

subscriber (Ranganathan, Seo & Babad, 2006; Wong, 2011), SIM card incompatibility (Gerpott et al., 2001), locked cell phones (Shy, 2002), network locking (Gerpott et al., 2001; Kim et al., 2004), bundled services (Shin, 2007). MNOs have realised that a combination of these hard lock-in SBs constitutes a powerful defensive marketing strategy (Chebat et al., 2011).

In many developing countries, SIM card incompatibility is still a common hard lock-in strategy employed by MNOs to ensure customer retention. SIM card incompatibility does not permit multiple usages of the same SIM card for different networks (Pihlström, 2008). This implies that the choice of an MNO to acquire a SIM card automatically forces a customer to use the owner of the SIM card for accessing mobile services. A subscriber who changes an MNO has to get a new SIM card and a new cell phone number. Thus, it will cost the subscriber effort, time and money to advise all his/her contacts of the new number (Gerpott et al., 2001). In an attempt to free subscribers from this captive system, mobile telecommunication regulators have introduced the Mobile Number Portability (MNP), which allows subscribers to keep their numbers even when they change the service provider (Lee et al., 2006; Srinuan, Bohlin & Madden, 2012).

Kim et al. (2004) and Shin (2007) consider cell phone locking and network locking are hard lock-in strategies commonly used in the mobile telecommunication industry. Vermeulen (2015) share the same view adding that cell phone lock-in technically restricts the use of the cell phone handset to the authorised MNO. Usually, MNOs are not manufacturers of cell phone handsets, but they enter into agreements with cell phone suppliers that allow certain brands of cell phones to be used strictly for their network. Thus, if consumers decide to switch to a service provider, they will have to purchase a new cell phone handset that can access the network of the new MNO. The extra cost involved in purchasing a new phone may create a switching barrier to the subscriber (Xavier & Ypsilanti, 2008).

Literature provides empirical evidence on the use of hard lock-in strategies as SBs. For example, Pihlström (2008) found that contractual agreements between MNO and subscribers forced repeat purchases in Spain. Similarly, the findings of Wong (2011) show that 96% of the contractual subscribers had a lower propensity to switch than

the pre-paid subscribers. These findings suggest that hard lock-in strategies make switching difficult, thus, making the current MNO a default service provider to the subscriber. While these findings and theoretical reasoning may suggest that hard lock-ins may confer some market power that MNO can strategically exploit to reduce customer defection, contrary reports have also been reported. For example, (Lee, Lee & Feick, 2001) found that hard lock-in strategies increased the propensity of the subscriber's desire to switch. This would suggest that the use of hard lock-in strategies differ in their effectiveness as SBs by context.

In the Cellular industry, set-up costs involve the time, effort, expenses and inconveniences associated with switching an MNO (Jacob, 2018). Similarly, Liang et al. (2005) contend that learning costs represent the effort required by the consumer to reach the same level of comfort in using the network, which may not be transferable to other networks. For example, each mobile network operator (MNO) has specific short codes for making mobile payments or mobile banking. Learning these short codes may be cumbersome to some subscribers (Hu & Hwang, 2006; Chuang, 2011), thus, encouraging them to stay with the same MNO.

The major problem associated with hard lock-ins is that customers develop a sense of powerlessness in the relationships, resulting in severe grudge-holding when customers sense the inability to exit the relationship (Malhotra & Malhotra, 2013). Grudge-holding may increase the propensity of customers to switch as retaliation to their feelings of being held captive by their service provider. This lens soft lock-ins as a better alternative method of locking customers to a service provider.

### **3.5.3.2 Soft lock-in switching barriers**

Although they are usually initiated by the MNO (Malhotra & Malhotra 2013), soft lock-in barriers are acceptable to the customers because the customer is free to accept the offer or not. Thus, soft lock-ins are considered relational benefits enjoyed by the customer in the relationship with the MNO and can therefore be called positive SBs.

Generally, soft lock-in strategies are based on appealing incentives that entice subscribers to stay with the MNO, which cause some psychological discomfort when the relationship is terminated (Malhotra & Malhotra, 2013). Typical soft lock-in

strategies in the context of MNOs, include a loyalty points rewarding system, local-network effects (Czajkowski & Sobolewski, 2016), bundled service offers, bonus airtime, airtime credit facility, roaming facilities (Maicas et al., 2009) and voice call discounts for weekends and on public holidays (Ahn et al., 2006; Seo et al., 2008). Bundling multiple mobile services involves offering more than one mobile service from the same MNO at a single price or transaction. A typical example of bundled multiple services involves combining voice calls, Internet access and social media from the same data bundle and offering it at a discounted price than if one would buy each separately. Such conditional purchases provide SBs to consumers because this reduces their transaction costs. Even though bundled services by themselves do not create added value, rather than buying several mobile services from different MNO, bundled services reduce transaction costs and the hassles involved in purchasing each separately.

The role of mobile network effects as a lock-in SB in the mobile telecommunication industry has attracted the attention of several researchers. Mobile network effects occur when there is a difference between the on-net and off-net tariffs (Birke & Swann, 2006; Maicas, Polo & Sese, 2009; Czajkowski & Sobolewski, 2016). MNO charge lower prices on calls made to a number of the same network (on-net) and higher tariffs on calls made outside the operator's network (off-net) (Birke & Swann, 2010; Karacuka, Catik & Haucap, 2013). The benefit for the subscriber is associated with intra-network calls (Karacuka et al., 2013). Consequently, the larger the number of intra-network calls, the lower will be the communication cost. This economic consideration is expected to be an SB when other household members use a certain network. This view was confirmed by Birke and Swann (2006), who investigated the impact of network effects on the consumer's choice of MNO in mobile telecommunication in the UK. As reported in the results of this study, consumers' choice of an MNO was strongly affected by the choices of other household members. The network effects were also confirmed in the empirical studies by Maicas et al. (2009) and Srinuan and Bohlin (2012). Intra-network benefits such as free intra-network calls, cheaper intra-network calls and free intra-network SMS act as soft barriers (Chuah et al., 2017). These strategies are meant to deter subscribers from defecting.

Empirical evidence supporting the notion of same-network soft lock-ins have been provided in the literature. According to Edward et al. (2010), a higher proportion of voice calls are between people using the same network. Wong (2011) established that consumers with optimal voice call plans were reluctant to switch than those with non-optimal plans. Seo et al. (2008), who found that as the complexity of the voice call plans increased, the propensity to switch decreased, also confirmed Wong's findings. Loyalty points are rewards given to the consumers for their loyalty to the MNO (Gerpott et al., 2001). It has been established that loyalty point programmes have a positive influence on the duration of the relationship between the subscriber and an MNO (Bolton et al., 2004). In a similar study, Ahn et al. (2006) found that loyalty points decreased the switching intentions of the subscribers. These findings suggest that loyalty programmes can be used as soft lock-in SBs in the mobile telecommunication industry.

Both of these lock-in strategies MNOs give power over the consumer, creating revenues for the company when subscribers are forced to repatronize the same MNO (Jones et al., 2007; Harrison et al., 2012). While the positive side of lock-in strategies is assured patronage, the flip side may be that customers who feel entrenched in a relationship may spread negative WOM if the service delivery is poor (Calvo-Porrall et al., 2017).

Recently, the innovativeness of a company has been identified as an important soft lock-in strategy for MNOs. For instance, Malhotra and Malhotra (2013) state that MNOs have moved beyond competing in price and delivery of core services and focused on value-added innovativeness to attract customers. They define company innovativeness as its ability to introduce new value-added mobile services to the market consistently. For example, an upgrade of the infrastructure from 3G to 4G or 5G is perceived as value-adding innovativeness by mobile phone customers (Malhotra & Malhotra, 2013). Innovativeness is also viewed as bringing new devices like iPhones, which are available only through one service provider. According to Malhotra and Malhotra (2013), the more innovativeness a company is perceived to be, the higher its attractiveness and, therefore, the more likely it is that customers would want to stay. Thus, perceived innovativeness can be considered as a soft lock-in SB in the cellular industry.

The points emerging from the reviewed literature suggest that hard lock-ins are contractual agreements that the MNO controls. For that reason, they can be considered negative SBs, while soft lock-ins can be considered positive switching barriers. Soft lock-ins can be considered as relational benefits enjoyed by the customer for continuing with the same MNO. It can be concluded that hard lock-ins lead to spurious loyalty while soft lock-ins, because they involve customer commitment, lead to true loyalty (Kim & Yoon, 2004).

### **3.6.5. Measurement of switching barriers**

The measurement of SB is complex. Kim et al. (2020) contend that literature suggests that the concept of SBs suffers from both deficient and contaminated measures. They state that the lack of measurement specificity of SBs is in line with the inconsistent use of the term in switching costs studies. According to el-Manstry (2016), there is little agreement on the dimensionality of SBs in literature. Both unidimensionality (Baloglu, Zhong & Tanford, 2014; Chuah et al., 2017; Chang et al., 2020) and multidimensionality (Blut et al., 2016; El-Manstry, 2016; Ghazali et al., 2016; Bergel & Brock, 2018) approaches have been employed. Kim et al. (2020) raise objections against the use of the unidimensional approach, arguing that the SB is a multidimensional construct encompassing several variables. They state that the unidimensional approach ignores the richness of the unique information that different dimensions will bring.

Kim et al. (2020) also note that the other problem associated with the measurement of SBs is that different scholars employed different dimensions. For instance, Burnham et al. (2003) used the term economic risk cost, which is too broad. Meanwhile, Jones et al. (2000) prefer to use the term uncertainty costs. These terms are similar because they involve perceived risk.

What seems to emerge from this review is that the operationalisation of the SBs depends on the context of the study and the researcher's objectives. In this study, the SB was considered to be a multidimensional construct. Consequently, it was measured using multiple indicators items. The indicators comprised negative SBs items (switching costs) and positive SBs items (interpersonal relational barriers) and

attractiveness of alternatives. The actual items used to measure these broad categories are discussed in the methodology chapter.

### **3.7. CHAPTER SUMMARY**

The chapter provides a review of literature of the definitions, conceptualisations and measurement of customer satisfaction, service quality, service recovery satisfaction, perceived justice and switching barriers as building blocks of the behavioural intentions construct. It is clear from the reviewed literature there is a proliferate of or diverse definitions of each of these constructs, which affects their conceptualisations and measurement approaches. According to Kim et al. (2020), multiple definitions, conceptualisations weaken construct clarity, its dimensionality in its measurements and also theory development. The definitions, conceptualisations and measurements approaches of each of these constructs in this review were provided to ensure phenomenon clarity, that is, to ensure that the context in which they are applied in this study is understood. The different debates about the definitions, conceptualisation and measurements of each of these factors were presented. The definitions of the constructs show that these are different phenomena. However, they share common comparative conceptualisation properties in which; 1) customers are thought to hold some expectations or standards, 2) customers make perceptions regarding the performance of the service provider, 3) customers compare their perceptions to their expectations, 4) this comparison results in the evaluations of the attributes, 5) the outcome of the evaluation is either customer satisfaction or dissatisfaction leading to favourable or unfavourable behavioural intentions. The comparative basis of these constructs differ most fundamentally on 1) the standards of comparison, 2) the nature of the standard, 3) the attributes and dimensions used for comparison, and 4) the stages in the comparison process. The ultimate reaction of the customer to the comparative evaluations is customer satisfaction and, finally, the formation of behavioural intentions.

Once the constructs are specified, the next issue is the nature of relationships between the indicators for model specification. Hence, literature on the relationships between and among the variables is reviewed next in Chapter 4.



## **CHAPTER 4: PROPOSED MODEL AND HYPOTHESES FORMULATIONS**

### **4.1. INTRODUCTION**

The definitions, conceptualisation and measurement of the variables used as building blocks for behavioural intentions in this study were presented in Chapter three. This chapter is focused on discussing the behavioural consequences of the predictor variables. The behavioural consequences of predictor variables refer to the influences or causal effects of these variables on the behaviour of the consumers. The relationships are reviewed in terms of the direction of causality of the variables specified in the conceptual model. The chapter commences with a discussion of the direct relationships involving perceived justice (PJSR), followed by the direct relationships involving service recovery satisfaction (RSat), service quality (SQ) and overall customer satisfaction (OCS), in that order. The postulated hypotheses are placed just below the literature review relating to them. The conceptual framework (Figure 4.1) was developed from an integration of hypotheses postulating the direct relationships between constructs. The incorporation of switching barriers (SBs) as a contingent or intervening factors led to the construction of the final comprehensive integrated conceptual framework for the study depicted in Figure 4.2. The last part of the chapter provides a discussion of the importance-performance matrix (IPMA), before a summary highlighting the key points emerging from the whole literature review.

### **4.2. PERCEIVED JUSTICE, SERVICE RECOVERY SATISFACTION AND OVERALL CUSTOMER SATISFACTION**

Perceived justice is a critical factor that customers use when evaluating the fairness of a service recovery solution (RSat) following a service failure (Söderlund & Colliander, 2015; Chen & Kim, 2019; Van Vaerenbergh et al., 2019). The question that remains unanswered is how customers react or respond to their judgments about the perceived fairness of a service recovery solution following a service failure and a service recovery. The psychological response of how customers would react to perceived fairness of a service recovery solution can be understood by considering the direct and indirect effects of this construct on the formation of behavioural intentions in the mind of the consumer. Thus, reviews of literature on the

direct effects of perceived justice (PJSR) on service recovery satisfaction (RSat) and overall customer satisfaction (OCS) are provided next sections.

#### **4.2.1. Impact of perceived justice on service recovery satisfaction (RSat)**

The judgment of fairness (perceived justice) of a service recovery solution provided by the service provider following a service failure or breakdown triggers emotions that influence the formation of behavioural intentions (BIs) in the mind of the consumer. As discussed in Chapter 3, perceived justice was restricted to mean the fairness of a service recovery solution after a service failure. Evaluation of perceived justice was also conceptualised as an equity discrepancy (Oliver, 2015). As such, customers' judgment of perceived justice affects their satisfaction with the service recovery solution. Alhwabani, Ali and Hammouda (2021) contend that customers evaluate the solutions offered by service providers to correct the service failure in terms of distribute (DJ, procedural (PJ) and interactional (IJ) justice. These authors relate the equity theory stating that the overall judgment of perceived fairness with a service recovery solution leads to customer satisfaction, if the solution is perceived to be adequate. Service recovery solutions that are perceived to be inadequate lead to customer dissatisfaction. Ali et al. (2021) also join scholars who assert that customers use DJ, PJ and IJ to appraise the fairness of a service recovery solution.

Han et al. (2019) extend the debate on how customers appraise service recovery solutions following a service breakdown. According to these authors, before making their judgments of the fairness of a service recovery solution, customers also consider whether the service failure was controllable or avoidable and the locus of control (i.e. who is to blame for the failure or is the cause of a service failure). If customers perceive the service failure as the service provider's fault and that it was avoidable, a poor service recovery will cause the customer to be dissatisfied with a service recovery solution. In an attempt to explain the psychological mechanisms underlying the perceived justice phenomenon, Oliver (2015) states that customers' feelings of gratitude with a service recovery solution increases when they believe the service failure was due to them (i.e. have internal locus of control). On the contrary, Su, Raju and Laczniak (2021) state that the anger of customers about an inadequate compensation for a service failure increase when they believe that it was the fault of the service provider (i.e. external locus of control).

Building on the foundations of the equity theory, Oliver (2015) suggests that the customer's judgment about whether or not the redress solution was equitable influences their satisfaction with the service recovery. That view gets the support of Gohary, Hamzulu and Alizadeh (2016), who contend that the extent to which the service recovery solution is perceived to be fair can make or break the relationship.

Chen and Kim (2019) make an exciting and important point about the psychological process that gives rise to customers' judgment of perceived fairness. They suggest that the three concepts: 1) attribution, 2) equity, and 3) appraisal, are integrated in the evaluation of a service recovery solution and the subsequent judgment. When the outcome of a service recovery solution is perceived to be unfair, customers interrogate their minds about the cause of the service failure, whether it was controllable and by whom (Chen & Kim, 2019). If the failure is attributable to the service provider, the result is anger, followed by either complaining or defection (Su et al., 2021).

There is a conventional belief that a satisfactory service recovery solution will restore customers' satisfaction and motivate them to stay with the service provider (Jung & Seock, 2017). Implicit in that conventional belief is that a failed service recovery will disappoint and motivate customers to leave the service provider. However, some scholars (Moliner-Valazquez, Ruiz-Molina & Fayos-Gardo, 2015) question the universality of that belief. They argue that the strength of the influence of perceived justice on satisfaction with a service recovery depends on customer attribution of the service failure. The argument of Moliner-Valazquez et al. (2015) is that feelings of gratitude and guilt are both connected to causal attributions. Guilt conscience (i.e. where customers perceive that the service failure was caused by themselves) has been shown to motivate customers to adopt behaviours that support partnerships and cultivation of close relationships even when customers feel inadequately compensated for the loss due to a service failure (Su et al., 2021). In contrast, a failed service recovery, which is perceived to be under the total control of the service provider, infuriates the customer (Nikbin et al., 2014; Su et al., 2021), leading complaining behaviour or defection.

The above discussion provides the fundamental mechanism by which customers' appraisal of a service recovery solution can lead to different customer responses. As suggested in the reviewed literature, the behaviours or responses of customers, is a direct reflection of whether they were happy or unhappy with the service recovery solution provided by the service provider. Another point emerging from the reviewed literature is that a customer's feelings of gratitude and guilt, explains the underlying psychological mechanism that at least partially explain why sometimes the same service recovery solution may lead to customer satisfaction and at other times it does not (Su et al., 2021).

Numerous studies have examined the relationship between perceived justice and service recovery satisfaction in different industries. For instance, Chen & Kim (2019) reported that a disappointing service recovery solution had a negative effect on the customer's satisfaction. Roschk and Gelbrich (2014) and Awa et al. (2015) also confirmed this relationship. Tsao (2018) employed an experimental approach to investigate the relationship between perceived justice and service recovery satisfaction in the hotel industry in Taiwan. The results revealed that perceived justice had a positive effect on service recovery satisfaction. Similar investigations conducted in the airline industry (Matikiti et al., 2019) in South Africa and the airline industry Indonesia (Ellyawati, 2017), confirmed this relationship. This relationship was also examined in the retail banking industry (Petzer et al., 2017) in South Africa, for Internet customers in Egypt (Alhawban, Ali & Hammouda, 2021), and in different business sectors in Turkey (Esen and Sonmezler, 2017). All these studies found a direct positive influence of perceived justice on service recovery satisfaction. Notwithstanding these previous empirical studies, other studies in the financial sector (Nadiri, 2016), hospitality industry (Jeong & Lee, 2017) and online shopping (Singh & Crisafulli, 2016) have also confirmed the positive impact of perceived justice on service recovery satisfaction.

Given the consistency of the findings on the influence of perceived justice on satisfaction with recovery (RSat) in different industries, the following hypothesis was formulated for this study: **H1a:** *Perceived justice with service recovery (PJSR), has a direct positive influence on service recovery satisfaction (RSat).*

#### **4.2.2. Perceived justice and overall customer satisfaction (OCS)**

Oliver (2015) states that researchers agree that overall customer satisfaction (OCS) has a positive impact on the performance of a firm, whether for selling goods or providing services. The importance of this relationship emphasises that it is important for a company to understand the extent to which a customer's perceived fairness of a service recovery solution (PJSR) will affect the overall satisfaction of a customer. Furthermore, if higher OCS leads to increased competitiveness and higher performance, the need to know the relationship between PJSR and OCS in situations characterised by service failures is even stronger.

In section 3.2.1, overall customer satisfaction was considered as a summary state of a customer's psychological response to the purchase and consumption of a service. Following that view, Jones and Suh (2000) consider satisfaction as a summary-state of a response to the customer's experience with a specific event (transaction-satisfaction) or a long term experience (overall satisfaction). Oliver (2015) contends that for regular repetitive service experiences (e.g. continuously consumed services like mobile services), satisfaction can be assessed at both the service encounter stage and over a long period. He calls customer satisfaction with a specific service encounter "interim" satisfaction and contends that several interim satisfactions sum up to overall satisfaction. Customers will view the episodes of interim satisfactions as an integrated whole, reflecting a customer's entire experience with a service provider over a long time and not as an individual service encounter (Maxham & Netemeyer, 2002). This discussion suggests that satisfaction can be evaluated for singular events, which accumulate and aggregate to form global or overall satisfaction. That view suggests that customers harbour their satisfaction/dissatisfaction judgments with specific service encounters over time, which they use to determine their overall judgment of satisfaction with a service provider.

Perceived justice judgments may have several consumer behavioural consequences, but the most undesirable consequence is that which may lead to customer defection. As previously suggested in Chapter 2, after consumption of a service, customers develop an attitude toward the service provider based on their experience and previous satisfaction. That experience now forms the basis for the customer's decision-making to continue or terminate the relationship with the service

provider (Oliver, 2015). As alluded to by Ajzen (2015), attitude is tied to the customer's intention to repurchase the service or repatronize the service in the future. Where there is a service performance failure and recovery, a customer's prior attitude can be affected by perceived justice through emotions, particularly where failure is attributed to the service provider (Su, et al., 2021). In line with that view, Musiiwa, Khaola, and Rambe (2019) found that emotions affect the cognitive evaluation such that negative emotions have a negative impact on the cognitive evaluation process of the customer. Furthermore, negative emotions result in negative evaluation, which in turn leads to unfavourable behavioural intentions (BI). In contrast, positive emotions result in a positive evaluation, which leads to satisfaction and favourable BIs towards the service provider (Musiiwa et al., 2019).

Su et al. (2021) contend that initially, service failures bring disappointment and perceptions of inequity lead to dissatisfaction. Dissatisfaction would act on the prior attitude revising it downward, and with it, intention to repurchase. That view concurs with Salhieh (2019), who contend that customers harbour memories of previous service experiences in their minds, which they use in the cognitive evaluation of the overall performance of a service provider. Similarly, Chen and Kim (2017) claim that service failures leave memories of negative feelings in the consumer's mind, which may influence their overall impression of a firm. That explanation provides a psychological mechanism through which perceptions of justice will have a direct effect on the global satisfaction of the customer.

Many scholars in service recovery (Maxham & Netemeyer, 2002b; Homburg & Furst, 2005; Zhao et al., 2012; Su et al., 2021) reported a positive relationship between perceived justice and customers' overall impression of a service provider. Similarly, Söderlund and Colliander (2015) investigated the impact of perceived justice on overall customer satisfaction (OCS) in Europe. They used under-rewarded, equitably-rewarded and over-rewarded students. The results revealed that equitably-rewarded and over-rewarded students had a positive overall impression of the service provider. In contrast, the under-rewarded students had a negative overall impression of the firm. The general conclusion from this study was that customers' perceived justice (fair reward) positively impacted the customer's overall satisfaction. Umar, Saleem and Majoka (2017) also believe in the positive influence of perceived

justice on OCS. Their investigation of the impact of the four dimensions of perceived justice on OCS in the hospitality industry in Pakistan revealed a positive impact of all the four dimensions of perceived justice on OCS. Recently, both of the studies by Musiiwa et al. (2020) in retail banking in Lesotho and by Ali et al. (2021) in the insurance industry of Pakistan confirmed that perceived justice had a positive influence on OCS.

Based on theoretical explanations of the reciprocity and attribution theories (Su et al., 2021), the following hypothesis was formulated for this study: **H1b**: *Perceived justice with service recovery (PJSR), has a direct positive influence on customer on overall customer satisfaction.*

#### **4.3. SERVICE RECOVERY SATISFACTION, SERVICE QUALITY, BEHAVIOURAL INTENTIONS AND OVERALL CUSTOMER SATISFACTION**

The literature in the previous section has shown the importance of OCS as the centre of business success. The importance of OCS in business is underscored by the tendency of satisfied customers to make repeat purchases, which can lead to behavioural loyalty. Extant literature on service delivery singled out the quality of service as one of the critical determinants of OCS (Cronin, Brady & Hult, 2000; Chang et al., 2017). While the effect of service recovery on the customer's service quality evaluations has not received much attention from researchers, it is an important relationship to be examined, especially where service failures are not entirely avoidable. This realisation emphasises that the relationships between service recovery satisfaction (RSat), service quality (SQ) and OCS, must be incorporated if the psychological mechanism that leads to the formation of behavioural intentions or repeat purchase decisions is to be understood.

Different studies have examined the relationships between service recovery satisfaction (RSat) on service quality (SQ), behavioural intentions (BIs) and overall customer satisfaction (OCS) separately. The relevant studies that modelled the direct relationships between these construct in different contexts are provided in the sections that follow.

##### **4.3.1. Direct influence of RSat on SQ**

The relationship between RSat and SQ has not received much attention from service management and marketing literature researchers. This is evidenced by the limited number of empirical studies that have examined the relationship between these two constructs in the context of service failure. Chang, Jeng and Hamid (2013) claim that their study is among the first to establish the direct influences of RSat on SQ. In a related study, Chao, Lin and Sun (2019) examined the impact of RSat on SQ as building blocks of their bigger model of customer loyalty of liner shipping services in Taiwan. The findings from their structural modelling equation using AMOS revealed that RSat had a strong positive and significant effect on SQ.

Furthermore, Chao et al.'s (2019) findings revealed that RSat accounted for 52.9% of the variation in SQ, which arguably reveals that RSat plays a critical role in explaining the quality of service in the consumer's minds. The findings and conclusions from these past studies add weight to the proposed relationship between these constructs in this study. The following hypothesis was postulated in this study: **H2a: Satisfaction with a service recovery directly impacts perceived service quality in the Cellular industry.**

#### **4.3.2. The effect of service recovery satisfaction (RSat) on OCS and BIs**

Satisfaction with a service recovery (RSat) can be considered an antecedent of service quality (SQ), behavioural intentions (BI) and overall customer satisfaction (OCS). The mechanisms of how RSat affects these factors are based on the affect-balance theory, which claims that events in life alternate between the positive and the negative, but their occurrence does not preclude the other (Andreassen, 2000). The affect-balance theory is particularly applicable to service failure and service recovery situations. The consequence of service failure is customer frustration, anxiety or disappointment because of the incurred losses. Andreassen (2000) states that a customer's recovery journey starts with a negative effect due to the frustration of the customer with a service failure experienced. The negative effect impacts the satisfaction judgment of the recovery process and the future repurchase decisions. In this case, negative effect refers to intense physiological arousal, which may last for some time (Andreassen, 2000). According to Andreassen (2000), research in consumer satisfaction shows that positive and negative affective orientations influence a customer's judgment of service recovery. A customer who is dissatisfied



with a service failure experiences a negative effect (anger, disgust, contempt). The disappointment brought about by the service failure may have a negative impact on the satisfaction judgment of service recovery and behavioural intentions, due to the customer being in a negative state of mind. Based on the above reason, it is logical to believe that excitement from a successful service recovery may, directly and indirectly, influence future repurchase intentions.

Several studies (Urueña & Hidalgo, 2016; Abney et al., 2017; Matikiti et al., 2018; Han et al., 2019) have provided empirical evidence that satisfaction with a service recovery solution (RSat) affects customers' attitude towards the service provider. For example, Bitner et al. (1990) as well as McCollough (2000), reported that RSat positively impacted BIs in the hospitality industry. Similar findings were reported in the airline industry (Yang & Hassett, 2018), mobile telephone industry (Awa et al., 2015; Kruger et al., 2015), education (Amin et al., 2020) and in the retail banking industry of South Africa (Petzer et al., 2017) and Lesotho (Musiiwa et al., 2019). Similarly, the meta-analysis studies of both Orsingher et al. (2010) and Gelbrich and Roschk (2011) on service recovery found that most of the studies included in their review reported that RSat had a positive effect on WOM intent and on repeat purchase intent, which are the main dimensions of BIs (Maxham & Netemeyer, 2002b). Vazquez, Iglesias and Neira (2012) revealed that when customers are content with a service failure's recovery solution, they tend to spread positive word-of-mouth (WOM) about the service provider and display a propensity to repeat purchase.

The influence of RSat on OCS was reported in a number of studies. For instance, Díaz et al. (2017) and Cheng et al. (2019) found a positive relationship between RSat and OCS. Chueh et al. (2018) also reported a strong positive relationship between RSat and OCS in the catering industry in northern Taiwan. Similarly, Maxham and Netemeyer (2002b) established that RSat (transaction-specific satisfaction) had a direct positive and significant influence on OCS. Recently, Liat et al. (2017) examined the link between these two constructs in the hotel industry and reported similar findings that RSat was directly and positively related to OCS.

The consistency of the findings reviewed so far suggests that RSat has a direct influence on OCS and BIs separately. However, these relationships need to be examined together, especially in situations where service failure occur and perceived justice is also incorporated in the same model. Consequently, on the basis of evidence from the reviewed literature, the following hypotheses were postulated: **H2b**: *Service recovery satisfaction (RSat), has a direct influence on the formation of BIs in the context of mobile services.* **H2c**: *Service recovery satisfaction (RSat), has a direct positive direct impact on overall customer satisfaction in the Mobile telecommunication industry.*

#### **4.4. SERVICE QUALITY, OVERALL CUSTOMER SATISFACTION AND BEHAVIOURAL INTENTIONS**

Service management literature shows an abundance of empirical studies that link service quality (SQ) and overall customer satisfaction (OCS) to the formation of behavioural intentions (BIs) in different contexts. However, a review of existing literature suggests that the specific nature and direction of the relationship between SQ and OCS continues to be a debate among service management and marketing scholars. A review of existing literature suggests that the conclusion on the causal order between SQ and OCS depends on the school of thought the researcher is inclined to.

##### **4.4.1. Debates about the antecedent nature between SQ and OCS**

Even though earlier studies on the role of SQ and OCS in the formation of future purchase intentions of customers reveal an unresolved debate, there is a consensus that these two constructs are fundamentally linked to customer retention, consumer post-purchase behaviour, and a service organisation's performance (Taylor et al., 1994). Three views seem to spur the debate about the causal order in which these two constructs occur in the formation of BIs. One group of researchers (Bitner, Booms & Tetreault, 1990; Cronin & Taylor, 1992) upholds the view that SQ is an antecedent of OCS. This group argues that SQ is an outcome or judgment of a cognitive evaluation process, leading to OCS if it is positive. Many empirical studies are in support of that conclusion. For example, Cronin and Taylor (1992) tested this proposition in the banking, pest control, dry cleaning and fast-food industries and found that OCS was derived from the consumer's assessments of SQ. They

concluded that SQ was a precursor to OCS. In a related study, Lam and Zhang (1999) reported some of the dimensions of SQ (reliability, responsiveness and assurance) were strong predictors of OCS in the tourism industry, which suggests that not all the dimensions of SQ will affect OCS in every context.

The second group of earlier researchers (Bolton & Dew, 1991; Cronin & Taylor, 1992) believe in the reverse causal order where OCS is a determinant of SQ. This view defies the logic of many marketing scholars (Lamb et al., 2015; Nobar & Rostamzadeh, 2018; Suchánek & Králová, 2018; Wiid, Cant & Makhitha, 2018) who believe that the ultimate goal of an organisation is to satisfy the customer. For example, Wiid et al. (2018) state that ensuring that customers' needs are totally satisfied or fulfilled increases the chances of a company to retain them, which guarantees company profitability. These authors describe total customer satisfaction as a response to a customer's evaluation of the discrepancy between expectations in all service performance metrics, including aspects of quality like reliability, responsiveness, empathy, assurance and tangibles (p. 58). From their description of total satisfaction, it is apparent that Wiid et al. (2018) consider SQ to be one of the determinants of overall or total customer satisfaction (OCS). McCollough, Berry & Yadav (2000) and Suchánek and Králová (2018) support Wiid et al.'s (2018), view that customer satisfaction describes the pleasurable fulfilment of a customer's needs. In that case, the view that OCS is an antecedent of SQ does not seem to make sense from a business management perspective. According to (Roberts-Lombard & Parumasur (2017), a consumer's reaction and action to repurchase is a consequence of their overall satisfaction/dissatisfaction with a service provider. This view supports the causal order assumed in this thesis that SQ is a precursor to OCS.

The third group of earlier researchers (Taylor & Cronin, 1994) claims that there is no recursive relationship between SQ and OCS. The perspective of this group is that neither of the two constructs is an antecedent or superordinate of the other.

Even though there seems to be no consensus about this debate, the literature reviewed so far brings out some important insights. The first point emerging is that, what seems to spur continued research on the causal order of SQ and OCS is their linkage to customer retention, profitability and business survival. Therefore, as stated

by many researchers (Giovanis, Athanasopoulou & Tsoukatos, 2016; Ngo & Nguyen, 2016), an understanding of the causal order between SQ and OCS will be important in guiding managers in their prioritisation of these variables in their strategic decisions. Another point emerging from the reviewed studies about the causal order of SQ and OCS is that whether SQ causes OCS or vice versa, largely depends on the cognitive and affective predisposition of the customer. For example, Salhieh (2019) argues that for customers who are characterised as cognitively or rationally oriented, the evaluation of SQ is said to precede overall satisfaction judgments. In contrast, more emotional consumers, as further argued by Chen and Kim (2017), are expected to experience satisfaction with the service provider, which then leads to the evaluation of SQ. Likewise, Salhieh (2019) contend that mobile subscribers are expected to be rational concerning their repurchase decisions. Theoretically, this assertion would imply that mobile subscribers evaluate SQ first as one of the criteria that influences their overall satisfaction with the firm (OCS).

#### **4.4.2. Empirical studies on the impact of SQ on OCS and BIs**

A number of studies have been conducted to examine the causal order of SQ and OCS in the formation of BIs. The most popular empirical studies among these, include the works of Taylor et al. (1994), Taylor and Baker (1994), Zeithaml et al. (1996), Cronin, Brady and Hult (2000), and Caruana (2002). Taylor et al. (1994) conducted a study to assess the roles of SQ and OCS in the formation of consumer purchases in Mexico. Their findings revealed that satisfaction judgments had a stronger influence on consumers' purchase intentions than their perceptions of SQ. These authors also reported that the relationship between SQ and OCS and their influence on consumer purchase intention formation appeared to be more additive than interactive. Zeithaml et al. (1996) examined the behavioural consequences of SQ in several companies. Their results provide strong evidence of BIs being influenced by SQ.

Cronin et al. (2000) claim to be among the first early researchers to investigate the causal order between SQ and OCS in the formation of BIs in Spectator sports, Participation sport, Entertainment, Health care, Long distance carriers and Fast food industries in the USA. These researchers proposed a number of models, which differ only in the causal order between SQ and OCS in the formation of BIs. Although

Cronin et al. (2000) claim that their results were not conclusive, they established that the model in which OCS was proximal to BI had a better fit to the data than alternative models. Their findings also indicated that SQ was a distal factor to BI and a precursor to OCS, which impacted BIs. In a related study, Taylor and Baker (1994) reported that SQ and OCS were distinct constructs, but SQ was an antecedent of OCS in the formation of purchase intentions in the health care, recreation, long-distance travel and telephone communication industries in the USA. Their findings made new revelations that OCS mediated the relationships between SQ and purchase intentions. In their study of the influence of SQ and OCS on BI at an army hospital, Ismail et al. (2017) also found that SQ and OCS separately and jointly affected the formation of BIs, but SQ was a precursor to OCS. Similarly, Selelo and Lekobane (2017) tested the relationship between SQ (independent variable) and OCS (the dependent variable) using a survey of 510 mobile phone customers from Gaborone in Botswana. They obtained similar results that SQ had a direct impact on OCS.

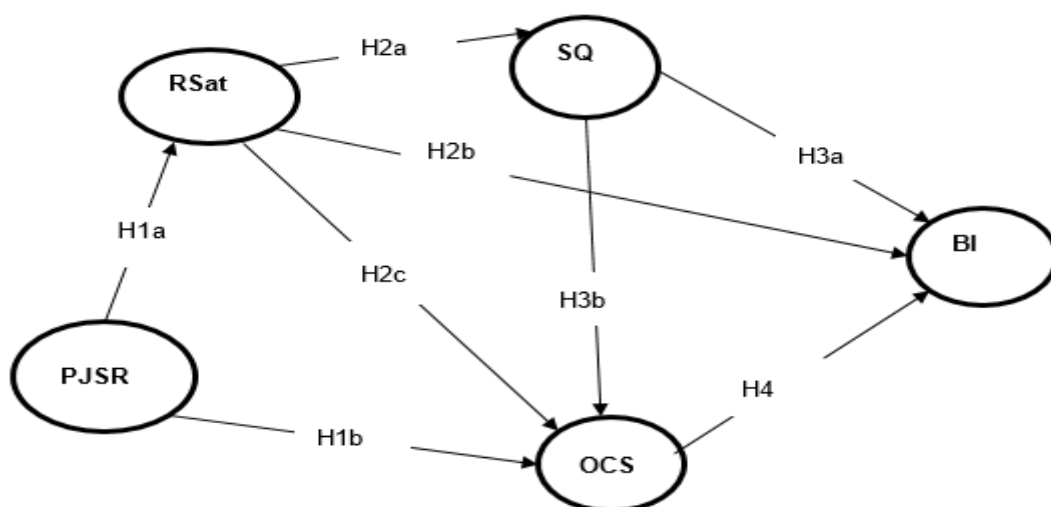
The diversity of the contexts in which the antecedent nature of SQ and OCS were investigated suggests that the SQ->OCS hold, irrespective of the culture and type of industry. However, the main limitation of all these studies was that they ignored that both OCS and BI are complex multi-attribute variables. In the process, it was incorrectly assumed that only SQ was sole determinant of OCS, while SQ and OCS were considered the only determinants of BIs. As argued by Hoffman et al. (2017), such a narrow approach to modelling complex constructs like of BIs is a great omission of the previous studies that reduces the dependability and credibility of the conclusions drawn from them.

The key points emerging from the reviewed literature on the relationships among SQ, OCS and BI, led to the formulation of the following hypotheses:

- H3a:** *Service quality (SQ) has a direct and positive influence on the formation of behavioural intentions for mobile services.*
- H3b:** *Service quality (SQ) has a direct positive effect on overall customer satisfaction for mobile services.*
- H4:** *Overall customer satisfaction (OCS) has a direct effect on the formation of behavioural intentions for mobile services.*

#### 4.5. PROPOSED MODEL FOR THE STUDY

A number of key highlights can be identified from the reviews studies on the relationships between the predictors of BIs in this study. First, the established relationships between the constructs in this study depended on the researcher's objective in selecting the independent and dependent variables. Second, the reviews suggest that generally, the researchers' objectives were to identify the effects of the independent variable on the targeted variable. Less attention was focused on how the independent variable explained the dependent variable as no analysis of the variance explained was conducted. Predictive analysis was also not considered in these previous studies. The current study seeks to close these gaps by developing a conceptual framework for the formation of BIs by integrating the hypotheses developed from the reviewed studies. In developing the model, perceived justice (PJSR) was set as the exogenous variable and BIs as the endogenous variable. Afterwards, RSat and OCS were added as they are directly influenced by PJSR. The next step was to add other constructs that are directly influenced by RSat since OCS was already on the model. Accordingly, SQ and BIs were added to the model. A review of other hypotheses indicates that SQ directly influenced BIs, while OCS directly impacts BIs. A synthesis of all these direct relationships led to the development of the sketch of the conceptual framework model for this study, as shown in Figure 4.1.



**Figure 4.1:** Conceptual framework before switching barriers.

**Source:** Author's conceptualisation.

**Key:** **BI** = Behavioural intentions; **OCS**= Overall customer satisfaction; **PJSR**= Perceived justice with service recovery; **RSat**= Service recovery satisfaction; **SQ**=Service quality; **SBs** = Switching barriers.

The proposed framework shows how the selected variables would influence each other in forming BIs in situations when they are all present in a single study. The model suggests the variables customers consider in making BIs decisions. As depicted in Figure 4.1, the variables represent a complex nomological causal network of relationships in which RSat, SQ and OCS are depicted as mediators. Thus, the proposed model shows the possible causal paths through which the spill effects of PJSR on BIs would be transmitted RSat, SQ and OCS.

As shown in Figure 4.1, there are a number of interconnections among the variables, which may suggest the possible occurrence of mediation in some structural paths. Consequently, mediation tests were incorporated in the empirical validation of the model.

#### **4.6. INDIRECT RELATIONSHIPS AMONG THE DETERMINANTS OF BIS**

The proposed theoretical framework in Figure 4.1 shows a number of causal interrelationships between RSat, SQ and OCS in the formation of BIs. As, indicated by Sarstedt et al. (2020), this suggests a potential for mediation relationships. Hair et al. (2021) describe a mediation relationship describes how and by what means an independent or endogenous variable affects the dependent variable. The possibility of mediating relationships attracted the interests of the researcher to test for mediation analysis. According to Hair et al. (2019) and Sarstedt et al. (2020), the process of mediation is a causal explanation, which assumes that the mediator variable is causally located between the independent and the dependent variable.

As shown in Figure 4.1, RSat, SQ and OCS are endogenous variables because their influence on the formation of BIs are depicted to be triggered by PJSR through sequential causal relationships. The proposed model suggests that RSat is a mediator in the PJSR->OCS causal relationship, while SQ mediates the RSat->BI and the RSat->OCS causal relationships. Similarly, OCS is suggested to mediate the RSat->BI causal relationships as well as the SQ->BI causal relationship. A literature

review and the formulated hypotheses relating to the causal relationships, are provided in the next sections.

#### 4.6.1. Mediating roles of RSat and OCS

Figure 4.1 shows that part of the effects of PJSR on OCS is transmitted via RSat. However, few studies have investigated the possible mediation of transaction-specific satisfaction (RSat) in the relationship between PJSR and OCS. In the field of service recovery, Maxham and Netemeyer (2002) examined the influence of perceived justice on both the transaction-specific satisfaction (RSat) on OCS for bank customers and home buyers in the USA. The findings from this study revealed that part of the effects of PJSR on OCS were transmitted via RSat and that the effect of RSat on BIs, measured as WOM and repurchase intentions, was transmitted via OCS. What makes the results of these studies more credible is that they were driven from longitudinal studies. The same customers participated in the survey in time one (post-service failure), time two (post-service recovery) and time three (two weeks post service recovery) (Maxham & Netemeyer, 2002). Esen and Sonmezler (2017) also conducted a study on the causal effects of PJSR on RSat and OCS in several industries that had a service failure in Ghana. Their results also confirmed that RSat mediated the influence of PJSR components on OCS and that OCS mediated the impact of RSat on BI, measured as customer loyalty. In a related study, Musiiwa et al. (2020) also established that part of the influence of PJSR on OCS was transmitted via RSat and that the impact of RSat on BIs was transmitted via OCS in the retail banking industry in Lesotho. The weight of the provided empirical evidence from the reviewed literature suggests that a customer's evaluation of perceived justice will influence RSat, which in turn influences their overall satisfaction and BIs (Oliver 2015) but on the influence of PJSR on OCS is transmitted via RSat. Similarly, the reviewed literature also suggests that part of the influence of RSat on BIs occurs through OCS. Based on the evidence from the reviewed literature, the following hypotheses were postulated in this study: **H5a**: *RSat mediates the PJSR->OCS relationship in the context of mobile cellular services.* **H5b**: *OCS mediates the RSat->BIs relationship in the context of mobile cellular services.*

#### 4.6.2. Mediation roles of SQ in the RSat->OCS and RSat->BI structural



The preceding paragraphs on service recovery satisfaction have shown that RSat has direct influence on SQ (**H2a**), BIs (**H2b**) and OCS (**H2c**). By connecting these hypotheses with (**H3a**) and (**H3b**), it sounds theoretically logical to infer that SQ may play an intermediary role in the RSat->OCS and the RSat->BIs relationships. A few studies have confirmed these assertions. For example, the work of Chao et al. (2019) provides empirical evidence on the mediatory role of SQ in the RSat->OCS structural path. The focus of these researchers was to construct a comprehensive model of repurchase intention where service failure and recovery were involved, but in the process, they also tested whether SQ mediated the RSat->OCS relationship. The results of their cross-sectional survey of 194 liner shipping customers in Taiwan revealed that SQ mediated the RSat->OCS causal relationship. Drawing on this evidence, the following hypothesis was postulated for empirical validation in this study: **H5c**: *Service quality will mediate the relationship between RSat and BI in the context of mobile cellular services.* Taken together, hypotheses **H2a**, **H2b** and **H3a**, led to the following hypotheses: **H5d**: *In the context of mobile cellular services, the influence of recovery satisfaction (RSat) on overall satisfaction (OCS) is mediated by service quality (SQ).*

#### **4.6.3. Mediation roles of OCS on the SQ->BI relationship**

A number of studies have also examined the mediating role of OCS in the SQ->BI relationship. Though the objective of Cronin et al. (2000) was not to test for mediation, their model, in which SQ was a distal factor to BIs but also influenced BI through OCS, makes it logical to suspect that OCS could be a mediator in the SQ->BI link. Similar findings were reported when Olorunniwo et al. (2006) investigated the mediating effects of SQ and OCS on BIs using a sample of 381 university students and restaurant customers in the USA. Recently, Ngo and Nguyen (2016) investigated the mediation role of OCS in the SQ->BIs relationship using 261 retail bank customers in Vietnam. These researchers found out that OCS mediated the effects of SQ on BIs, but the extent and type of mediation were not examined. In a study of the nomological causal relationships involving SQ and OCS in the formation of BIs in different cultures of the USA, Australia, Netherlands, Hong Kong, and Morocco, Brady et al. (2005) found that part of the SQ effects on BI was transmitted via OCS. The major point emerging from these studies seems to be that, part of the effects of SQ on BIs is transmitted via OCS as the mediator.

In a related study, Alan (2016) investigated the relationships between SQ, OCS and BIs for Luxury hotels in Ghana. Similar to the results of previous studies, Alan (2016) reported that SQ directly impacted OCS and BI separately but of the influence of SQ on BIs was transmitted via OCS. This effectively means OCS mediated the relationships between SQ and BI. The weight of empirical evidence provided in this literature review suggests that when SQ, OCS and BI are examined simultaneously, SQ is a precursor to OCS, but OCS mediates the relationship between SQ and BI. Despite this conclusion, the biggest concern today is that most of the previous researchers did not elaborate on the type of mediation transmitted by OCS (Hair et al., 2012b; Hair et al., 2019). According to Hair et al. (2019), reporting of the causal mediation results that lack sufficient detail is suboptimal, and may lead to invalid and wrong inferences. It is recommended that reports of mediation analysis should be detailed enough to include the decomposition of the total effect into direct and indirect effects in order to provide a deeper understanding of the structural paths through which the mediated effect is strongest (Nitzl, Roldan, & Carrion, 2016; Hair et al., 2017; Ramayah, Hwa, Chuah and Ting, 2017; Cepeda, Nitzl, & Roldán, 2018). Overall, the weight of empirical evidence suggests that OCS will mediate the relationship between SQ and BIs. Thus, it was hypothesised that: **H5e: OCS mediates the relationship between SQ and BIs in the context of mobile cellular services.**

#### **4.7. THE MODERATING ROLE OF SWITCHING BARRIERS (SBS)**

Satisfaction and SQ researchers have controversially assumed that a customer's BIs is only an outcome of the cognitive evaluation of the experiential variables (PJSR, RSat, SQ and overall OCS) (Sotiriadis, 2017). According to Sotiriadis (2017), experiential variables are factors that customers use for evaluating a service provider after a service encounter experience. Many studies refute this view arguing that besides experiential factors, customers are controlled by switching barriers (SBs), which may force them to stay with the same service provider irrespective of their satisfaction with experiential factors (Dawi, Jusoh & Nor, 2013; Giovanis et al., 2016; Salhieh, 2019).

In Chapter three of this thesis, switching barriers (SBs) were defined as anything that makes it difficult for a customer to leave the current service provider (Bansal et al., 2005; Dawi et al., 2013). Patterson (2004) considers SBs as company's deliberate barriers to stop customers from switching to alternative suppliers. In other words, Patterson (2004) considers SBs as a measure that is meant to increase customer longevity. In the context of mobile telecommunication service, this suggests that it is highly unlikely that subscribers will switch service providers if they perceive the presence of SBs they cannot overcome. This implies SBs are contingent factors in the formation of BIs. Prediction of customer behavioural loyalty (customer's repeat purchasing behaviour) is not accurate in the absence of SBs (Giovanis et al., 2016). Therefore, it is important to test when and under what conditions the relationship between BI and its antecedents would be affected by SBs. Hair et al. (2017) state that a moderating variable strengthens, weakens, or reverses the independent and dependent variables' relationships.

In Chapter four of this thesis, it was mentioned that MNOs use lock-in strategies to force subscribers to stay with them for a prescribed period. According to Pihlström (2008), the presence of lock-in SBs makes it difficult for customers to make a free or voluntary decision to terminate their relationships with a MNO, even if they generally feel unimpressed with the quality of service and the fairness of a service recovery solution. Thus, the presence of lock-in SBs in this industry implies that subscribers may have to consider what they are likely to lose by breaching their contractual obligations they have with their current MNO. Knowledge about how SBs moderate the decision-making process that leads to the formation of BIs is important to business managers. As alleged by Giovanis et al. (2016), this implies that without incorporating SBs, the model for the formation of BIs would not be comprehensive enough.

#### **4.7.1. Empirical studies on the moderation role of SBs in the formation of BIs**

In service management literature, many researchers have incorporated SBs as an important potential, influential factor in forming BIs in different contexts. For instance, Kim et al. (2018) examined the moderation roles of SBs (financial, procedural, relational switching and attractiveness of alternatives) on the OCS->BIs relationship using 846 mobile phone subscribers in South Korea. Their results revealed that in

the presence of SBs, it is not only customer satisfaction that influences the formation of repeat purchase intentions, but rather it is a mix of the dual facet of SBs and customer satisfaction. Specifically, Kim et al. (2018) found that financial switching costs had a negative interaction effect on the OCS->BIs relationship, but procedural costs and attractiveness of alternatives did not have any moderating effects. These mixed results may suggest that different types of SBs may have different implications in the formation of BIs.

Chuah et al. (2017) contend that MNOs have long recognized SBs as a powerful defensive marketing tool for maintaining customer retention where service quality issues might lead to customer defection. In explaining their proposed mechanism how this happens, Chuah et al. (2017) state that, apart from complementing customer satisfaction, SBs play an adjustment role in the satisfaction->loyalty link. Chuah et al. (2017) then used 417 Generation Y post-paid mobile subscribers to investigate the moderating roles of SBs in the formation of BIs in Malaysia. The results obtained from SmartPLS analysis revealed that SBs moderated the formation of BIs such that, high SBs (high perceived switching costs) forced subscribers to stay with their current MNO. Even when their satisfaction with the company was low, subscribers felt powerless to terminate their relationship with the MNO because of the high penalties for breaching the contracts. However, when customer satisfaction was high, SBs did not have an influence on BIs (Chuah et al., 2017). Ghazali et al. (2016) share a similar view with Chuah et al. (2017) stating that SBs act as a buffer against the poor SQ. The findings of Chuah et al. (2017) are an important reference to this study because they used the Generation Y age group, which is believed to be a problematic segment in that they are less loyal to an MNO and that their behaviours are difficult to predict.

Using a sample of 1000 subscribers from the mobile telecommunication industry in Taiwan, Giovanis et al. (2016) developed an integrated model involving corporate image, SQ and OCS as predictors of BIs (measured as a customer's future repurchase intentions) and SBs as moderating factors. Their results revealed that SBs moderated the SQ->BI and the OCS->BI relationships such that, when perceived SQ and OCS were low, the moderating effects of SBs was high. However, when perceived SQ and OCS were high, SBs did not have any effect on the SQ->BI

and the OCS->BI relationships. These findings are more relevant to this study in that besides having a direct positive influence on BIs, SBs also moderated the SQ->BIs and the OCS->BIs relationships.

Many other researchers (Malhotra and Malhotra, 2013; Ghazali et al., 2016; Dawi et al., 2018) have simultaneously investigated the direct and moderating effects of SBs in the formation of BIs. Specifically, Dawi et al. (2018) examined the role of SBs on the SQ->BI and OCS->BI relationships in the pay-television (pay-TV) industry. Their results showed that SBs (social ties) moderated the OCS->BI causal relationship. Using data collected from 272 online auction customers, Li (2015) examined the role of SBs (lost benefits, switching costs and attractiveness of alternatives) in moderating the relationship between RSat and repurchase intentions in Taiwan. The results of this study revealed that SBs moderated the effects of RSat such that even when customers were not satisfied with a service recovery solution, they had to stay with the same supplier because of the prohibitive high SBs. However, when RSat was high, the presence of SBs did not have any effect on repurchase intentions. Similarly, Lai, Liu and Lin (2011) investigated the moderating role of SBs with data collected from 686 Auto Insurance customers in Taiwan. The results indicated that switching costs created a pull-back effect, which prevented customers from leaving their insurance company even when they felt dissatisfied with the quality of service. These findings revealed that SBs strengthened the customer satisfaction->retention link when customers were dissatisfied, but did not have an effect when customer satisfaction was high. The findings of this study suggest that SBs may have both direct and moderating effects on BIs at the same time.

Taken together, the findings of the studies on the effects of SBs on the formation of BIs suggest that SBs have a direct as well as moderating effect on the SQ->BI, RSat->BI, and the OCS->BI relationships. Based on the discussion above, the following relationships were further hypothesised: *Switching barriers will moderate: (H6a) the SQ->BI relationship, (H6b) the OCS->BI relationship and (H6c) RSat->BI relationship and finally that (H6d) SBs will have a direct impact on the formation of BIs.*

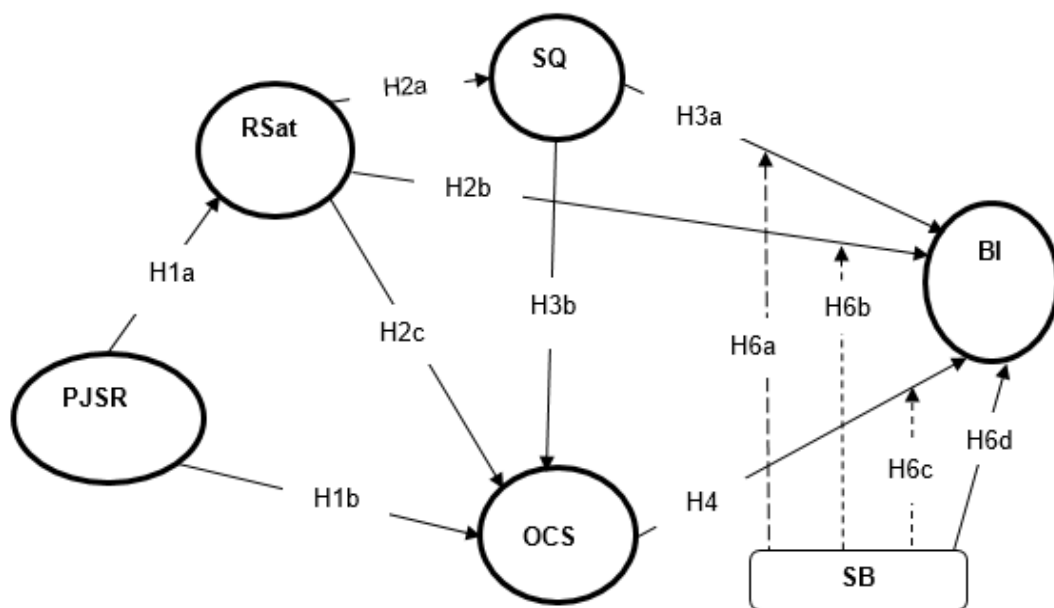
All the hypotheses derived from the reviewed literature are summarised in Table 4.1.

**Table 4.1: Summary of hypotheses**

<b>Hypothesis</b>	<b>Description</b>
<b>H1a</b>	Perceived justice (PJSR) has a direct positive influence on service recovery satisfaction (RSat). (PJSR->RSat).
<b>H1b</b>	Perceived justice has a direct positive influence on overall customer satisfaction (OCS). (PJSR->OCS).
<b>H2a</b>	Service recovery satisfaction has a direct positive impact on service quality (SQ). (RSat->SQ).
<b>H2b</b>	Service recovery satisfaction has a direct positive impact on the formation of behavioural intentions (BI). (RSat->BI).
<b>H2c</b>	Service recovery satisfaction has a direct positive direct impact on a customer's overall satisfaction. (RSat->OCS).
<b>H3a</b>	Service quality has a direct and positive influence in the formation of behavioural intentions. (SQ->BI).
<b>H3b</b>	Service quality has a direct positive effect on overall customer satisfaction. (SQ->OCS).
<b>H4</b>	The overall satisfaction of a customer has a direct positive effect on the formation of behavioural intentions. (OCS->BI).
<b>H5a</b>	Service recovery satisfaction mediates the relationship between perceived justice and overall customer satisfaction (OCS) (PJSR->RSat->OCS).
<b>H5b</b>	Overall, customer satisfaction mediates the relationship between RSat and behavioural intentions (BI). (RSat->OCS->BI).
<b>H5c</b>	Service quality mediates the relationship between RSat and behavioural intentions. (RSat->SQ->BI).
<b>H5d</b>	Service quality mediates the relationship between RSat and overall customer satisfaction. (RSat->SQ->OCS).
<b>H5e</b>	Overall, customer satisfaction mediates the relationship between service quality and behavioural intentions. (SQ->OCS->BI).
<b>H6a, b, c</b>	Switching barriers moderate the relationships between and (a) service quality, (b) overall satisfaction and (c) recovery satisfaction.
<b>H6d</b>	Switching barriers (SB) have a direct positive influence on behavioural intentions. (SB->BI).

The table shows the direction of the relationships except where mediation and moderation are involved. All the above hypotheeses were integrated into proposed model for the study shown in Figure 4.2, which incorporates the effects of intervening factors (SBs) onto Figure 4.1.

As shown in Figure 4.2, the proposed framework shows how the selected predictor variables would influence each other in the formation of BIs in situations where they are all present.



**Figure 4.2:** Conceptual framework for the study incorporating switching barriers

**Source:** Compiled by the researcher

**Note:** **BI** = Behavioural Intentions; **OCS** = Overall Customer Satisfaction; **PJSR**= Perceived Justice with Service Recovery; **RSat** = Service Recovery Satisfaction; **SB** = Switching Barriers; **SQ**= Service Quality.

**Key:** ———→ Direct relationships    - - - →Moderating linkages

The dependent variable in the model is the behavioural intentions construct (**BI**), and the independent variables are service quality (**SQ**), customer satisfaction (**OCS**) and recovery satisfaction (**RSat**), while the contingency variable is switching barriers (**SB**). The model shows that perceived justice (**PJSR**) will directly affect the RSat

and OCS and that RSat directly impacts SQ, OCS, and BI. Furthermore, RSat is predicted to mediate the relationship between perceived justice and OCS. The framework also shows that SQ and RSat are critical antecedents of OCS, but both indirectly impact BI through OCS. Similarly, both SQ and RSat have a direct and indirect impact on BI through OCS.

Overall satisfaction (OCS) has a direct causal effect on BI. In addition to their direct influence on OCS and BI, switching barriers (SB) are predicted to moderate the relationships between BI and its three evaluative antecedents, namely SQ, OCS, and RSat.

#### **4.8. IMPORTANCE-PERFORMANCE ANALYSIS OF CONSTRUCTS**

The fourth objective of this study was to identify the importance of the predictor (exogenous) variables in predicting the target (endogenous) variable and the industry's performance against those predictor variables. Although the literature on the use of the importance-performance matrix analysis (IPMA) is not common in many consumer behaviour studies, many academics concur that the IPMA is important for identifying service quality shortfalls for strategic actions (Slack, 1994; Oh, 2001; Lee & Hsieh, 2011; Minta & Stephen, 2017). Following this realisation a few studies have included the IPMA analysis in their investigations. For example, based on a survey of 476 bank customers in Ghana, Minta and Stephen (2017) used IPMA results from SmartPLS to show that service reliability was the most important dimension of service quality valued by customers. However, the industry's performance was highest on service tangibility, which implies that a model that explains the roles of PJSR, RSat, SQ and OCS in the formation of BIs but does not provide business managers with specific actions to take for developing appropriate strategies is not adequate. The same sentiments were echoed by Slack (1994), who contend that it is not sufficient to explain and predict consumer behaviour if that information is not actionable by managers. Slack (1994) argued that a more crucial stage is to determine the importance and performance of the predictors that enable business managers to infer the appropriate business decisions for improvement. In the context of the current study, the importance-performance matrix was expected to reveal the gaps managers would need to focus on regarding PJSR, RSat, SQ and



OCS in the formation of BIs. Thus, the extension of analysis to include the IPM of the constructs was deemed necessary.

#### **4.8.1. Concept of the IPMA**

The IPMA approach of analysis was first proposed by Martilla and James (1977) as a tool that combines the “importance” and “performance” of predictor variables that contribute to the future purchase decisions about a service or product. According to Martilla and James (1977), a predictor variable can be identified prior to the measurement of its importance and performance. Slack (1994) suggests that for multi-attribute or multi-dimensional constructs, the “importance” of a variable is in the consumer’s mind and variables are not of equal importance for making specific decisions. Therefore, as argued by Minta and Stephen (2017), it is critical that the “perceived importance” of a construct be compared to the company’s performance of that variable to establish the gap. In relation to this study, Minta and Stephen’s (2017) argument implies that variables that customers perceive as important will play a significant role in the formation of BIs and, subsequently, their choice of an MNO. Thus, the perceived performance of “important” predictor variables may be a good starting point for management action. Therefore, it is strategically important for managers to identify the constructs that customers perceive as important in the formation of BIs and how customers perceive they are performing against these constructs. A number of researchers (Ringle & Sarstedt, 2016; Hair et al., 2018; Tailab, 2020) concur that the importance-performance matrix tool incorporated in the PLS-SEM package can be used to provide a deeper understanding of the causal variables at play in a causal model.

#### **4.8.2. Operationalisation of the IPMA**

The IPMA has been operationalised as a four-quadrant grid that identifies the importance and performance ratings of the construct on the same plot (Ringle & Sarstedt, 2016; Minta & Stephen, 2017). The IPMA plot or grid is developed from a computation of the average scores of the importance and performance dimensions, which are then combined to produce a grid or matrix (Ringle & Sarstedt, 2016; Hair et al., 2017). The importance dimension forms the Y-axis or the vertical axis, while the performance dimension forms the X-axis or the horizontal axis (Ringle & Sarstedt, 2016; Tailab, 2020). The four quadrants of the IPMA grid capture the

actions required from management. For example, constructs in the low-low quadrant (bottom left) deserve low priority because they are low in importance and low in performance, while those predictors in the high-importance and low-performance quadrant deserve management's close attention. In other words, the company needs to focus on improving the high-importance but low-performing constructs (Hair et al., 2017; Minta & Stephen, 2017).

Several methods have been used to determine the importance and performance of constructs in business management studies. The first approach is the direct method in which customers are asked the extent to which they perceive a given determinant to be important to the determination of the target construct and how well the supplier is performing against it (explicit approach) (Hemmasi et al., 1994; Slack, 1994). The second approach is an implicit method involving the use of statistical inference methods to predict the importance (X-axis) and performance (Y-axis) of the independent variables on the determination of the dependent variable (Ringle & Sartedt, 2016, Hair et al., 2017). Matzler and Sauerwein (2002) proved that the implicit method was superior to the explicit method. Ringle et al. (2015), Ringle and Sartedt (2016), and Hair et al. (2017) recommend the use of the implicit method when PLS-SEM is used for data analysis. The explicit method was preferred in this study because of its simplicity and superiority over the explicit approach.

#### **4.8.3. Previous studies on the IPMA**

Many studies have utilised the importance-performance matrix analysis (IPMA) to identify performance gaps for remedial action by the service providers in tourism (Zhang & Chow, 2004; Azzopardi & Nash, 2013; Sever, 2015), hotels (Oh, 2001), banking industry (Joseph et al., 2005; Minta & Stephen, 2017) and in the mobile telephony industry (Pezeshki & Mousavi, 2009; Lee & Hsieh, 2011). One important appreciation from all these studies is that the IPMA is a useful and versatile tool in directing management decisions about the appropriate strategic actions in prioritising resources for business success. Slack et al. (2015) state that the proliferation of studies using IPMA suggests that this tool has become a relevant and critical constituent of success in today's competitive world. It is for that reason that the IPM was selected as a tool to complement the causal relationships among the predictor variables by identifying the areas of improvement for MNOs.

#### **4.9. CHAPTER SUMMARY**

The main purpose of this chapter was to review the literature on the relationships between and among the factors used as the building blocks of the model for the formation of behavioural intentions. Seventeen hypotheses were formulated, which were synthesised to develop the conceptual framework for the study in Figure 4.2.

The proposed framework shows how the selected predictor variables would influence each other in forming BIs in situations where they are all present. The dependent variable in the model is the behavioural intentions construct (BI), and the independent variables are service quality (SQ), overall customer satisfaction (OCS) and recovery satisfaction (RSat), while the contingency variable is switching barriers (SB). The model shows that perceived justice (PJSR) will directly affect the RSat and OCS and that RSat has a direct impact on SQ, OCS and BI. Furthermore, RSat is predicted to mediate the relationship between perceived justice and OCS. The framework also shows that SQ and RSat are critical antecedents of OCS, but both indirectly impact BI through OCS. Similarly, both SQ and RSat have a direct and indirect impact on BI through OCS.

In response to the call to increase the diagnostic value of predictive models, the chapter included a review of the importance-performance matrix analysis (IPMA) concept. The IPMA is a tool for identifying the importance of the determinants of BI to guide management decision-making.

The next chapter renders the research methodology of this study. Essentially, it captures the philosophical research approach, the research design, sampling and sample size and the selection of the statistical tool for data analysis.

## CHAPTER 5: RESEARCH METHODOLOGY

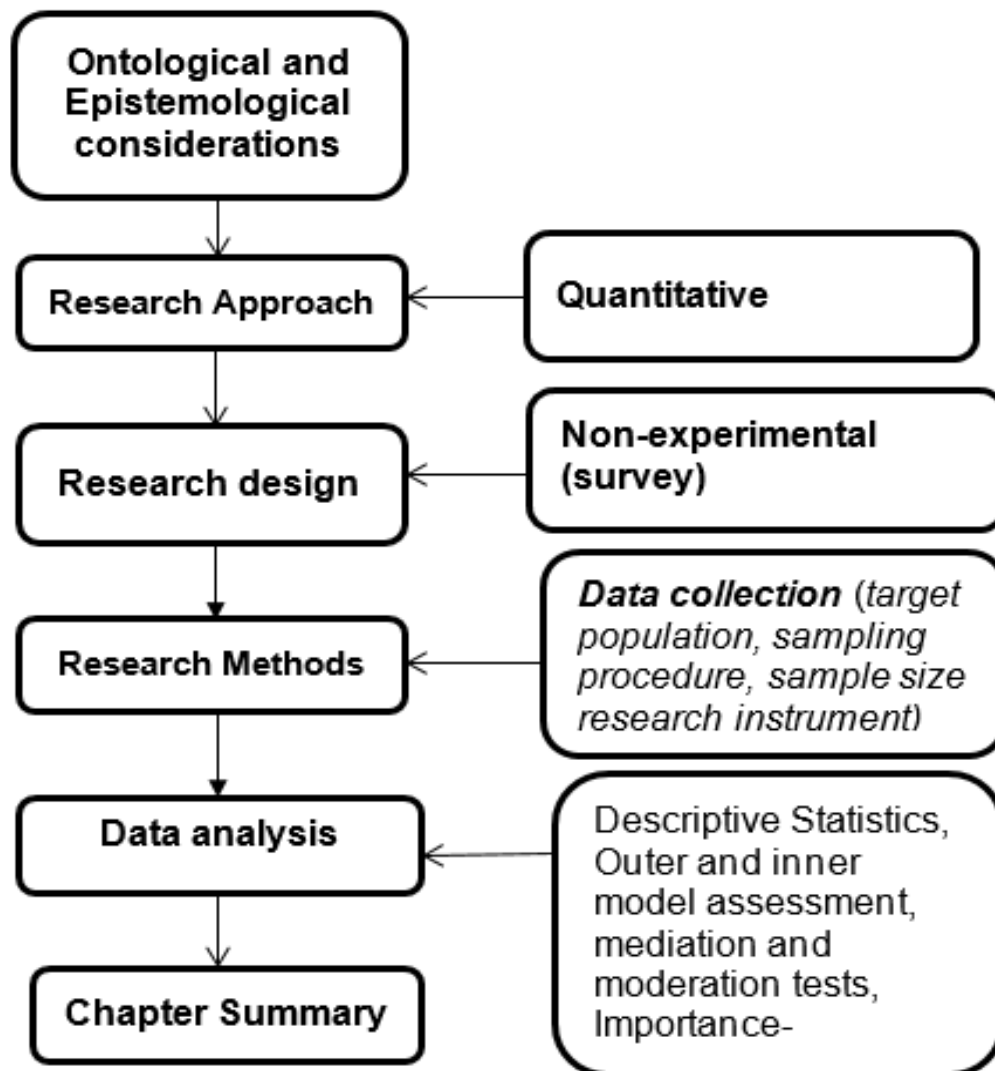
### 5.1. INTRODUCTION

Every scientific research study must outline and provide key interrelationships and connections between ontology, epistemology, methodology and method (Alharahsheh & Pius, 2020). The purpose of this chapter is to show how the quantitative methodology employed in this study was selected and deemed the most appropriate for the study from the ontological and epistemological perspectives. Section 5.1 commences with a brief outline of how the ontological and epistemological issues were translated into methodological strategies that influenced the researcher's methodological decisions in this study. This is followed by a brief description and rationale for selecting the quantitative as the most appropriate approach for the current study in section 5.2. Section 5.3 provides a brief description of the adoption of a survey research design in this study. The determination of the sample size, data collection, questionnaire design and the sampling techniques are presented in section 5.4. Data capturing using the Partial Least Square Structural Equation Modelling (PLS-SEM) protocol is rendered in section 5.5. Section 5.6 provides a description of model evaluation and validation in SmartPLS. Section 5.6.1 is about outer model assessment in SmartPLS while section 5.6.2 provides an assessment of the inner model. Mediation tests are covered in section 5.6.5. While the moderation effects of switching barriers are in section 5.6.6, the importance-performance (IPMA) evaluations are covered in section 5.6.7. The chapter ends with a summary of the salient points arising from the whole chapter in section 5.7. The whole methodology chapter is summarised in Figure 5.7.

### 5.2. ONTOLOGICAL AND EPISTEMOLOGICAL CONSIDERATIONS

According to Tuli (2010), a research paradigm decides how a researcher views a phenomenon and which research methodology to study those phenomena. Similarly, Creswell et al. (2018) state that social science research is about understanding the true reality in the world. For that reason, these authors argue that the interpretation of the outcomes of a research problem as a true reality and acceptable knowledge depends on its ontological and epistemological orientation. As stated by Creswell (2014), it is useful for researchers to think about the ontological orientation (the researcher's beliefs about the nature of reality and humanity) and the

epistemological orientation (the theory about how that understanding or knowledge may be acquired (epistemology)).



**Figure 5.1:** Framework of the presentation of the chapter

**Source:** Author's compilation)

Du Plooy-Cilliers, Davis and Bezuidenhout (2016) agree with Creswell (2014) that, considering the ontology and epistemology orientations is the central feature of any research methodology in social science. This study follows the arguments and logic that researchers need to delineate the basic ontological assumptions of their study at the beginning, as this will give rise to epistemological assumptions, which will lead to methodological considerations (Creswell et al., 2018).

### **5.2.1. Ontological perspective of the study**

The key ontological question is whether or not one or multiple social reality exists independent of human conceptions and interpretations, which govern social behaviour. Creswell et al. (2018) claim that social scientists hold two polarized viewpoints of ontology: objectivism (positivist approach) and subjectivism or constructionism (interpretivist approach). Alharahsheh and Pius (2020) state that either a positivist or interpretivist philosophy, underpins a social science study. The objectivism view holds that the reality about the world is independent of social actors and that the only objective way of getting real about any phenomenon under study, regardless of the researcher's perspective or beliefs, is through a quantitative method (Alharahsheh & Pius, 2020). On the hand, De Vos et al. (2019) state that the subjectivism view assumes that, reality is a product of social processes acquired through socially constructed interpretations and meanings.

The view of Tuli (2010) is that the most common ontological perspectives in social science research are positivism and interpretivism. This view is supported by Du Plooy-Cilliers et al. (2016), stating that positivists believe that reality exists in the world and the purpose of research is to uncover and explain it using an objective scientific method, while researchers are not participants in what they study. The ontological logic of positivism, Creswell et al. (2018) claim, is that the truth and reality that exist in the world need to be uncovered through research using objective scientific methods. Creswell et al. (2018) make further arguments that, positivists are the view that acceptable knowledge should be uncovered and provided quantitatively in numbers clearly visible to the researcher and not an illusion. Tuli (2010) adds that, as a result, positivist researchers focus on establishing the truth by making claims about reality and then providing evidence of its existence through the scientific analysis of objectively gathered empirical data. In contrast, subjective researchers (interpretivism) consider reality as a human construct, where researchers make their own sense of social realities (Creswell et al., 2018; Alharahsheh & Pius, 2020). De Vos et al. (2019) allude that interpretive researchers use qualitative research methodologies to investigate, interpret and describe social realities. Different from the positivist approach, interpretivist treats people as research participants and not as objects, enabling the participants to make meanings of their own realities in the construction of knowledge (De Vos et al., 2019).

Given the differences between the positivist and interpretivist orientations, the nature of this thesis is positivist because the researcher sought to establish relationships among variables and explain causality in the prediction of the target construct.

### **5.2.2. Epistemological perspective of the study**

Creswell et al. (2018) state that epistemology is concerned about how researchers discover the true reality about the world, which can be considered true knowledge. In that way, epistemology is concerned with the basis on which researchers claim to have acquired knowledge about the reality in the world. Creswell et al. (2018) state that there are three debates about the epistemological assumptions of research that distinguish positivists from interpretivists. The first relates to the relationship between the researcher and the researched. While interpretivists believe that the relationship between the respondents and the researcher is interactive, positivists believe that the researcher should be free from the participants and the phenomenon being investigated. According to Tuli (2010), the involvement of the researcher as a participant compromises the objectivity of the findings of the research, while the participation of the researcher in the phenomenon being investigated compromises the objectivity and acceptability of knowledge obtained. This is because the interpretation of the phenomenon will be embedded in the researcher's experiences from his/her participation. Tuli (2010) further argues that the role of the researcher should be to gain knowledge about a phenomenon from the point of view of an outsider rather than from that of an insider. This thesis follows the logic of Tuli (2010) because the researcher was independent of the participants in the study.

The second epistemology debate relates to the objectivity of knowledge gained from a study of a phenomenon. Creswell et al. (2018) question whether knowledge and understanding that emerges from the opinion of the researcher as a participant should be considered objective or subjective. Other researchers (Tuli, 2010; Du Plooy-Cilliers et al., 2018; De Vos et al., 2019), strongly contest the view that knowledge obtained when the researcher is a participant is credible. These authors argue that where researchers are also participants in a study, the interpretation of the outcomes of such studies depend on the researcher and, therefore, can only be subjective and not objective. The premise of the current thesis is based on

establishing facts about the relationships between and among the predictor variables, and therefore it seeks an objective understanding of the investigated phenomenon.

The third epistemological debate centres on the generalisability of the findings. In the case of interpretivism, Creswell (2014) argue that, because the interpretation of the outcomes of research depends on the experiences of the researcher, they cannot be replicated and/or verified by another researcher. These authors also advance the view that because the positivist approach uses scientific methods to acquire knowledge and understanding of a phenomenon, they can be replicated, verified and generalised. De Vos et al. (2019) support this view, stating that the purpose of research should be to provide a scientific explanation of the probable causal laws that predict the general patterns of human activity. Accordingly, scientific explanations combine deductive logic with precise empirical observations in order to confirm causal laws that can be used to predict general human behaviour. Although this view is contested by the interpretivists, the epistemological view of positivists is that empirical facts exist in a world that is governed by the “cause and effect” laws. As a result, the goal of the research, as De Vos et al. (2019) remarked, is to develop the most objective methods possible to the closest approximation of reality. Researchers who work from this perspective explain in quantitative terms how predictor variables of a phenomenon interact to shape the outcomes of the dependent variables. The current thesis follows a positivist approach, because the researcher formulated and tested hypotheses about how predictor variables (PJSR, RSat, SQ and OCS) interact to shape the outcome variable (BIs).

### **5.3. RESEARCH APPROACH**

De Vos et al. (2019) contend that the research approach is determined by the aim or objective of the study. The overall aim of this study was to develop a comprehensive model for the formation of BI using PJSR, RSat, SQ and OCS as its building blocks. This entailed establishing and evaluating the causal relationships of these variables, in order to explain their collective influence in the formation of BIs. Thus, the research involved a rigorous, deductive, objective and scientific-analysis of data. The researcher had to formulate testable hypotheses and operationalise constructs so that they are quantitatively measured to collect data for an in-depth statistical



analysis. Hypotheses were based on the existing theories about the relationships connecting the constructs of interest. The current study follows the deterministic approach in that, it involved testing the relationships between and among variables to estimate their relative roles in predicting the target construct. Therefore, a qualitative approach was deemed most appropriate because the study was not based on theory development, but, rather, it involved a rigorous analysis of empirical data to validate, confirm or disconfirm the hypothesised postulated relationships (Creswell, 2014).

#### **5.4. RESEARCH DESIGN**

The ontological and epistemological views of positivists guide the researcher in selecting the research design to collect data. De Vos et al. (2019) assert that the term “research design” has been given different connotations in social science research in social science research. In some studies, “research design” refers to the overall plan or details of all the steps necessary to address the research questions (Creswell, 2014; De Vos et al., 2019). The research design refers to a method used for data collection (Du Plooy-Cilliers, 2016), while it refers to the quantitative or qualitative approach (Alharahsheh & Pius, 2020). The view adopted in this study concurs with De Vos et al.’s (2019) connotation who describe “research design” as a step dedicated to collecting data to answer the research questions and objectives of the study.

Creswell et al. (2018) state that in quantitative research, the researcher relies on numerical data to test the theories about the relationships between and among variables and looks for probable explanations of the cause and effect. The same authors advise that the goal of quantitative research is to explain the relationships between and/or among variables. The current study adopts a descriptive and explanatory survey research design (Creswell, 2014; Creswell et al., 2018). As remarked by Creswell et al. (2018), descriptive and explanatory studies are complementary to one another, and their aim is to provide answers to the “*how*” and “*why*” types of research questions. Besides developing a comprehensive explanatory-predictive model, one of the objectives in this study, was to explain the roles of the predictor variables (i.e. the roles of PJSR, RSat, SQ and OCS) in the formation of BIs. These objectives put the research into a descriptive as well as a

explanatory the category. The nature of the research questions and hypotheses require that a quantitative research design be followed for data collection.

#### **5.4.1. Target population**

The target population in this study comprised all individuals above the age of eighteen years, who had used a personal mobile phone for at least six months. A period of six months was deemed appropriate for an individual to acquired adequate experience to be able to evaluate the general performance of the service provider when making a decision about whether or not to continue with service provider. This characterisation made the target population too large, as it meant that the target population covered the whole country of Lesotho. This made the physical visit to of all areas of the country with mobile subscribers an unrealistic goal. In view of this constraint, only selected districts, deemed to have high concentration of people were targeted. The reason being that, places where people are concentrated, increase the chances of getting respondents willing to participate in the survey.

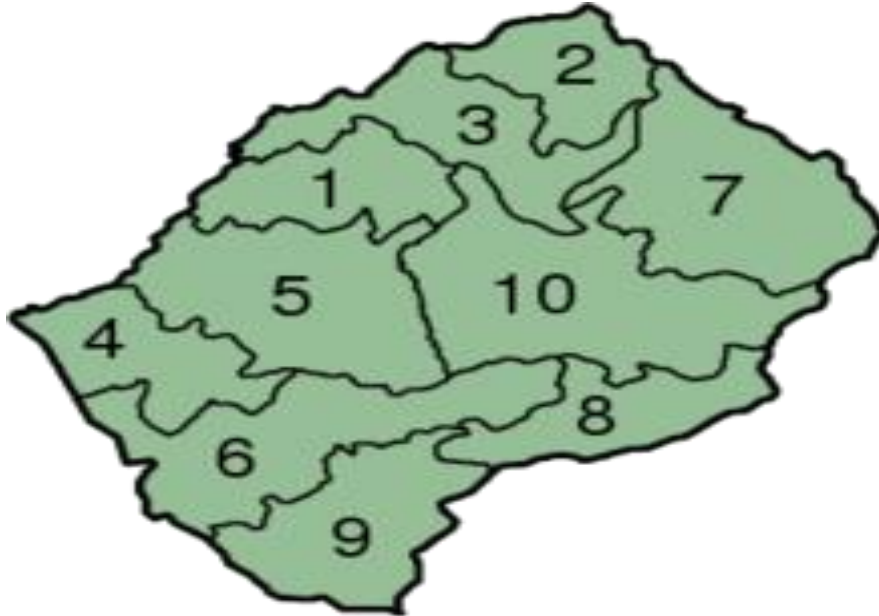
#### **5.4.2. Sampling procedure**

One of the challenges faced by the researcher was that subscriber databases were proprietary to the mobile network operators (MNO). This constraint ruled out the use of random sampling as subscriber databases could not be given to the researcher. In light of that constraint, convenience sampling of the districts and villages was deemed appropriate. Participants were drawn from accessible individuals in the selected districts and villages shown in Figure 5.2 with the stimated population densities in Table 5.1.

Du Plooy-Cilliers et al. (2016) state that purposive and convenient sampling methods are used where the entire population size is too large and difficult or impossible to access. Figure 5.1 shows the districts of Lesotho, while Table 5.1 shows their estimated population sizes.

Despite having ten districts (see Figure 5.2), The Kingdom of Lesotho is broadly divided into the northern region (districts 1, 2, 3, and 7), the central region (districts 5 and 10), and the southern region (districts 4, 6, 8 and 9). Five research assistants

were engaged and trained to gather data from the districts in these three broad regions of the country, where mobile subscribers were concentrated.



**Figure 5.2:** The districts of Lesotho

**Source:** Lesotho Communication Authority (LCA) (2017).

**Table 5.1:** The estimated population per district

Name of district	Estimated population size in 2016
Berea	262 616
Butha-Buthe	118 242
Leribe	337 521
Mafeteng	178 222
Maseru	519 186
Mohale's Hoek	165 590
Mokhotlong	100 442
Qacha's Nek	74 756
Quithing	115 469
Thaba-Tseka	135 347

One research assistant was assigned to collect data from the northern region of the country in the districts of Berea and Leribe. The reason was that, besides these two

districts being close to each other, they had the highest population densities in the northern region of the country. Two research assistants were assigned to collect data from Maseru district, in the central region of the country, because this district had the highest population density. The last two research assistants were assigned to the country's southern region, one from to Mafeteng district and one to Mhale's Hoek district. These two districts are far apart such that it was not possible to one person to cover both. The data collection process coincided with the level 5 lockdown period caused by the Covid-19 pandemic, making general accessibility of the targeted areas difficult. As the Covid-19 lockdown restricted movement of people, the research assistants approached the chiefs of the respective areas for permission to collect data from villagers in the targeted areas without violating Covid-19 rules. This made data collection from villages a little easier, as many people were found in their homes.

#### **5.4.3. Sample size estimation for data collection**

Existing literature on PLS-SEM (Hair et al., 2017; Kock & Hadaya, 2018) suggests that the minimum sample size is mainly influenced by the analytical method used, the complexity of the model, and the precision of the variables required. This study involved a complex model with six interrelated constructs involving several relationships to be investigated. SmartPLS-SEM statistical analysis technique was considered more appropriate because of its ability to handle complex models (Akter, Wamba & Dewan, 2017), its less stringent conditions on the normality of data (Goodhue et al., 2012; Sarstedt et al., 2016; Rigdon et al., 2017) and its ability to generate the importance-performance grids among other reasons (Hair et al., 2018, 2019). Further justification for selecting SmartPLS software for data analysis is provided in section 5.5 on data analysis in this chapter.

Often the advocates of the PLS-SEM (Hair et al., 2011, 2014, 2019; Ritcher et al., 2016; Sarstedt et al., 2016; Rigdon et al., 2017), claim that PLS-SEM is preferred over the covariance-based SEM (CB-SEM) because of its remarkable ability to achieve acceptable power with small sample sizes. While this may be true for models with strong path coefficients and large effects sizes, other researchers (Kock & Hadaya, 2018; Kyriazos, 2018) note that this claim is not true for models with modest and fairly weak path coefficients. For that reason, Kyriazos (2018)

recommend that the minimum sample size for a structural equation modelling (SEM) method is determined by many factors. Early researchers using PLS-SEM (Hair et al., 2011, 2014), relied on the rule of thumb for estimating the minimum samples size. The rule of thumb methods mentioned by Hair et al. (2014) includes the 10-times rule and the R-squared. The statistical details about these methods are deliberately avoided here, but in summary, a minimum sample size between 200 and 500 ( $200 \leq N \leq 500$ ) was generally accepted as good (Hair et al., 2017; Kyriazos, 2018; Hair et al., 2019). The rule of thumb method is not based on the statistical power of the study and, therefore, may lead to a grossly inaccurate estimate of the sample size required for a study. For example, Kyriazos (2018) mention that in SEM methods, the inadequate sample size will affect the quality criteria assessments of the model. The model assessments quality metrics affected include the correlation between constructs and their items, factor loadings, reliability and validity tests, item parcelling, model fit test, comparison of nested models and the risk of model misspecification or oversimplification (Kyriazos, 2018). Given the risks associated with an inadequate sample size, Kyriazos (2018) concluded that just an appropriate sample size is required as a rule. Cohen (1990) support that view, adding that, unduly large samples beyond the required size to achieve statistical power are also not good as they waste resources and the efforts of the researcher. In addition to that, Uttley et al. (2019) add that, unduly large sample sizes could overstate unimportant effects. An important conclusion that can be drawn from the comments of these research methodological authors, is that equilibrium should always be sought between avoiding a sample size that is too small to uncover crucial effects, and too large to add unnecessary extra cost and time to the study. This conclusion promotes the use of power analysis to determine an appropriate sample size, which is not too small or excessive for the study.

In line with the conclusions drawn from the reviewed literature, many research methodological authors (Kock & Hadaya, 2018; Memon et al., 2020; Ranatunga, Priyanath, & Rgn, 2020) recommend the use of statistical power for calculating sample size. This is because the statistical analysis's power in testing the hypotheses gives credibility to the accuracy and conclusions of the study's findings (Goodhue et al., 2012; Kline, 2016; Kyriazos, 2018). Consequently, advocates of the PLS-SEM method (Hair et al., 2017, 2018, 2019; Ringle et al., 2018; Uttley, 2019)

recommend the use of statistical power analysis for the determination of the minimum sample size in social science research.

The statistical power of a study is its precision power, which determines the likelihood of detecting an actually present effect (Coolican, 2014; Uttley, 2019; Memon et al., 2020). Hair et al. (2017), citing Cohen (1988, 1990, 1992), state that the four parameters that influence the statistical power of a study include: 1) the size of the sample, 2) the probability of identifying a non-existing effect called alpha ( $\alpha$ ), 3) the probability of identifying an effect that actually exists ( $1-\beta$ ) and 4) the effect size. The *beta* ( $\beta$ ) value measures the probability of not identifying an existing effect when it actually exists.

In contrast, the value of ( $1-\beta$ ), which measures the probability of identifying an effect when it actually exists, is called the desired statistical power of the study (Cohen, 1988). Although Cohen (1988, 1992) provides the minimum level of statistical power as 0.5 (50%), many methodological researchers (Coolican, 2014; Kock, 2014, Breur, 2016; Kock & Hadaya, 2018) use 0.8 (80%), as the ideal level. These authors also state that, a figure above that would be preferable. In support of that view, Hair et al. (2017) state that a power of 80% has been the most acceptable statistical power in many social science studies involving PLS-SEM.

Effect size measures the magnitude of the effect that an independent variable actually has on the dependent variable (Barker et al., 2016; Kyriazos, 2018; Memon et al., 2020). The higher the effect size, the greater the probability that a true effect will be properly detected with a small sample size (Goodhue et al., 2012; Kock, 2014; Kock & Hadaya, 2018). The level of significance ( $\alpha$ ) relates to the probability of rejecting the null hypothesis, which is generally accepted at 0.05 (5%) in social and behavioural science research (Hair et al., 2017; Memon et al., 2020). To estimate sample size, it is necessary to know the effect size to achieve a statistical power of 80% or greater. As a general guideline, effect sizes have been described as small (0.02), medium (0.15) and large (0.35) effect sizes (Hair et al., 2017). Kyriazos (2018) asserts that the significance level ( $\alpha$ ), the desired statistical power ( $1-\beta$ ), and effect size are prerequisites for *a priori or prospective* determination of the minimum

sample size required for a study. The author further emphasises that omitting this step in estimating the size of the sample for a study, could mean failure to detect a significant effect.

Existing literature states that the statistical power and minimum size of a sample for a study can be determined with different methods before data collection. For example, Kock and Hadaya (2018) recommends the use of the G\* Power (Faul et al., 2009), but is quick to highlight that it requires great skill of the user because it is complex. As an alternative, Hair et al. (2017) recommend the use of Soper's online sample size calculator, to calculate minimum sample sizes for social science researchers using the second-generation multivariate techniques like the CB-SEM or PLS-SEM, for data analysis. Consequently, Soper's (2020) online sample size calculator was used to determine the minimum sample size required for the study, before data was collected. Using an anticipated effect size of 0.35 (Hair et al., 2017), a desired minimum statistical power level of 0.8, and a significance ( $\alpha$ ) of 0.05, the recommended minimum estimated sample size was 308. This sample size was considered adequate as it was within the range of sample size recommended by the rule of thumb ( $200 \leq N \leq 500$ ).

#### **5.4.4. Data collection method**

Data were collected using a cross-sectional survey approach (Du Plooy et al., 2016). Respondents from the the selected areas of the country completed a self-administered questionnaire. The questionnaire was tested with a pilot study before the main data for the study were collected.

#### **5.4.5. Questionnaire design**

The data collection instrument was developed by modifying items from existing scales selected from articles drawn from reputable peer reviewed journals (see Appendix A).

##### *5.4.5.1. Structure of the questionnaire*

In order to be logical and well-structured, the questionnaire was divided into different sections, with each section addressing a specific variable in the conceptual model.

Altogether the final questionnaire had 57 items. The questionnaire consisted of seven sections (sections A through G) that addressed the variables under investigation. Section A, was on demographic profiles, while section B was on overall satisfaction (OCS) (4 items). Section C (7 items), was on the behavioural intentions (BIs) construct. This construct was measured as repurchase intentions (3 items) and word-of-mouth intentions (4 items). Section D (12 items), was on perceived service recovery justice (PJSR of Justice). Each of the four dimensions [(distributive (DJ), procedural (PJ), interactional (IJ) and information (InfJ) justice], had three items. Section F (4 items), dealt with service recovery satisfaction (RSat). In order to capture a wide range of types of switching barriers (SBs), the items in Section E (13 items), about SBs, were divided to ensure they captured a number of forms of SBs, consisting of switching costs (4 items), Innovativeness of the service provider (perceived interactive and supportive) (4 items), local network influences (4 items) and alternatives' attractiveness (2 items). The last section, G (17 items), covered items for perceived service quality (SQ) (reliability (4 items), responsiveness (4 items), Assurance (2 items), empathy (4 items) and tangibles (3 items).

#### 5.4.5.2. Measurement scales

For consistency, all the statements were measured on a 7-point Likert scale anchored with 1 (strongly disagree) and 7 (strongly agree). For the SQ measurement, the scale was divided into three main categories with 1 to 3 (below expectations), 4 (equal to expectations) and 5 to 7 (above expectations). To minimise common method bias, the sections of the questionnaires did not follow a sequential order in the conceptual model. The sources of the measurement scale items in the questionnaire are listed in Table 5.2.

**Table 5.2: Sources of measurement scale items by construct and dimension**

Section/Construct	Dimension(s)	Items	Source(s)
<b>Section B</b> Overall Customer satisfaction (OCS)	-	1 - 4	Maxham & Netemeyer (2002b); Akroush et al. (2019)
<b>Section C</b> Behavioural Intentions (BI)	Repurchase Intentions (RPI)	5 - 7	Giovanis, Athanasopoulou & Tsoukatos (2016)
	Word of mouth	8 - 11	Giovanis, Athanasopoulou &



	intentions (WOM)		Tsoukatos (2016)
<b>Section D</b>  Perceived service recovery justice (PJSR)	Distributive justice (DJ)	12 - 14	Maxham & Netemeyer (2002b)
	Procedural justice (PJ)	15 - 17	Smith et al (1999), Maxham & Netemeyer (2002b)
	Interactional justice (IJ)	18 - 20	Maxham & Netemeyer (2002b)
	Informational justice (InfJ)	21 - 23	Prasongsukarn & Patterson (2012)
<b>Section E</b>  Switching barriers (SBs)	Switching costs (SC)	24 - 26	Czajkowski & Sobolewski (2016)
	Innovativeness (Inn)	27 - 30	Malhotra & Malhotra (2013)
	Local network influence (LNI)	31 - 34	Czajkowski & Sobolewski (2016)
	Attractive alternatives (Alt)	35 - 36	Giovanis, Athanasopoulou & Tsoukatos (2016)
<b>Section F</b> Service recovery satisfaction (RSat)	-	37 - 40	McCullough, Berry & Yadav (2000) Maxham & Netemeyer (2002b)
<b>Section G</b>  Service quality (SQ)	Reliability	41 - 44	Akroush et al. (2019)
	Responsiveness	45 - 48	
	Assurance	49 - 50	
	Empathy	51 - 54	
	Tangibles	55 - 57	

#### 5.4.5.3. Face and content validity tests of the questionnaire

The questionnaire was subjected to seven experienced researchers in social science (three well-experienced professors in social science research, three PhD lecturers in marketing, and one PhD statistician) for face and content validity assessments. The experts identified some grammatical errors, made some recommendations and corrections on some items to reduce the ambiguity of the statements. The recommendations from these experts were incorporated into the questionnaire to be piloted, to reduce the ambiguity of some of the statements. As per the recommendation of one of the experts, two new items were added in the category of SBs to capture “alternative attractiveness” (Alt 1 & Alt 2).

#### **5.4.6. Pilot-testing**

According to De Vos et al. (2019), pilot studies are implemented in settings convenient to the researcher. The pilot test was conducted on a convenient sample of 45 individuals comprising five academic staff members, five non-academic staff, five undergraduate students and 30 post-graduate students at the National University of Lesotho (NUL), where the researcher was based. Before the questionnaire was distributed for pilot testing, the general permission to collect data from the NUL community (staff, students and contractors) was sought from the university.

Permission was granted through a letter from the Registrar dated 5 March 2020 (see Appendix D). Convenience sampling was employed in selecting the participants in the pilot sample. Data for the pilot test was collected within five days, from 6 March 2020 to 10 March 2020. The main objective of the pilot study was to identify sections that needed improvements or modifications before the questionnaire was employed for data collection. The pilot sample was a prototype of the population from which data for the main study would be collected. Participants in the pilot sample were encouraged to write any comments about the clarity of the statements in the questionnaire and the time it took them to complete the questionnaire without stopping.

Only 35 of the participating respondents returned the questionnaire, of which five were incomplete and therefore were dropped from the pilot tests. The respondents indicated that, on average, it took them 20 minutes to complete the questionnaire. The feedback from the pilot study was incorporated into the final questionnaire for the main study. Data from the pilot survey were used to test the instrument's psychometric properties in terms of its internal reliability, validity, and collinearity of the constructs before data for the main study were collected. To be conservative, the time for completing the questionnaire was put at 30 minutes. Individuals who participated in the pilot study were excluded from participating in the main study (Du Plooy et al., 2016).

#### **5.4.7. Selection of research assistants for data collection for the main study**

As stated above, five postgraduate students were recruited from the MSc in Economics class at the National University of Lesotho and trained to be research assistants. Masters students were preferred because of their knowledge of research and data collection. Three streams of masters classes, MSc in Developmental studies, MSc in Agriculture and MSc in Economics, were visited to advertise the five positions for research assistants. Only nine students from the MSc in Economics responded to the advert, but 4 of those declined the rates offered, leaving only five who accepted the offer. The five research assistants were then assigned to specific areas mentioned in section 5.4.2 above. The questionnaire was written in English language and distributed by hand to the participants for completion. Mobile subscribers in Lesotho are a mix of literate and illiterate individuals. To ensure inclusivity and avoid the bias of collecting data only from the elite social class, research assistants were asked to assist respondents with explaining the questionnaire where respondents did not understand. The questionnaire was not translated or converted to the local language, but the research assistants were trained to ensure they understood all sections of the questionnaire in the local language.

A variety of methods or data collection were employed to maximise the response rate. The research assistants were asked to use any method convenient to the situation but not be biased or force participants into participating in the survey. The research assistants visited cities, villages and nay places with high traffic of people in their designated areas. The intercept method was used in cities, while the drop and pick method was employed mainly in villages. For the drop and pick method, respondents were expected to complete the questionnaire at their own convenient times from the comfort of their homes before the research assistants would call back to collect them. The data collection process took a full month of 30 days, from 16 March 2020 to 15 April 2020.

## **5.5. DATA CAPTURING AND ANALYSIS**

The collected data were coded and entered into SPSS version 25.0.0.0 for further analysis. The first data analysis step involved factor analysis using the principal component analysis (CPA) approach in SPSS. This step was carried out to

determine the cross-loadings items for possible elimination in the next analysis steps.

### **5.5.1. Factor analysis**

As indicated before, the initial questionnaire contained 57 items. The Principal Component Analysis (PCA) method was used to identify items with significant loadings of 0.5 and higher in more than one factor. This stage was deemed necessary to reduce items to a manageable number and to avoid the possible problem of multicollinearity in further analysis (Field, 2017:1335), while retaining as much original data information as possible. The PCA method was preferred because the hypothesized model was reflective in nature. The Principal Factor Analysis (PFA) was deemed inappropriate because it is based on the principle that it is the latent construct that causes the responses to the measured variables, which is typical for formative models. Following Field's (2017: 1345) guidelines for sample sizes below 500, the first step was to suppress any items with loadings of 0.4. After that stage, items with loadings in multiple factors were identified. Field (2017:1345) recommends that if the difference between two cross-loading coefficients of an item is less than 0.2, it must be dropped. Consequently, all items with multiple loadings whose differences were 0.2 and below were then dropped. After this stage, only 36 items remained eligible for validation of the proposed model.

### **5.5.2. Parcelling of the 36 indicator items for PLS-SEM analysis**

After eliminating cross-loading items and items with loadings below 0.5, still, 36 items remained for model evaluation such that fitting them on a single PLS-SEM model was not easy. In such cases, Matsunaga (2008) advises that researchers may aggregate individual items that measure the same construct into groups called parcels, then proceed to use those parcels as indicator items of the target construct for structural equation modelling (SEM) assessments. Consequently, to reduce the number of items and enable easy handling of the PLS-SEM model, the 36 measurement items were parcelled, as shown in Table 5.2.

As shown, the scale items for BIs were aggregated into two dimensions of repeat purchase intentions (RPI) and word-of-mouth intentions (WOM). Likewise, the items for perceived service recovery justice (PJSR) were parcelled into the traditional

dimensions of perceived justice (DJ, PJ, IJ and InfJ). Similarly, the 17 items of the SQ construct were aggregated into the traditional dimensions of the SERVQUAL scale, which are Reliability, Assurance, Tangibles, Empathy and Responsiveness. The 18 items measuring the different forms of SBs were aggregated into switching costs (SC), Innovativeness (Inn), local network influence (LNI) and alternative attractiveness (Alt). Because items for measuring overall satisfaction (OCS) and service recovery satisfaction (RSat) were few, they were not parcelled. Table 5.10 shows the number of items parcelled and the name of the parcel used for PLS-SEM assessments.

**Table 5.3: Parcels used as measurement items for constructs**

<b>Construct</b>	<b>Description</b>	<b>Number of items parcelled</b>	<b>Name of parcel</b>
PJSR	Distributive justice	4	DJ
	Procedural justice	4	PJ
	Informational justice	3	InfJ
SQ	Reliability	4	Reliability
	Responsiveness	2	Responsiveness
RSat	Service recovery satisfaction	3	Not parcelled
OCS	Overall customer satisfaction	4	Not parcelled
BI	Repurchase intentions	3	RPI
	Word-of-Mouth	4	WOM
SB	Innovativeness (Inn)	4	Not parcelled
	Local network influence	1	LNI
<b>Total</b>		<b>36</b>	

The justification for the selection of SmartPLS-SEM is discussed relative to what the study was trying to achieve. The most important thing in research is to inform the practitioners (Crewell et al., 2018). However, as exclaimed by some research methodologists (Goodhue et al., 2012; Breur, 2016; Kock and Hadaya, 2018), the practitioners' confidence about the findings of a study depends on the statistical power for the study.

Therefore, even though the critical considerations for data analysis include the objectives of the study, the complexity of the conceptual model, and the desired accuracy of the findings (Creswell, 2014; De Vos et al., 2019), they must, very

importantly, include the statistical power of the study. The current study was explanatory-predictive in nature, involving six variables measured by 36 items. The complexity of the model demanded the use of the SEM technique. Of the two types of SEM: (CB-SEM and PLS-SEM), the PLS-SEM was preferred for many reasons (Henseler et al., 2016). While an in-depth comparison of the differences between these two approaches is beyond the scope of this study, a statement on their characteristics may show their principal operational differences.

Covariance-based SEM (CB-SEM) estimates model parameters using the empirical variance-covariance matrix and is the method of choice when the hypothesised model consists of one or more common factors. In contrast, variance-based SEM (PLS-SEM), first creates proxies as linear combinations of observed variables and then estimates the model parameters using these proxies. According to Henseler et al. (2016), PLS-SEM is a method of choice when the hypothesised model consists of composites. The hypothesised model in this study was based on a linear combination of composite factors, which were created as linear combinations of proxies. This makes the variance-based method the most appropriate method for data analysis in this study.

PLS-SEM has received much popularity among researchers in strategic management (Hair et al., 2012a) and marketing (Hair et al., 2012b, 2019). Henseler et al. (2016) associate this popularity with the ability of the PLS-SEM method to model both single factors and composites and to its ability to handle complex models involving several nomological interrelationships among the latent variables. According to Hair et al. (2011), one of the major advantages of PLS-SEM over CB-SEM is its ability to handle complex or sophisticated models that require more sophisticated analysis. Because the hypothesised model in this study consisted of six variables with a complicated nomological network of relationships and 36 measurement statements, it was deemed a complex model by the standards of Kock and Hadaya (2018). Consequently, PLS-SEM path modelling was preferred as an appropriate statistical tool for data analysis in this study.

Hair et al. (2017) state that researchers should also consider the type of model specification (reflective or formative) and the CB-SEM's requirements for normal

distribution of the data when choosing the appropriate SEM for data analysis. Besides the PLS-SEM's advantage of being able to handle models that contain both reflective and formative specified structural in a single model, it does not require data to be normally distributed like the CB-SEM (Rigdon, 2012, 2014, 2016). The condition of not requiring data to be normally distributed gives the PLS-SEM approach an advantage over the CB-SEM because generally it is difficult to know the characteristics of data before it is collected and analysed. Because PLS-SEM does not strictly require data to be normally distributed, it was more appropriate tool for data analysis in this study compared to the CB-SEM method.

The other reason for using PLS-SEM as an analysis tool in this study was its suitability to address all the research goals and objectives of this study. The main purpose of the study was to develop an explanatory-predictive model for the formation of BIs that could be used to predict the likely behaviour of mobile phone subscribers in the Cellular industry. According to Rigdon (2016), PLS-SEM is most appropriate where the study's primary goal is to assess the model's predictive relevance for the formation of the endogenous construct, in this case BIs. On the contrary, the existing literature (Hair et al., 2017; Kock and Hadaya, 2017; Hair et al., 2019), seems to suggest that the CB-SEM method is more appropriate for the explanatory power of a statistical model but not for predictive modelling. The same authors also emphasise that PLS-SEM can handle both explanatory and predictive studies. Given that the current study was based on developing an explanatory-predictive statistical model, PLS-SEM was deemed more suitable than CB-SEM.

The fourth objective of this study was to determine the importance and performance of each causal variable in the formation of the BIs of the subscriber. Ringle and Sarstedt (2016) demonstrated that PLS-SEM is able to clearly show the priority analysis map (importance-performance map, IPMA) of the determinant constructs on the formation of the outcome construct, which the CB-SEM method is not able to do. This was also deemed a serious limitation of the CB-SEM method in this study. Evermann and Tate (2016) agree that IPMA is an important diagnostic tool for management decisions and cite the ability of PLS-SEM to offer this advanced analysis as one of the main reasons for its preference where IPMA tests are

involved. Consequently, it was deemed appropriate to employ the PLS-SEM method for data analysis in this study.

## **5.6. MODEL EVALUATION IN SMARTPLS-SEM**

Model evaluation involves validation of the model using different assessment metrics.

### **5.6.1. Test of the model's goodness-of-fit (GoF)**

According to Henseler et al. (2016), the first step in model evaluation is to determine its global goodness-of-fit (GoF) or its suitability to be used to provide answers to the research question and research objectives. However, other advocates of PLS-SEM (Hair et al., 2017, 2019), have contested that view citing that the metrics used for assessing GoF are not fully developed. Henseler et al. (2016) make a strong argument that GoF is important because it provides an overall assessment of both the outer model and the inner model (overall model) in one test. Henseler et al. (2016) emphasise the need to carry out GoF test stating that if the model does not fit the data, the data contains more information than the model conveys. The obtained estimates may be meaningless, and the conclusions drawn from them become questionable. Although in general some PLS-SEM advocates (Hair et al., 2017; 2019) hold the view that PLS-SEM is not used for model fit tests because they will be meaningless, others (Henseler et al., 2016) are of the view that GoF must be reported. For that reason they recommend testing model fit should be the first in model assessment. But even Henseler et al. (2016) warn that the GoF from PLS-SEM must be treated with caution.

According to Henseler et al. (2016), currently, the only approximate model fit criterion implemented for PLS path modeling is the standardized root mean square residual (SRMR). The SRMR is the square root of the sum of the squared differences between the model-implied and the empirical correlation matrix. A value of zero for SRMR would indicate a perfect fit, while an SRMR value between zero and 0.05 indicates an acceptable fit (Henseler et al., 2016). Recently, it has been empirically proven that even entirely correctly specified model can yield SRMR values of 0.06 and higher (Henseler et al., 2014). Therefore, a cut-off value of 0.08 (i.e.  $SRMR < 0.08$ ) was proposed as the upper limit for acceptable model fit. Although Henseler



et al. (2014, 2016) state that there is more than one way of testing model fit, they only recommend the use of SRMR. The other GoF indices are not yet developed for the variance-based PLS-SEM. However, in this study, readers are warned not to place too much emphasis on the significance and measuring of the GoF in PLS-SEM, as it is said to be at stage of being perfected for PLS-SEM.

### **5.6.2. Evaluation of the measurement (outer) model**

Traditionally, model evaluation in PLS-SEM is aimed at validating the hypothesised relationships in the conceptual model, which would determine the suitability of the statistical model to be used for testing its explanatory capacity and its predictive capacity (Hair et al., 2017). When using PLS-SEM, model validation is a process of determining whether both the measurement and the structural model meet the quality criteria for empirical data, thus, providing evidence for the model's power to explain and predict the ultimate endogenous variable (Henseler, 2015; Hair et al. 2017). As required by the PLS-SEM method, the process of model assessment was conducted on both the outer and inner models in two separate stages (Hair et al., 2017, 2019; Sarstedt et al., 2017). However, because the model was only reflective, the actual specific steps followed in evaluating results in PLS-SEM were slightly different from those that would be followed for a formative or a reflective-formative model (Sarstedt et al., 2017).

The first stage in PLS analysis involved an assessment of the measurement (outer) model and the second stage involved an assessment of the structural model assessment (Hair et al., 2017, 2019). The aim of first stage was to confirm the adequacy of the measurement model to address the research questions and/or hypotheses. In other words, stage one of PLS analysis provides evidence of the adequacy or ability of the measurement model to support the evaluation or examination of the theorised hypotheses and relationships among the latent variables in stage two (Hair et al., 2017; Kock & Hadaya, 2017). The methodological implications of two-stage in PLS are that this stage, which involves the actual test and validation of the proposed model, can only be conducted after the quality of the measurement model is confirmed in stage one (Hair et al., 2017; Kock & Hadaya, 2017; Sarstedt et al., 2017; Hair et al., 2019).

The first stage of evaluating PLS-SEM results involved checking the quality of the measurement model in terms of its reliability and validity.

#### *5.6.2.1. Internal consistency reliability tests*

The internal consistency reliability of the measurement model was evaluated using three assessments: the outer loadings of the indicator items (indicator reliability), Cronbach's alpha and composite reliability (CR). A composite variable is a linear combination of several variables that are selected to represent a construct based on the research problem at hand (Hair et al., 2017). The CR is the preferred measure of internal reliability for composite constructs where several items are used to measure a construct indirectly and their individual values are combined to form a composite score (Hair et al., 2017). The logic of using CR is that the measure of the construct will be accurate based on the assumption that using several items to measure a single concept is more likely to represent all its different facets and therefore improves its accuracy and reduces the measurement error (Hair et al. 2017). The importance of outer loadings is that they indicate the reliability (the square of the outer loading) and/or the sufficiency of the indicators in measuring the measurement construct or latent variable. The importance of Cronbach's alpha value is that it indicates the convergence of the indicator items in measuring the same construct. Composite reliability is equally important as it reflects the constructs' reliability and/or convergence in measuring the composite model. However, there are concerns that Cronbach alpha values tend to undervalue the internal reliability of complex PLS-SEM models (Henseler et al., 2015, Hair et al., 2019). Thus, instead of relying on the Cronbach alpha, the CR, which considers that indicators have different loadings, is the preferred measurement of internal consistency for complex reflective models (Hair et al., 2017). However, it is traditional in research that where possible, both the Cronbach alpha and CR and their statistical significance are reported. Consequently, for the completeness of the reporting, both Cronbach alpha and CR values were reported in this study.

According to Hair et al. (2017), the minimum acceptable value for item outer loadings is 0.708. This would give the minimum required item reliability measure of at least 0.050 (which calculated as the square of 0.708) (Hair et al., 2017). However, it is common practice that the minimum values for outer loadings, Cronbach's alpha and

CR have been put at 0.70. According to research methodologists (Du Plooy et al., 2016; De Vos et al., 2019) and some PLS-SEM advocates (Hair et al., 2017; Sarstedt et al., 2017), indicator items with outer loadings below the minimum threshold of 0.70 should be dropped only if deleting them will improve the Cronbach alpha and the CR values. However, their eliminations should not compromise the content validity of a construct. Since all the constructs in the model were reflective, dropping some items did not compromise the content validity of the constructs for further analysis. Once reliability was confirmed, the next step of stage one involved the measurement of convergent validity.

#### *5.6.2.2. Convergent validity*

Convergent validity refers to the extent to which a construct explains the variance of the indicators used to measure it (Sarstedt et al., 2017). Hair et al. (2017) describe it as the extent to which a measure correlates positively with alternative measures of the same construct. According to Hair et al. (2017), to evaluate the convergent validity of each reflective construct in the measurement model, researchers consider the crossloadings of the indicator items and the average variance extracted (AVE). Higher outer loadings of the indicator items indicate that the items have much in common, which is captured by the construct they measure.

The AVE of a construct is determined by finding the grand average value of the squared loadings of the indicators used to measure it (Hair et al., 2017). The minimum cut-off point for AVE was 0.50. This threshold is based on the logic that, on average, the construct must be able to explain more than half of the variance of its indicators (Hair et al., 2019). The same authors argue that, an AVE value of less than 0.50 indicates that, on average, more variance remains in the error of the items than in the variance explained by the construct.

To validate the results of the outer model assessment, the model was bootstrapped 5000 times (Preacher & Bayes, 2008) with a complete bootstrap report. The statistical significance of these measurements were examined using the t-values, p-values and confidence intervals (CI) from the complete bootstrap report. Once the statistical significance of the internal reliability and convergent validity of the

measurement model were confirmed, the last step in evaluating the measurement model involved an evaluation of its discriminant validity.

#### *5.6.2.3. Discriminant validity tests*

Discriminant validity measures the extent to which constructs in the conceptual framework, which is assumed to be different, are empirically different from one another (Hair et al., 2017; Sarstedt et al., 2017). The data used for model evaluation consisted of 36 indicator items adapted from various existing scales, but their internal reliabilities were re-tested in the current context to control for common method bias (Podsakoff et al., 2012). Discriminant validity tests were assessed based on the cross-loadings of the indicator items in SPSS. The cross-loading rule is that items should load highly on the construct they are purported to measure and lowly on other constructs. The rule of thumb is that an item is loading highly in more than one construct must be dropped (Hair et al., 2017). Consequently, items that account for more than 50% variance in multiple variables and those with loadings below 0.50 were dropped (Podsakoff et al., 2012). The remaining items were subjected to cross-loading checks in PLS to determine the discriminant validity of indicators (Sarstedt et al., 2017; Hair et al., 2019).

Discriminant validity was assessed using the more reliable heterotrait-monotrait (HTMT) ratio initially recommended for PLS-SEM (Henseler et al., 2015; Voorhees et al., 2016; Hair et al., 2017). Hair et al. (2017) argues that the exact threshold of HTMT is debatable but Henseler et al. (2015) has suggested an upper limit threshold of 0.90. Consistent with Henseler et al. (2015), the lower the HTMT value, the more the two constructs are perceived to be distinct and that HTMT values close to 1 indicate lack of discriminant validity.

The bootstrap method was used to get the confidence intervals of the HTMT ratios. The confidence intervals were used to determine the statistical significance of the HTMT ratios (Henseler et al., 2015; Hair et al., 2019). Following Henseler et al.'s (2015) guidelines, confidence intervals of the HTMT statistic should not include 1 or cross zero. If they include zero, they indicate lack of discriminant validity, and therefore should be considered statistically insignificant.

Once all the criteria for assessing the measurement were ascertained, the next step involved an assessment of the structural model. As required by the protocol of PLS-SEM model evaluation criteria (Hair et al., 2017), the measurement model was assessed for sufficient internal reliability (Cronbach alphas and Composite reliability, convergent validity (AVE) and discriminant validity (HTMT), before the structural model evaluations were carried out. According to Hair et al. (2012b), if the measurement lacks reliability and validity, the inner model estimates may be substantially biased, leading researchers to overlook relationships that could be significant.

### **5.6.3. Evaluation of the structural (inner) model**

Following Hair et al. (2017) guidelines, the structural model is evaluated after the measurement model has shown sufficient reliability and validity. The reason given for this is that if the specified measurement (outer) model does not possess the minimum required properties of acceptable reliability and validity, the structural (inner) model estimates become meaningless (Henseler, Hubona & Ray, 2016). As a condition, the outer model has to demonstrate acceptable levels of reliability and validity criteria before assessing the inner structural model in PLS-SEM (Hair et al., 2017).

#### *5.6.3.1. Testing for multicollinearity and the model goodness of fit.*

Even though Hair et al. (2017) suggest that testing for multicollinearity of the constructs is not a necessary condition for reflective models, they did not mention any danger for doing so. In contrast, Henseler et al. (2016) state that it is always recommendable to test for multicollinearity even in reflective models. Consequently, the multicollinearity of the constructs was examined based on the variance inflation factor (VIF) method. Multicollinearity measures the degree to which two constructs in the same model are perceived as being different from one another (Hair et al., 2019). The recommendation of Hair et al. (2017) is that the VIF value between any two variables in the same reflective model must not exceed 5. The smaller the VIF, the more the constructs are perceived to be different. In contrast, the higher the VAF, the more the two constructs are perceived as not different from one another.

After the VIF evaluation (results are in Chapter 6), the model was examined for its goodness-of fit (GoF) to the data set, which will be explained in detail in section 5.6.3 below.

#### 5.6.3.2. Evaluation of structural paths ( $\beta$ -values)

In constructing a causal theoretical model, Va de Waldt (2020) recommends that prior to any model assessment, the first step is to establish the directions, strengths and statistical significance of the causal structural path coefficients between and among the constructs in the model. Following this advice, the statistical significance of each path coefficient was determined by performing a complete bootstrapping of the sample 5000 times to get the t-values, p-values and confidence intervals at a 5% two-tailed significance level (Preacher & Hayes, 2008). The primary focus of this step was to assess whether the model coefficients were significant, meaningful and in the hypothesised direction, rather than testing the model's predictive capacity. After establishing the statistical significance of the path coefficient, its relevance to the model prediction was evaluated by examining its magnitude. The closer the path coefficient was to +/- 1.0, the more relevant it was to the prediction of the endogenous than that close to zero.

#### 5.6.5. Hypotheses integration, explanatory and predictive evaluations

The proposed model was developed by synthesising all the proposed hypotheses from the literature in Chapter four. Data from the survey was then used to empirically validate the hypotheses and the proposed model for further analysis, in line with the research objectives.

Research objectives 1a (RO1a) sought to synthesise the proposed model from the hypothesised relationships in the literature review in order to assess its explanatory power. Research objective 1b (RO1b) sought to evaluate the predictive relevance of the proposed statistical model. As stated before, these two research objectives were meant to fully address research question one (RQ1).

The most common measure used to evaluate the amount (proportion) of variance in the outcome construct explained by all the predictor variables taken together, is the coefficient of determination ( $R^2$ ) (Shmueli et al., 2016, 2019; Sarstedt et al., 2017).

According to Hair et al. (2017),  $R^2$  represents the explanatory power of the proposed model. There is no threshold for  $R^2$ , but the closer it is to 1.0, the higher the in-sample explanatory power or predictive accuracy of the model (Hair et al., 2011; Rigdon, 2012; Sarstedt et al., 2014). Henseler et al. (2009) and Hair et al. (2011, 2017, 2019) suggest that  $R^2$  values of 0.75, 0.50 and 0.25 indicate substantial, moderate and weak levels of predictive accuracy.

The model's predictive power was assessed using the in-sample predictive relevance based on the Stone-Geisser  $Q^2$  value of the target construct (BI) and the out-of-sample predictive relevance using the root mean squared error (Shmueli et al., 2019). In evaluating the in-sample predictive relevance of the global model, Hair et al. (2017) state that only the  $Q^2$  value of the ultimate target variable should be reported. As such, the blindfolding procedure was used to determine the  $Q^2$  value of BI. As a rule of thumb, any  $Q^2$  values greater than zero but less than 0,25 represent a small in-sample predictive power, while  $Q^2$  values between 0.25 to 0.50 represents medium predictive power of the model. Values of  $Q^2$  above 0.50 depict large predictive relevance (Shmueli et al., 2016; Hair et al., 2019).

The out-of-sample predictive capacity reflects the model's ability to estimate the likely behaviour of new cases not included in the sample used to generate model estimates (Shmueli et al., 2016, 2019). According to Shmueli et al. (2019), a model's out-of-sample predictive power can be evaluated as a comparison of the differences between either the root mean squared error (RMSE) and their corresponding naïve benchmark values extracted from the linear regression model (LM) or as well as the mean absolute error (MAE) and their LM values. In this study, the out-of-sample predictive capacity of the model was evaluated based on both the RMSE and MAE to determine whether the results would be the same. The condition for the out-sample predictive capacity of a model is that all the LM-RMSE or LM-MAE differences must be positive. The smaller these differences are, the higher the out-of-sample predictive power of the proposed model. Conversely, the higher the difference between LM and the corresponding RMSE and/or MAE values, the lower the model's predictive power (Shmueli et al., 2016, 2019). To obtain the RMSE, MAE and LM figures for evaluation of the out-of sample predictive, the researcher ran the PLSpredict process in Smart PLS 3.2.9, using 10 folds and 10 repetitions.

The following four guidelines recommended by Hair et al. (2019) and Shmueli et al. (2019) when comparing the RMSE and MAE values for determining the out-of-sample predictive power of a model were applied in this study:

- 1) If all the PLS values are higher than the naïve LM values ( $LM < PLS$  or  $LM - PLS < 0$ ) for all indicators, it indicates that the model lacks predictive power.
- 2) If most of the dependent construct's indicators in PLS analysis have higher values than in the naïve LM, it indicates that the model has low predictive power.
- 3) If a minority or the same number of indicators in PLS analysis yield higher predictions than the naïve LM benchmark, it indicates a medium predictive power.
- 4) If none of the indicators in PLS analysis has higher RMSE or MAE values than the naïve LM benchmark ( $LM > PLS$  or  $LM - PLS > 0$ ), the model has high predictive power.

#### **5.6.5. Evaluation the explanatory roles of the RSat, SQ and OCS (RO2)**

Research objective two (RO2) sought to explore the underlying mechanisms by which PJSR influenced BIs through its influences on the RSat, SQ and OCS. By its nature this research objective (RO) was based on establishing the explanatory roles of endogenous constructs (RSat, SQ and OCS) in the formation of BIs. This meant establishing the mediating roles of these factors in the formation of BIs in the context of the study. However, Henseler et al. (2016) suggest before mediation analysis is conducted, researchers must evaluate the proposed model's goodness-of-fit (GoF). GoF pertains to the extent to which a model 's predictions explain (fit) dependent-variable values of the observations used in developing the model (Henseler & Sarstedt, 2014). The argument is that, besides the estimates obtained from a model which does not fit the data being meaningless, the conclusions drawn from it will be questionable and invalid. Consequently, the model's GoF tests were conducted using the bootstrap analysis of SmartPLS, before the mediation tests were examined.



#### 5.6.5.1. Model's goodness-of-fit

Hair et al. (2017) state that the metric used to measure a model's GoF in PLS-SEM has been a debate over years. Traditionally, PLS-SEM advocates (Sarstedt et al., 2017) have followed Henseler and Sarstedt (2013) in challenging the usefulness of GoF both conceptually and empirically. However, recently some of the advocates of PLS-SEM (Henseler et al., 2016) have shown an appreciation of the importance of measuring a model's GoF index before validation of the structural paths. The main importance of GoF index is that it takes both the measurement and structural model's performance into account. In doing so, it means the GoF index provides a global validation of the proposed statistical model. Even with that explanation, still contradictory views about measuring the GoF index in PLS-SEM have been raised by Hair et al. (2017). These authors argue that the GoF test has been developed for the CB-SEM but it is not yet well developed for the PLS-SEM method, and therefore its meaning in the context of CB-SEM is not fully transferable to PLS-SEM. Henseler and Sarstedt (2013) as well as Sarstedt et al. (2017), share a similar view, stating that GoF index cannot reliably distinguish valid from invalid models, and therefore PLS-SEM researchers should avoid its use for evaluating the a model's overall fit to the collected data. Likewise, the lack of clarity on the usefulness of the GoF index, has been considered a serious limitation of the PLS-SEM method in social science research. To address this deficiency, Henseler et al. (2016) later developed a way of assessing GoF in PLS-SEM, which they recommended should be done, particularly for evaluation explanatory models. According to these authors, the main debate is about the unit of measuring the GoF index.

Several PLS-SEM-based model fit measures have been proposed but Hair et al. (2017) argue that they are still in their infant stages of development. More recently, Henseler et al. (2016) assessed the efficacy of using the standardised root mean square residual (SRMR) as a measure of GoF in PLS-SEM. According to Henseler et al. (2014, 2016), SRMR is an absolute measure of fit. Acceptable values of SRMR range between 0 and 0.08. The closer the SRMR value is to zero, the better the model fit (Henseler et al., 2014; 2016). A value of zero indicates a perfect fit. According Henseler et al. (2016), the other measures of GoF like the root mean square residual covariance ( $RMS_{\theta}$ ) have not been well developed in PLS-SEM. Hair et al. (2017) concur with that view stating that too little is known about the

behaviour of these other measures of GoF in PLS-SEM. Hence, in this study, the standardised SRMR index was used to assess the GoF of the proposed model before further tests were conducted.

#### *5.6.5.2. Mediation and hypotheses testing*

Mediation tests were conducted to address RO2 which sought to explicate the explanatory roles of RSat, SQ and OCS in the formation of BIs in the mobile telephone industry, in line with the proposed structural paths in the proposed statistical model. However, the condition for mediation analysis in PLS-SEM requires that all the quality assessments of the measurement model and structural model be satisfied before any mediation is tested (Nitzl et al., 2016). In line with this requirement, the statistical significance of all the criteria metrics of the outer and the inner models were evaluated before mediation analysis. A structural path was considered important for mediation analysis only if it was statistically significant.

Mediation analysis provides a method to examine the mechanisms by which an exogenous latent variable affects an endogenous variable through another or other intermediate constructs (Baron & Kenny, 1986; Henseler et al., 2016; Nitzl et al., 2016; Sarstedt et al., 2017). A mediator variable decomposes the total effect of a predictor variable into its direct effects (controlling for the mediator) and its indirect effects on the outcome variable through the mediator. Therefore, mediation tests explain the mediation roles of RSat, SQ and OCS in line with RQ3, which was decomposed into hypotheses that predict different relationships as shown in the conceptual framework in Figure 4.2.

The tests for mediation involved a detailed analysis of the statistical significance of the structural paths, as recommended by Nitzl et al. (2016) and seconded by Hair et al. (2017) and Sarstedt et al. (2017) for PLS-SEM. In line with the protocol of mediation analysis in PLS-SEM (Nitzl et al., 2016), the first step was to evaluate the statistical significance of the total indirect effects, followed by specific indirect effects and finally, the total effects, which is the sum of all the direct and indirect effects.

The evaluation criteria followed the method recommended by Nitzl et al. (2016), which specifies that for mediation to exist, both indirect and direct effects must be

statistically significant, otherwise no mediation. Nitzl et al. (2016) also state that if the indirect effects are statistically significant but the direct effect is not, then there is full mediation. Similarly, there will be no mediation when the direct effect is statistically significant, but the indirect effect is not. The t-values, p-values and confidence intervals (CI) were included in the tables for statistical significance analysis of the direct and indirect paths (Hair et al., 2017).

#### *5.6.5.3. Additional tests conducted to substantiate the type of mediation*

Mediation occurs in two forms: partial mediation and full mediation (Nitzl et al., 2016). The variance accounted for (VAF) values were computed for each specific relationship to determine whether the type of mediation could be described as partial or full mediation. The variance accounted for (VAF), which quantifies the magnitude of the indirect effects on the total effects, was computed to provide further evidence of partial mediation. According to Hair et al. (2013) and Nitzl et al. (2016), (1) if VAF value is below 20%, it means there is no mediation, (2) if VAF lies between 20% and 80%, it means there is partial mediation and (3) if VAF is above 80% it means there is full mediation. Where partial mediation was exhibited, further tests were conducted to evaluate whether the partial mediation was complementary (both the indirect and the direct effects are significant and have the same sign) or competitive both the indirect and direct effects are significant but carry opposing signs (Nitzl et al., 2016). To distinguish between two types of partial mediation, the product of the direct and total indirect effect was computed. A positive result implies a complementary partial mediation, while a negative result signifies a competitive partial mediation (Nitzl et al., 2016).

#### **5.6.6. Moderation effects of switching barriers (SB) (RO3)**

Research objective three (RO3) sought to examine the extent to which switching barriers (SBs) would influence the strength and direction of the relationships between the BI construct and its antecedents in the mobile phone industry. In this study, switching barriers were considered to be intervening factors that customers would consider when making decisions to continue with or terminate their relationships with the current service provider. In order to address RO3, the researcher examined the moderation effects of SBs on the RSat-BI, SQ-BI and OCS-BI relationships.

Following Hair et al.'s (2017) guidelines, the condition for test for moderation effects is that the proposed model must pass both the outer and inner model assessment criteria after adding the intervening variable to the proposed model. According to Henseler et al. (2016), the logic behind this condition is that, if the proposed model does not meet the outer and inner assessment criteria, the moderation results will be meaningless. Consequently, before the model was examined for the moderation effects of SBs, the outer and inner models assessments were conducted to confirm that all the relevant quality criteria were satisfied (Hair et al., 2017).

The protocol for testing moderation in PLS-SEM requires that the independent variables and the moderator be standardized before the moderation effects are examined. The standardisation process involves subtracting the variable's mean from each observation and dividing the result by the variable's standard error (Sarstedt & Mooi, 2014). This is meant to reduce collinearity among the moderation construct, the independent variables and the exogenous constructs, resulting from the reuse of indicators when using the product indicator approach (Hair et al., 2017). The moderation effects of SBs on the relationship between BI and its direct antecedents were presented in a graphical plot. The gradient or slopes of the lines in the plot were checked for their statistical significance before interpreting their meanings.

#### **5.6.7. Importance-performance (IPMA) evaluations (RO4)**

Research objective four (RO4) sought to evaluate the overall performance of PJSR, RSat, SQ and OCS on the formation of BIs and to examine the extent to which mobile subscribers considered them important in deciding about whether or not to continue with the same MNO. To address this research objective, the researcher used the importance-performance gap analysis (IPMA) (Ringle & Sarstedt, 2016; Tailab, 2020) of these predictor variables. In order to provide a deeper understanding of the IPMA matrix for strategic recommendations, Ringle and Sarstedt (2016) recommend that the IPMA for the predictor constructs be complemented with an IPMA of the indicator items. Consequently, the two IPMA were conducted in this study. However, Ringle and Sarstedt (2016) allege that many

managers do not know how to correctly interpret the IPMA from PLS-SEM. Hence a brief description of how the IPMA works is given below.

#### *5.6.7.1. Construction of the IPMA for constructs*

The importance and performance were determined from the drawn importance-performance map analysis (IPMA) grid for BI. The IPMA analysis is important for identifying and prioritising areas requiring improvement (Ringle & Sarstedt, 2016; Hair et al., 2017; Tailab, 2020). A construct's importance is its total effects (sum of direct and its total indirect effects) on the target constructs (Ringle & Sarstedt, 2016). The importance of a construct is the X-axis. The value for each construct is the total effects of the indicator on the target construct (BI). The performance of the constructs is the Y-axis. The performance of a construct is expressed as a percentage from zero to 100%. The IPMA plot was obtained by running the IPMA on SmartPLS software.

#### *5.6.7.2. Construction of the IPMA for the indicator items*

Since the IPMA for constructs is general, the IPMA tool for the indicators was necessary to identify the specific areas for management actions (Ringle & Sarstedt, 2016). Thus, the IPMA for indicators was deemed an important step in determining the specific indicators affecting the performance of the endogenous construct (Ringle & Sarstedt, 2016). The construction of the IPMA for indicator items followed the same approach used for drawing the IPMA for the construct. The X-axis reflects the importance of the indicator item in influencing the customer's intentions to continue with or terminate the relationship while the Y-axis reflects the performance of the indicator in influencing the BI.

## **5.7. CHAPTER SUMMARY**

The chapter presented the research methodology of the study. The study adopted a positivist epistemology and used quantitative data collected from a cross-sectional survey of mobile subscribers to validate the proposed model. Due to the wide dispersion of subscribers across the country, convenient sampling was adopted for data collection using a self-administered questionnaire. SmartPLS version 3.2.9 was used for outer and inner model assessments following Hair et al.'s (2017) two-stage protocol. The explanatory power of the study was evaluated using  $R^2$ . The in-sample

predictive relevance of the model was evaluated using the  $Q^2$  from the blindfolding procedure. The model's out-of-sample predictive power was evaluated using the differences in RMSE and MAE and their corresponding LM values. The chapter also states that mediation analysis was conducted to explicate the explanatory of RSat, SQ and OCS in the formation of BIs here perceived justice is involved. The chapter concludes with a description of the importance-performance map analysis (IPM) as a diagnostic tool for identifying areas of focus for management. The results are presented and interpreted next in Chapter six.

## CHAPTER 6: PRESENTATION AND INTERPRETATION OF RESULTS

### 6.1. INTRODUCTION

This chapter presents the results of the study consistent with the research objectives formulated in Chapter one. The chapter commences with the presentation of descriptive statistics of the respondents, followed by the results of the two-stage model evaluation in the partial least square structural equation modelling (PLS-SEM) method. The results of the outer model assessment are presented first, and those of the structural model assessment are presented next. For clarity and ease of flow, the presentation of the results follows the order of the Research Objectives (ROs), from RO1a to RO4. Finally, the chapter concludes with a summary of the key findings raised in the findings.

### 6.2. DESCRIPTIVE STATISTICS

#### 6.2.1. Demographic profiles of the respondents

Table 6.1 illustrates the demographic statistics of surveyed sample in terms of the characteristics in the table. Table 6.1 revealed that all the 405 respondents could recall having encountered a problem with their mobile network operator (MNO) before. The demographic profiles in Table 6.1 show that, 219 (54.1%) of the respondents preferred Vodacom Lesotho (VCL), while 178 (44%) preferred Econet Telecom Lesotho (ETL). The reason for this was not clear but it could be because VCL came to Lesotho first and has been in market for a longer period than ETL. Only 8 (1.9%) of the respondents used MNOs from South Africa, possibly because they lived at the border between South Africa and Lesotho.

**Table 6.1: Demographic profiles of the respondents by question**

	Frequency	Percent	Cumulative Percent
<b>1. Is the choice of the Cellular company you use your independent decision?</b>			
No	0	0	0
Yes	405	100.0	100.0
Total	<b>405</b>		
<b>2. Which Cellular company do you most of the time?</b>			
Vodacom Lesotho	219	54.1	54.1

Econet Lesotho	178	44.0	98.1
MTN (SA)	5	1.2	99.3
Telkom (SA)	2	0.5	99.8
Cell C (SA)	1	.2	100.0
Total	<b>405</b>		
<b>3. What is your form of subscription?</b>			
Post-paid	4	1.0	1.0
Pre-paid	401	99.0	100.0
Total	<b>405</b>		
<b>4. How long have you been using this Cellular company?</b>			
6months to 1 year	29	7.2	7.2
1-2yrs	48	11.9	19.0
3-4yrs	69	17.0	36.0
over 5yrs	259	64.0	100.0
Total	<b>405</b>		
<b>5. As far as you can recall, have you ever experienced any problems like loss of network signal or connectivity, loss of airtime, data bundles, rapid data consumption etc in the past?</b>			
No	0	0	0.0
YES	405	100	100.0
Total	<b>405</b>		
<b>6. Please indicate your gender in the appropriate box below.</b>			
Female	198	48.9	48.9
Male	207	51.1	100.0
Total	<b>405</b>		
<b>7. Please indicate in the appropriate box, your age group.</b>			
18-28 years	258	63.7	63.7
29-39 years	105	25.9	89.6
40-50 years	32	7.9	97.5
51-60 years	9	2.2	99.8
61 years and above	1	0.2	100.0
Total	<b>405</b>		
<b>8. What is your highest level of education?</b>			
Primary	4	1.0	1.0
Secondary	47	11.6	12.6
Certificate level	55	13.6	26.2
Diploma	52	12.8	39.0
Undergraduate degree	220	54.3	93.3



MSc degree	24	5.9	99.3
PhD	3	0.7	100.0
Total	<b>405</b>		
<b>9. Please tick the appropriate box that describes your employment status.</b>			
Self-employed	57	14.1	14.1
Formally employed	127	31.4	45.4
Studying student	166	41.0	86.5
Farmer	55	13.6	100.0
Total	<b>405</b>		
<b>10. Please tick the appropriate box that describes your estimated monthly income.</b>			
None	160	39.5	39.5
Below R5000	157	38.8	78.3
R5001-R10000	41	10.1	88.4
R10001- R20000	27	6.7	95.1
R20001-R25000	10	2.5	97.5
R25001- R30000	5	1.2	98.8
Above R30000	5	1.2	100.0
Total	<b>405</b>		

The table also shows that 401 (99%) respondents were pre-paid while only 4 (1%) were postpaid subscribers. In terms of their loyalty, 29 (7.2%) had used their current MNO for almost a year, 48 (11.9%) had been with the current MNO for almost 2 years, 69 (17%) had been with same MNO for a maximum of 4 years while 259 (64%) had been with the same company for over years. This indicates that generally, the Basotho people are loyal to their MNO. The reason could be that subscribers have restricted choices since there are only two major MNOs in the country. In the context of this study, the respondents' confirmation of a service failure was an important step in the development of the model as the conceptual framework assumed an occurrence of a service failure and service recovery. All the respondents, 198 (48.9%) and 207 (51.1%) males, recalled that they had experienced some problems with their MNO. This should be of great concern and discomforting to the MNOs as subscribers' recall of bad experiences may lead to unfavourable behavioural intentions (BIs) and/or switching.

In terms of their age groups, the group consisted of 258 (63.7%) aged between 18 and 28 years, 105 (25.9%) aged between 29 and 39 years, 32 (7.9%) aged between

40 and 50 years, 9 (2.2%) aged between 51 and 60 years and 1 person above 60 years. These results reflect the high affinity for technological connectivity of the youth. Including people above 40 years in the survey was important for getting a balanced opinion on the investigated issues. These people had attained different levels of education with 4 (1%) having attained primary level, 47(11.6%) secondary, 55 (13.6%) certificate level, 52 (12.8%) diploma level, 220 (54.3%) having one degree, 24 (5.9%) holding master degree and 3 (0.7%) having a PhD. The level of education is important to mobile operators because research has proven that educated individuals tend to demand quality services from MNOs (Al-Haddad, Taleb & Badran, 2018).

The occupation of the participants was also normally distributed with 57(14.1%) being self-employed, 127 (31.4%) in formal jobs, 166 (41%) being students and 55(13.6%) being peasant farmers. The monthly incomes of the respondents varied across the participants. Of the respondents surveyed, 160 (39.5%) indicated that they did not have monthly earnings. Possibly the majority of these respondents were students since there 166 students in the survey. 157 (38.8%) had a monthly income below five thousand rands, 41(10.1%) earned between five thousand and ten thousand rands, 27 (6.7%) earned between ten thousand and twenty thousand rands, 10 (2.5%) earned between twenty thousand and twenty-five thousand rands, 5 (1.2%) earned above twenty-five thousand but below thirty thousand rands and 5 (1.2) earned above thirty thousand rands. The assortment of the surveyed participants suggests a balanced representation of what be classified as lower class or the poor (those not earning any income), middle class (earnings above R25000 but below R30 000) and the upper class (earning above R30 000 per month).

### **6.2.2. Differences between respondents in terms of the variables measured**

The demographic data were subjected to t-statistic tests in Social Package for Social Scientist (SPSS) to determine if there were significant statistical differences in the two categorical groups of gender and prepaid and post-paid subscribers, in terms of their perceived justice (PJSR), service recovery satisfaction (RSat), perceptions of service quality (SQ), overall satisfaction (OCS) and BIs. The results showed no significant differences between the male and female respondents and between the

pre-paid and post-paid customers in terms of the measured variables measured in this study.

### **6.2.3. Data reduction method**

The questionnaire used to collect data for the development and validation of the model predicted in the conceptual framework initially had more than 70 indicator items. Each construct in the model was measured using several indicator items such that handling and fitting all of them in one partial least square (PLS) model would present logistical challenges. As such, these data were subjected to a preliminary data cleaning process in SPSS before PLS-SEM analysis was conducted. Of the two common techniques used for data reduction in social science, factor analysis was deemed more sophisticated as it proposes a model to explain the correlations of the observed variables. As stated in the methodology chapter (section 5.5.1), data were reduced using the Principal Component Analysis (PCA) technique. The Principal Factor Analysis (PFA) was deemed inappropriate as the hypothesised model was reflective, not formative.

Indicator statements were subjected to factor analysis using principal axis factoring with varimax rotation in SPSS to identify items that were cross-loading or not loading well for possible dropping before PLS analysis (Podsakoff et al., 2012). Twelve factors were extracted, which explained 73% of the variance in BIs. Eight items were dropped because their cross-loadings were considered high with a coefficient of 0.5 and above in more than one factor (Field, 2017).

The Kaiser-Meyer-Olkin (KMO) was used to determine the sampling adequacy of data used for factor analysis. The obtained value of the KMO measurement of 0.931 was above the threshold of 0.6 (Siebert & Kunz, 2016), demonstrating sample adequacy. These data were subjected to Bartlett's test of sphericity to determine redundant items and to examine the extent to which factor analysis was applicable and suitable to the collected data. The Bartlett's test of sphericity obtained was significant ( $X^2 = (2080) = 26998.626$ ,  $p = 0.000$ ), confirming that factor analysis was appropriate, and therefore, the factors identified in the factor analysis would be acceptable for further analysis.

#### 6.2.4. Mean and standard deviations of the variables

The average scores of the constructs were computed. The results are shown in Table 6.2.

**Table 6.2: Mean and standard deviations of the constructs**

Construct	Minimum	Maximum	Mean	Standard deviation
PJSR	1.00	7.00	4.59	1.39861
SQ	1.00	7.00	4.45	1.02920
RSat	1.00	7.00	4.87	1.45767
CS	1.00	7.00	5.16	1.45063
SB	1.00	7.00	3.83	1.14484
BI	1.00	7.00	5.04	1.47759

As shown in Table 6.2, the average scores of the constructs ranged from a minimum of 3.83 for switching barriers (SBs) to a maximum of 5.16 for overall customer satisfaction (OCS), suggesting that the MNOs in this market were perceived to be doing well in all the measured variables in this study. The mean score of 5.16 on a scale of 7 gives 74% for OCS. This suggests that subscribers were generally satisfied with their MNOs, leading to mean score of 5.04 (72%) favourable BIs. Although the mean score for service recovery (RSat) was 4.87 (70%), the fairness construct (PJSR) was only moderate average score of 4.59 (66%). This suggests that MNOs are not as fair as the wishes of subscribers whenever there is a service delivery breakdown. The average score of 4.45 (64%) for service quality (SQ), should be a cause for concern to the industry, as it suggests that the MNOs are just meeting the expectations of their customers. This could probably suggest that MNOs are prioritising other key performance indicators at the expense of service quality. The average score for switching barriers was 3.83 (55%). This indicates that respondents did not feel very restrained from changing their current MNO. A possible explanation is that subscribers did not feel tied to a MNO because majority of them (99%) were pre-paid customers. A combination of low switching barriers, unfair service recovery (PJSR=66%), and poor service quality (64%), motivate customers

to defect if better alternatives were available. It is logical to suggest the two MNOs are surviving because of lack of alternatives.

#### **6.1.4. Inter-construct correlations**

Although inter-construct correlations were not hypothesised in this study, they are necessary to show variables related to one another. Even though correlational associations cannot provide a cause-effect mechanism, there is no cause-effect relationship without correlations. If variables are highly correlated, they are likely to share common factors. The results of the inter-construct correlations and the respondents' profiles are shown in Table 6.3.

A visual inspection of the correlational matrix shows that all the constructs in the study had positive and statistically significant correlations with the BI construct, indicating that further investigation of the proposed relationships were worthwhile. The table also showed positive significant associations between the respondents' *independent* or *dependent* choice of a MNO and the form of subscription (0.226), period of stay with the company (0.145), age of respondent (0.102) and switching barriers (0.099\*). The results also revealed a reciprocal association between the age and occupation of the subscriber (-0.295\*\*), which may suggest that the chances of getting a job diminishes as one gets older. There was a positive significant association between occupation and income (0.530\*\*), which suggests that the higher the job status, the better the monthly earnings. Logically, better jobs translate into better earnings. As expected, the association between education and income was positive and significant (0.182\*\*). This suggests that the level of education was a determinant of the income level, while higher remuneration was restricted to those with higher levels of education.

**Table 6.3: Interconstruct associations**

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Choice	1																	
2	Company	-.043	1																
3	Subscription	.226**	.016	1															
4	Period	.145**	-.240**	.186**	1														
5	Problem	-.081	-.001	-.211**	-.172**	1													
6	Gender	.012	-.029	-.041	.034	.028	1												
7	Age	.102*	.043	-.043	.015	.103*	.027	1											
8	Education	.019	.065	-.026	.122*	.018	-.031	-.007	1										
9	Occupation	.039	-.026	.046	-.038	-.050	-.072	-.295**	-.041	1									
10	Earnings	-.054	.034	-.105*	-.005	.158**	.102*	.498**	.182**	.530**	1								
11	OCS	-.015	.130**	-.003	-.036	-.005	.022	-.082	.067	-.001	.031	1							
12	BI	.010	.151**	.023	-.021	-.017	.025	-.039	.008	.032	-.027	.764**	1						
13	Justice	.039	.092	-.048	-.051	.048	.056	.005	.025	-.057	.061	.525**	.538**	1					
14	SB	.099*	.000	-.034	-.074	.062	-.015	.081	-.073	-.067	.071	.361**	.366**	.323**	1				
15	RSat	-.017	.109*	-.018	-.058	.017	.056	-.021	-.023	-.056	.001	.548**	.570**	.646**	.356**	1			
16	SQ	-.089	.047	-.004	.002	.027	-.029	-.042	-.001	-.033	.043	.424**	.471**	.427**	.324**	.526**	1		
17	BI (RPI)	.043	.156**	.036	.034	-.029	.069	-.024	.078	.007	-.006	.711**	.918**	.450**	.331**	.515**	.415**	1	
18	BI (WOM)	-.015	.133**	.012	-.059	-.007	-.009	-.046	-.043	.047	-.039	.725**	.959**	.547**	.354**	.553**	.464**	.767**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed); \* . Correlation is significant at the 0.05 level (2-tailed).

### 6.3. EMPIRICAL VALIDATION OF THE PROPOSED MODEL

The process of model assessment follows the two-stage protocol suggested for PLS-SEM, where the outer model is assessed before moving on to the assessment of the inner model (Hair et al., 2019). The reason given for this order was explained in section 5.6.2 of Chapter five. As discussed in Chapter five, the variables in this study were all reflective in line with the previous studies on mobile network operators or mobile communication (Pihlström, 2008). The choice of the PLS-SEM as the most appropriate technique for data analysis was discussed in detail in Chapter five. As such, Hair et al.'s (2019) two-stage protocol for assessing reflective models was followed to answer the research objectives set in chapter one.

#### 6.3.1. Testing for goodness-of-fit

As recommended by Henseler et al. (2015, 2016), the model fit of the proposed model was examined using the Standardized Root Mean Square Residual (SRMR). The results of goodness-of-fit obtained from bootstrapping process, are shown in Table 6.4.

**Table 6.4: Test of goodness-of-fit**

SRMR	Original Sample (O)	Sample Mean (M)	95%	99%
<b>Saturated Model</b>	0.020	0.016	0.020	0.022
<b>Estimated Model</b>	0.036	0.019	0.026	0.030

As shown in Table 4, both the saturated and estimated estimated SRMR were below 0.08. This indicates that the proposed model was acceptable for further tests, since it had sufficient fit to the empirical data. Thus, the proposed model was suitable for outer an inner model assessments and mediation tests.

#### 6.3.2. Assessment of the measurement model

The first stage involved assessing the internal reliability, the composite reliability, the validity and the average variance extracted (AVE) of the model. The indicator outer loadings, Cronbach alpha, CR and AVE, are shown in Table 6.5.

### 6.3.2.1. Internal reliability tests

As illustrated in Table 6.5, all the outer loadings of all the indicators were well above the minimum cut-off point of 0.70, thus, indicating sufficient internal reliability. However, indicator InfJ had the smallest outer loading of 0.733, while the “Reliability” indicator had the highest outer loading of 0.934. Overall, the results of the outer loadings suggest high levels of indicator reliability. Table 6.5 revealed that all the constructs had Cronbach alphas above the 0.70 thresholds, ranging from 0.856 (SQ) to 0.945 (RSat). The CR values revealed a similar trend, with the lowest figure of 0.861 (SQ) and the highest figure of 0.945 (RSat). Thus, based on these measurements, the five constructs showed high levels of internal reliability to support further analysis. Both Cronbach alpha and CR were reported for the completeness of the report. Otherwise, the reliable metric for internal reliability in complex models is the CR.

### 6.3.2.2. Convergent validity results

The convergent validity was determined using AVE shown in Table 6.5.

**Table 6.5: Outer loadings of the indicator items**

Construct	Indicator	Outer Loading	p-value	Cronbach alpha	CR	AVE
Behavioural Intentions (BI)	RPI	.865	0.000	.870	.870	.770
	WOM	.890	0.000			
Perceived justice (PJSR)	DJ	.871	0.000	.868	.873	.699
	InfJ	.724	0.000			
	PJ	.902	0.000			
Overall customer satisfaction (OCS)	OCS1	.900	0.000	.937	.937	.789
	OCS2	.926	0.000			
	OCS3	.907	0.000			
	OCS4	.817	0.000			
Service recovery satisfaction (RSat)	RecSat1	.917	0.000	.945	.945	.851
	RecSat2	.923	0.000			
	RecSat13	.928	0.000			
Service quality (SQ)	Reliability	.934	0.000	.856	.861	.757
	Responsiveness	.802	0.000			

**Note:** Significance means  $p < 0.05$



As shown in Table 6.5, all AVE values for the construct were above the minimum threshold of 0.50 (ranging from 0.699 for PJSR to 0.851 for RSat), indicating that all the constructs in this study explained more than 50% of the variance in the indicators used to measure them. Thus, the AVEs of the construct showed sufficient convergent validity of the measurement model.

### 6.3.2.3. Discriminant validity measurements

Studies on PLS-SEM use (Hair et al., 2017; 2019; 2020) reveal that researchers predominantly used the Fornell-Larker's criterion and indicator's cross-loadings to determine discriminant validity for reflective constructs. However, recent developments in social science have suggested dropping the use of the Fornell-Larker criterion in favour of a more reliable heterotrait-monotrait (HTMT) method. Hair et al. (2017) state that studies have shown that the Fornell-Larker criterion does not perform well when indicator loadings are between 0.65 and 0.85. More details about why the Fornell-Larker criterion was deemed unsuitable for determining discriminant validity in PLS-SEM models and the preference for the HTMT criterion have been provided in the discussion of the methodology in Chapter 5. Therefore, the new criterion for assessing discriminant validity, the heterotrait-monotrait (HTMT) initially suggested by (Henseler et al., 2015), was deemed to be a more effective approach was used. The results of the HTMT evaluation are presented in Table 6.6.

**Table 6.6: Results of the Heterotrait-Monotrait (HTMT) ratio evaluation**

	BI	PJSR	OCS	RSat	SQ
BI					
PJSR	0.629				
OCS	0.846	0.600			
RSat	0.646	0.720	0.602		
SQ	0.607	0.582	0.577	0.617	

As shown in Table 6.6, the HTMT ratios between the constructs were below the maximum of 0.85, indicating sufficient discriminant validity among the constructs in the model. The results revealed that SQ and OCS had the highest discriminant validity (HTMT= 0.577), while BI and OCS (HTMT = 0.846) showed the lowest discriminant validity. As expected, all the HTMT ratios between the pairs of

constructs were statistically significant as their confidence intervals did not cross zero, clearly supporting that there was sufficient discriminant validity among the constructs. A summary of the results of the outer model assessment is shown in Table 6.7.

**Table 6.7: Summary of the outer model assessment**

Variable	Items	Item load	Internal Reliability		Convergent validity	Discriminant validity
			CR	$\alpha$	AVE	HTMT
			$\geq 0.70$	0.70 -0.95	0.70 -0.95	$\geq 0.50$
BI	RPI	.865	.870	.870	.770	YES
	WOM	.890				
PJSR	DJ	.871	.873	.868	.699	YES
	InfJ	.724				
	PJ	.902				
OCS	OCS1	.900	.937	.937	.789	YES
	OCS2	.926				
	OCS3	.907				
	OCS4	.817				
RSat	RecSat1	.917	.945	.945	.851	YES
	RecSat2	.923				
	RecSat3	.928				
SQ	Reliab	.934	.861	.856	.757	YES
	Respon	.802				

As shown in Table 6.7, all the quality criteria used for outer model assessment were satisfied, thus, lending support for the evaluation of the structural model in the second stage of the internal model assessment.

### 6.3.3. Structural (inner) model assessment

The inner model was assessed using the coefficient of determination ( $R^2$ ), the predictive relevance ( $Q^2$ ) and the statistical significance of the structural paths (Shmueli et al., 2016). Before assessing the structural relationships, the collinearity (variance inflation factor, VIF) was performed to ensure that there was no bias in the regression of the constructs.

### 6.3.3.1. Multicollinearity among the predictor constructs

The multicollinearity of constructs in the inner model was examined using the variance inflation factor (VIF). The results of multicollinearity are shown in Table 6.8.

**Table 6.8: Results of inner model multicollinearity for predictor variables**

	BI	PJSR	OCS	RSat	SQ
BI					
PJSR			2.191	1.000	
OCS	1.759				
RSat	1.889		2.355		1.000
SQ	1.802		1.712		

As shown in Table 6.8, all the VIF values were below the maximum of 5.0 (Hair et al., 2017), indicating that multicollinearity was not an issue among the predictor variables.

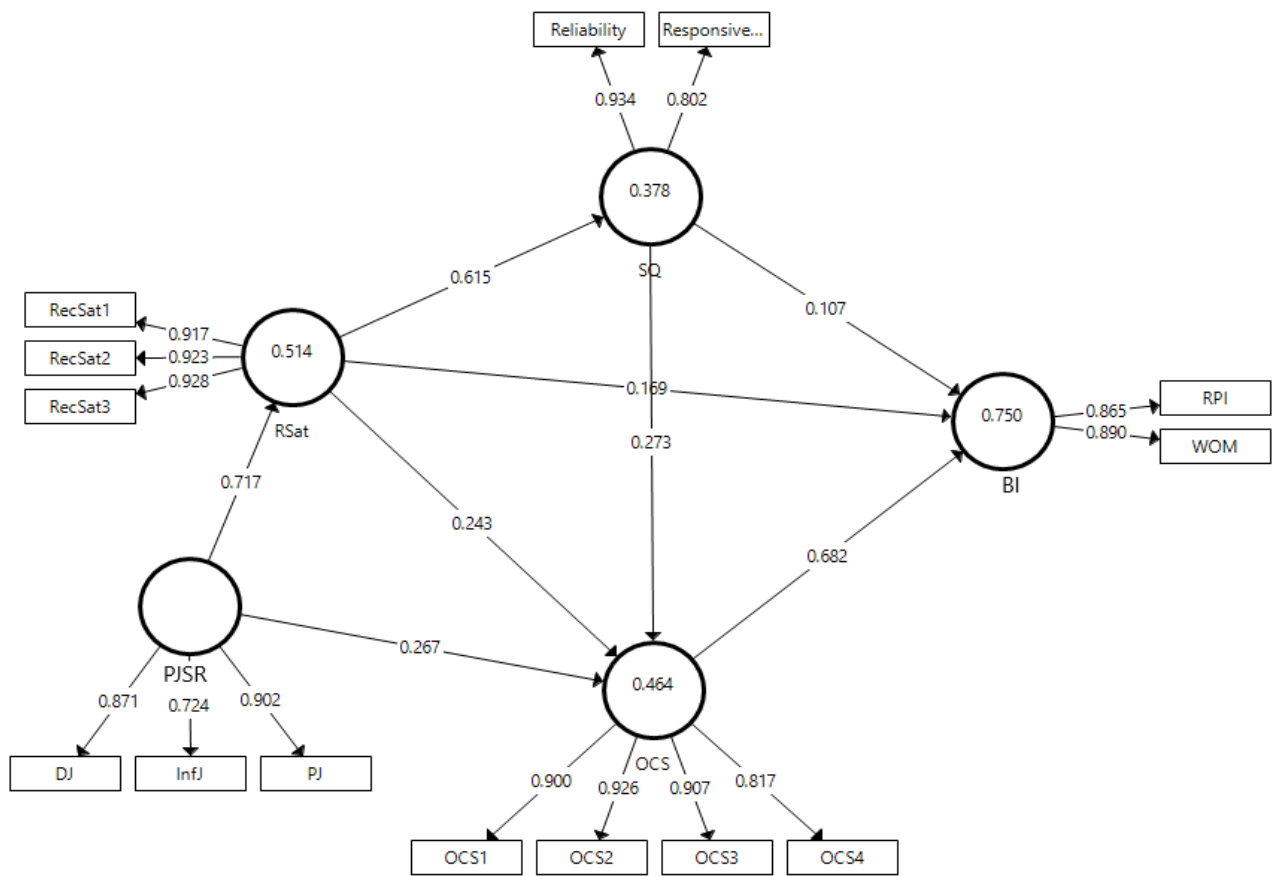
## 6.4. EXPLANATOR-PREDICTIVE ANALYSIS OF PROPOSED THE MODEL

Research objective 1a (RO1a) sought to evaluate the explanatory power of the proposed synthesised from the hypotheses in the literature review while Research objective 1b (RO1b) sought to examine the in-sample and out-of-sample predictive relevance on the proposed model. The results pertaining to these research objectives are presented next.

### 6.4.1. Model's explanatory power ( $R^2$ ) (RO1a)

The results of the  $R^2$  evaluation and the  $\beta$  values are shown in Figure 6.1. As shown in Figure 6.1, the  $R^2$  for BI was 0.75 (75%). This  $R^2$  value represents the variance in BI explained by all the predictor variables in the model (PJSR, SQ, RSat and OCS). In other words, the five predictor variables (PJSR, SQ, RSat and OCS) collectively explained 75.0% variance in BI. Though not conclusive, an  $R^2$  value of 0.750 for BI suggests that the conceptual framework in this study had sufficient explanatory power (Hair et al., 2019) because only 25% variance in BI remained unexplained. Collectively the PJSR, SQ and RSat constructs explained 46.5% of the variance in OCS ( $R^2 = 0.464$ ). This value is considered sufficiently high in consumer behaviour research (Hair et al., 2011; Hair et al., 2017). As expected from service recovery

literature, the Justice construct explained 51.4% of the variance in RSat, while RSat explained 37.8% of the variance SQ.



**Figure 6.1:** Direct structural paths and their  $\beta$ -values.

In order to evaluate the explanatory power of the proposed model credibility, it was important to assess the the extent to which the relationships (structural paths) that form the inner model were statistically significant. This was done through testing for the statistical significance of the hypotheses that described the structural relationships.

#### 6.4.2. Significance of the direct structural paths

The structural paths provide direct answers to the hypotheses formulated for the model. The direct paths and their statistical significance are shown in Table 6.9. The t-values,  $p$ -values and confidence interval (CI) values were computed to show evidence for statistical significance. Only the t-value and the  $p$ -values were retained in the text because repeating all these criteria in the write-up would be redundant.

As shown in Table 6.8, the beta ( $\beta$ ) values of all the direct paths in Figure 6.1 were statistically significant (t-values  $> +/-1.96$ , p-values  $< 0.05$ ) and their confidence intervals (CI) did not include or cross zero. Hypotheses **H1a** and **H1b** predicted that PJSR has a positive direct influence on RSat and OCS, respectively (see Figure 4.1 in Chapter 4).

**Table 6.9: Direct paths, their t-values, p-values and confidence interval (CI)**

Structural path	Effects ( $\beta$ -values)	Std. Dev.	t-values	p- values	Confidence Interval	
					2.50%	97.50%
PJSR -> RSat (H1a)	.717	0,038	18.668	0,000	0,636	0,782
PJSR -> OCS (H1b)	.267	0,073	3.640	0,000	0,124	0,416
RSat -> SQ (H2a)	.615	0,037	16.811	0,000	0,535	0,684
RSat -> BI (H2b)	.169	0,053	3.214	0,001	0,073	0,272
RSat -> OCS (H2c)	.243	0,084	2.900	0,004	0,094	0,396
SQ -> BI (H3a)	.107	0,045	2.378	0,018	0,023	0,194
SQ -> OCS (H3b)	.273	0,065	4.228	0,000	0,135	0,387
OCS -> BI (H4a)	.682	0,057	12.001	0,000	0,565	0,786

The results in Table 6.9, also show that PJSR had a strong and significant influence on (RSat) ( $\beta = 0.717$ ,  $t = 18.668$ ,  $p = 0.000$ ) and a moderate influence on (OCS) ( $\beta = 0.267$ ,  $t = 3.640$ ,  $p = 0.000$ ). These results indicate that an increase by one standard deviation in PJSR, will cause an increase of 0.717 in RSat and an increase of 0.267 in OCS, respectively. Thus, hypotheses **H1a** and **H1b** were supported.

Hypotheses **H2a**, **H2b** and **H2c** predicted that RSat would have a direct positive influence on SQ, BI and OCS, respectively. Consistent with these hypotheses, the results in Table 6.9, show that RSat had a strong positive significant influence on SQ ( $\beta = 0.615$ ,  $t = 16.811$ ,  $p = 0.000$ ), a comparatively weaker positive significant influence on BI ( $\beta = 0.169$ ,  $t = 3.214$ ,  $p = 0.001$ ) and a comparatively moderate positive significant influence on OCS ( $\beta = 0.243$ ,  $t = 2.900$ ,  $p = 0.004$ ). Thus, **H2a**, **H2b** and **H2c** were supported. Similarly, **H3a** and **H3b** posited that SQ would directly influence BI

and OCS, respectively. As revealed in Table 6.8, the direct paths SQ → OCS ( $\beta=0.273$ ,  $t=4.228$ ,  $p=0.000$ ) and the SQ → BI ( $\beta=0.107$ ,  $t=2.378$ ,  $p=0.018$ ) and were both significant, supporting the **H3a** and **H3b** hypotheses. The model also postulates that OCS (**H4**) would have a direct positive influence on BI. The results in table 6.9 revealed that the OCS → BI ( $\beta=0.682$ ,  $t=12.001$ ,  $p=0.000$ ) was positive and significant. Thus, hypothesis **H4** was supported.

Even though they were significant, the direct influences of SQ and RSat on BI ( $\beta=0.107$  and  $\beta=0.169$ , respectively) were comparatively weaker than the influence of OCS on BI ( $\beta=0.682$ ). These findings indicate that an increase by one unit of standard deviation in SQ will cause an increase of 10.7% ( $\beta=0.107$ ) or in the BI construct and an increase of 27.3% ( $\beta=0.273$ ) in OCS. Similarly, an increase of one unit of standard deviation in RSat will cause an increase of 16.10% ( $\beta=0.169$ ) in BI and an increase of 24.3% ( $\beta=0.243$ ) in OCS. Table 6.10 also shows that an increase by one unit of standard deviation in OCS will cause an increase of 68.2% ( $\beta=0.682$ ) in BI. Thus, these results suggest that OCS has a higher impact on the customer's formation of BI than SQ and RSat. However, SQ and RSat may still be worth managing because of their effects on OCS, which is the primary driver of the customer's BI.

#### **6.4.3. Model's in-sample and out-of-sample predictive relevance (RO1b)**

The in-sample predictive relevance of the model was tested using the in-sample cross-validated  $Q^2$  values from the blindfolding procedure while the out-of-sample predictive power of the model using the differences between the root mean squared error (RMSE) and mean absolute error (MAE) and the naïve benchmark measured as linear regression model (LM). The differences between RMSE and MAE and their corresponding LM values were important in this study to determine the out-of-sample predictive capacity of the model. The out-of-sample predictive capacity shows the extent to which the model can be used to predict the behaviour of respondents outside those surveyed and sampled.

### 6.5.3.1. Model's in-sample predictive relevance ( $Q^2$ )

The cross-validated blindfolding results revealed that the model had high in-sample predictive relevance ( $Q^2$ ) of 0.545 for the BI. This implies that the model was able to predict the likely BIs of the surveyed sample.

### 6.5.3.2. Model's out-of-sample predictive relevance

The model's out-of-sample predictive capacity was examined by computing the RMSE and MAE differences for each dimension in PLS and linear regression model (LM). When all the LM values are higher than their corresponding values of the RMSE and MAE values, it implies that the model has the high predictive capacity of determining the likely behaviour of the participant outside the surveyed participants. The results of these differences are shown in Table 6.10.

**Table 6.10: Difference between RMSE and MAE in PLS and LM**

Indicator	PLS		LM		LM-PLS	
	RMSE	MAE	RMSE	MAE	RMSE	MAE
RPI	1.355	1.048	1.362	1.050	0.006	0.002
WOM	1.335	1.046	1.337	1.051	0.002	0.005
OCS1	1.468	1.138	1.473	1.143	0.006	0.004
OCS2	1.326	1.017	1.331	1.023	0.004	0.006
OCS3	1.384	1.058	1.389	1.062	0.005	0.004
OCS4	1.321	0.979	1.323	0.981	0.002	0.002
RecSat3	1.253	0.956	1.258	0.957	0.005	0.001
RecSat1	1.370	1.049	1.371	1.051	0.000	0.002
RecSat2	1.263	0.955	1.267	0.956	0.004	0.001
Responsiveness	1.168	0.918	1.175	0.922	0.006	0.004
Reliability	0.978	0.746	0.982	0.751	0.004	0.005

As shown in Table 6.10, all the RMSE and MAE values were smaller than their corresponding values in LM. This satisfies Shmueli et al.'s (2019) criterion, specifying that when all the RMSE and/or MAE values from PLS are smaller than

their corresponding values from LM, the proposed model has a high out-of-sample predictive relevance. Because the model had high explanatory power ( $R^2=75\%$ ) a high in-sample relevance ( $Q^2 = 0.546$ ) and a high out-of-sample relevance, suggests that research objective one (RO1a and RO1b) for developing an explanatory-predictive model for the formation of BIs was satisfied.

## **6.5. THE EXPLANATORY ROLES OF PREDICTOR VARIABLES (RO2)**

Research objective 2 (RO2) sought to investigate the explanatory roles or the mechanisms by which the PJSR could impact on the formation of BIs through RSat, SQ and OCS. In order to fully address this objective, a number of steps were carried out. The first step was to check for model fit. The second step involved an evaluation of causal relationships between and among the constructs in the structural model. This involved an evaluation of all the total indirect effects, specific indirect effects and all the total effects of the constructs on BIs. The results of these steps are provided below.

### **6.5.1. Total indirect effects, specific indirect effects and total effects**

The results of the total indirect effects, specific indirect effects and total effects of each construct are shown in Table 6.11.

The results reveal that the relationships for total indirect effects, specific indirect effects and total effects of all the predictor variables (PJSR, RSat, SQ and OCS) were all significant (see Table 6.11), thus, providing evidence for conducting mediation testing for hypotheses confirmation or disconfirmation. For clarity in presentation, the mediation tests were presented in their numerical order, of the hypotheses, from the left to the right side of the proposed model (See Table 6.11 in relation to Figure 6.1). As mentioned in Chapter 5, the nature of mediation was also identified and confirmed using the variance accounted for (VAF) computations, which shows the proportion of the total indirect effect of the total effect of causal paths on the target construct. Finally, partial mediation outcomes were examined to show whether they were the complementary or competitive type of partial mediation.

### **6.5.2. Mediation roles of RSat**



The explanatory roles of RSat, SQ and OCS were determined by analysing their total indirect effects, specific indirect effects and total effects shown in Table 6.11.

Hypothesis **H5a** predicted that RSat mediated the relationship between PJSR and OCS. As both the indirect path PJSR->RSat->OCS ( $\beta = 0.175$ ,  $t = 2.749$ ,  $p = 0.006$ ) reported in Table 6.11 and the direct path PJSR -> OCS ( $\beta = 0.267$ ,  $t = 3.640$ ,  $p = 0.000$ ) in Table 6.9 were significant, it was concluded that RSat partially mediated the PJSR->OCS relationship. Hence hypothesis **H5a** was supported.

**Table 6:11: Results of Total Indirect, Specific Indirect and Total effects**

<b>Total Indirect Effects</b>					
	<b><math>\beta</math> -values</b>	<b>t-values</b>	<b>p-values</b>	<b>2.5%</b>	<b>97.5%</b>
PJSR -> BI	.551	14.070	0.000	0.481	0.630
PJSR -> OCS	.295	5.040	0.000	0.180	0.410
PJSR -> SQ	.441	11.428	0.000	0.362	0.511
RSat -> BI	.347	6.607	0.000	0.248	0.447
RSat -> OCS	.168	4.146	0.000	0.091	0.247
SQ -> BI	.186	3.850	0.000	0.090	0.278
<b>Specific Indirect Effects</b>					
PJSR -> OCS -> BI	.182	3.343	0.001	0.081	0.288
RSat -> OCS -> BI	.166	2.926	0.004	0.060	0.273
PJSR -> RSat -> OCS -> BI	.119	2.766	0.006	0.042	0.204
SQ -> OCS -> BI	.186	3.850	0.000	0.090	0.276
RSat -> SQ -> OCS -> BI	.115	3.822	0.000	0.056	0.175
PJSR -> RSat -> SQ -> OCS -> BI	.082	3.682	0.000	0.042	0.131
PJSR -> RSat -> BI	.121	3.116	0.002	0.051	0.198
RSat -> SQ -> BI	.066	2.379	0.018	0.018	0.120
PJSR -> RSat -> SQ -> BI	.047	2.396	0.017	0.010	0.088
PJSR -> RSat -> OCS	.175	2.749	0.006	0.061	0.296
RSat -> SQ -> OCS	.168	4.148	0.000	0.091	0.247
PJSR -> RSat -> SQ -> OCS	.121	3.991	0.000	0.061	0.180
PJSR -> RSat -> SQ	.441	11.428	0.000	0.362	0.511
<b>Total effects</b>					
PJSR -> BI	.551	14.070	0.000	0.481	0.630
PJSR -> OCS	.562	13.354	0.000	0.483	0.649
PJSR -> RSat (direct effect only)	.717	18.668	0.000	0.636	0.782
PJSR -> SQ	.441	11.428	0.000	0.362	0.511

OCS -> BI (direct effect only)	.682	12.001	0.000	0.565	0.786
RSat -> BI	.515	8.628	0.000	0.378	0.622
RSat -> OCS (direct effect only)	.412	5.764	0.002	0.270	0.538
RSat -> SQ (direct only)	.615	16.811	0.000	0.535	0.684
SQ -> BI	.294	4.739	0.000	0.174	0.405
SQ -> OCS (direct effect only)	.273	4.228	0.000	0.135	0.387

To substantiate the type of partial mediation, the  $\beta$ -values of the total indirect effect and the direct effect of these relationships were multiplied. Since the product of the specific indirect effect (PJSR->RSat->OCS) and the direct effect (PJSR-> OCS) was positive (i.e.  $0.175 \times 0.267 = 0.047$ ), it was concluded that RSat serves as a complementary partial mediator in the relationship between PJSR and OCS. Specifically, the VAF of the PJSR->RSat->OCS structural path was 0.52 or 52%, obtained from dividing the total indirect effect of PJSR on OCS (0.295) by the total effects of PJSR on OCS (0.562). The positive VAF further confirms the role of RSat as a partial mediator in the relationship between PJSR and OCS.

Table 6.11 shows that the PJSR construct had the second-largest total effects on BI (0.551) compared to the total effects of OCS (0.682) on BI. Since no direct link was postulated between PJSR and BI, these results imply that all the total effects of PJSR on BI were through its indirect effects. There were five hypotheses involving the indirect effects of PJSR on BI through its direct effects on RSat and OCS.

Although no specific mediation hypotheses were made between PJSR and BI, the results in Table 6.11 show that all the five specific indirect effects through which PJSR could influence BI were positive and significant. These results lend support for the “*indirect only*” type of mediation. The mediation analysis involving the SQ construct will be presented next.

### 6.5.3. Mediation roles of SQ

The mediation roles of SQ in the proposed model were hypothesised in **H5c** and **H5d**. Hypotheses **H5c** and **H5d** predicted that the relationship between RSat and BI and between RSat and OCS would be mediated by SQ, respectively (see Figure 4.1

in Chapter 4). Since the direct influence of RSat on BI reported in Table 6.9 was significant (**H2b**,  $\beta=0.169$ ,  $t=3.214$ ,  $p=0.001$ ) and the specific indirect effects of RSat on BI through SQ reported in Table 6.11 was also significant ( $\beta = 0.066$ ,  $t= 2.379$ ,  $p= 0.018$ ), it was concluded that SQ was a partial mediator in the relationship between RSat and BI and hypothesis **H5c** was, thus, supported. Similarly, since the indirect influence of RSat on OCS through SQ was significant ( $\beta = 0.168$ ,  $t= 4.148$ ,  $p= 0.000$ ) and the direct influence of RSat on OCS in Table 6.9 was significant (**H2c**), it was concluded that SQ is a partial mediator in the relationship between RSat and OCS. Hence **H5d** was supported.

The VAF value for the RSat->SQ-> OCS structural path was 0.41 (0.168/0.412). This also provides evidence that SQ is a complementary partial mediator in the relationship between RSat and OCS. The VAF value for the RSat->SQ->BI was 0.00 (0.066/0.515). Contrary to hypothesis **H5c**, this result did not support the partial mediation of SQ in the relationship between RSat and BI obtained above. It was then concluded that although SQ is a partial mediator in the relationship between RSat and OCS, it is not a partial mediator in the relationship between RSat and BI.

#### 6.5.4. Mediation roles of OCS

The proposed model suggested that OCS would have an intermediating role in the relationship between RSat and BI (**H5b**) and the relationship between SQ and BI (**H5e**). Since both the direct influence of SQ on BI (**H3a**) and RSat on BI (**H3b**) reported in Table 6.9 and the specific indirect relationships between SQ and BI and RSat and BI through OCS reported in Table 6.11 were positive and significant, it was concluded that OCS was a partial mediator of both the RSat→BI and SQ→BI structural paths. Thus, hypotheses **H5b** and **H5e** were supported.

The results of the partial mediation obtained above were substantiated by calculating the VAF for the corresponding relationships. The VAF value for the RSat->OCS->BI was 0.32 (0.166/0.515) while that of the SQ->OCS->BI structural path was 0.63 (i.e. 0.186/0.294). Since these two VAF values were positive, it was concluded that, based on VAF, OCS was a partial mediator in the SQ->OCS->BI and RSat->OCS->BI structural paths, thus, lending further support for hypothesis **H5b** and **H5e**.

Since OCS is a partial mediator in **H5b**, **H5e**, the RSat->SQ->OCS (**H5d**) was significant, but the partial mediation of SQ in the RSat->SQ->BI (**H5c**) was not confirmed by VAF, it was concluded that SQ and OCS mediated the relationship between RSat and BI in series (RSat->SQ->OCS-> BI). The statically significant RSat->SQ->OCS-> BI relationship ( $\beta = 0.115$ ,  $t = 3.822$ ,  $p = 0.000$ ) reported in Table 6.11, provides further evidence in support of this conclusion. This is because the sign of the product of the direct and total indirect effects of the mediated relationships between SQ and BI and between RSat and BI were positive (i.e.  $0.107 \times 0.186 = 0.020$ ) and ( $0.169 \times 0.166 = 0.028$ ), it was concluded that OCS had a complementary partial mediation role in the relationship between SQ and BI and between RSat and BI.

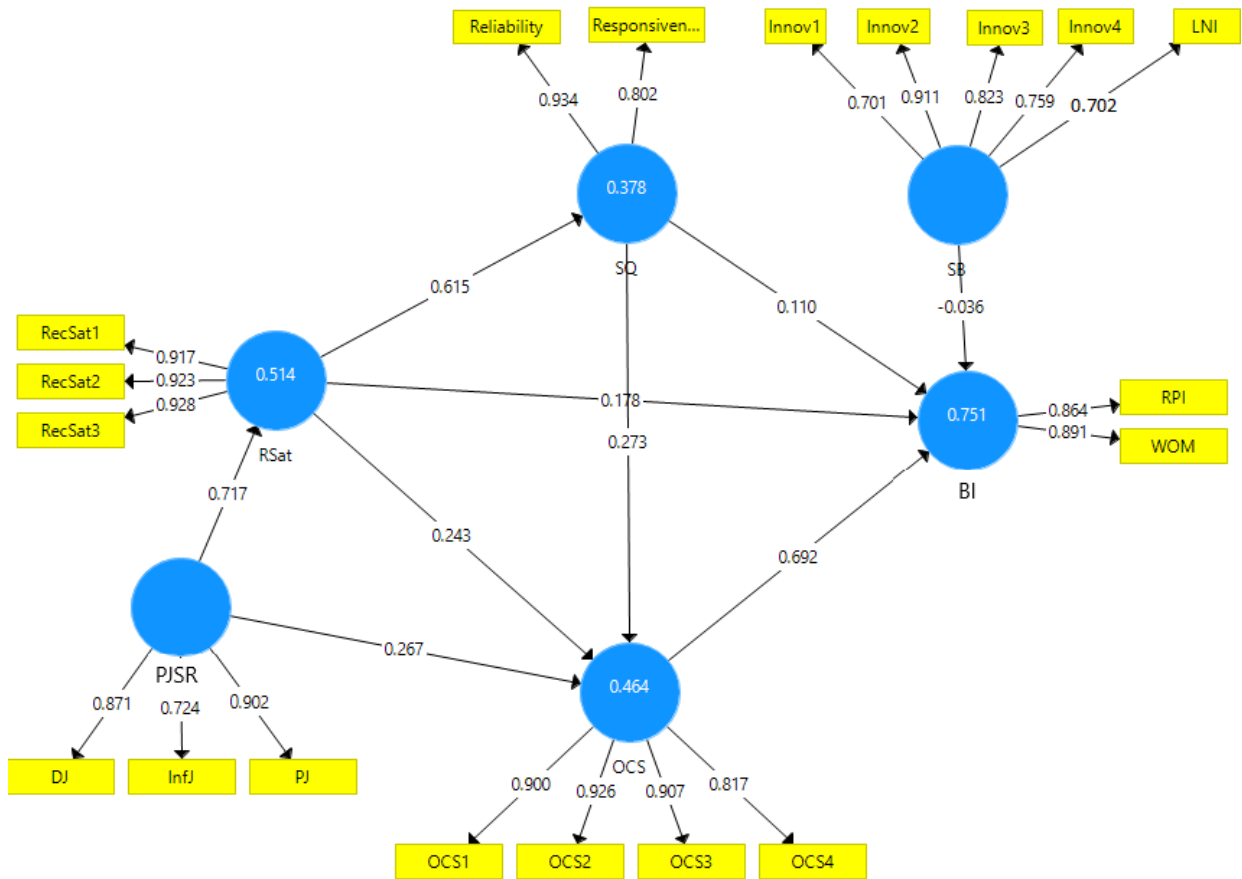
## **6.6. MODERATION EFFECTS OF SWITCHING BARRIERS (SBS) (RO3)**

As mentioned in chapter five, the moderation effects of switching barriers (SB) on the relationships between BI and its direct antecedents were examined. Various tests were conducted to determine the magnitude and direction of the moderation effects of the SB, as required in the PLS-SEM criteria discussed below.

### **6.6.1. Model evaluation after adding switching barriers (SB)**

After incorporating switching barriers into the test model, the two-stage assessment of the model were repeated (Hair et al., 2017). The results are shown in Figure 6.2.

The changes in  $R^2$  values after incorporating the moderator to the proposed model are important (Ramayah et al., 2018). However, Figure 6.2 shows, the  $R^2$  values for RSat (0.514), SQ (0.378), OCS (0.464) remained unchanged as in Figure 6.1 after introducing SB in the model. The slight increase in the  $R^2$  value of BI from 0.750 to 0.751 (0.001) after including SB in the model was also considered negligible (Ramayah et al., 2018). The cross-validated redundancy ( $Q^2$ ) value (0.545) for BI also remained unchanged in both Figure 6.1 before adding the moderator and Figure 6.2 after adding the moderator to the model.



**Figure 6.2:** Direct effects of switching barriers (SB) on BI

The results for discriminant validity (HTMT ratios) after adding a moderator are shown in Table 6.12.

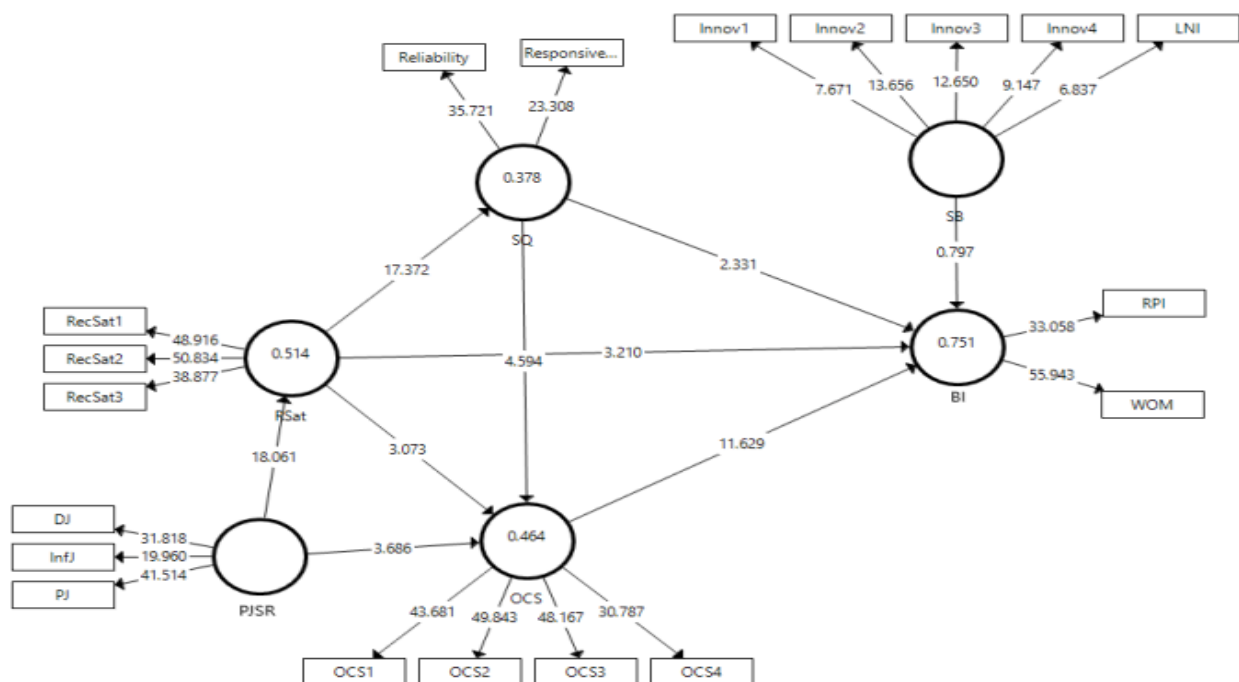
**Table 6:12:** HTMT results of model including SB

Relationship	Original Sample (O)	Sample Mean (M)	Bias	Confidence Interval (CI)	
				2.5%	97.5%
SB → BI	0,415	0,417	0,003	0,298	0,507
SB → PJSR	0,431	0,432	0,001	0,322	0,528
SB → OCS	0,473	0,476	0,002	0,377	0,558
SB → RSat	0,457	0,458	0,001	0,356	0,546
SQ → SB	0,390	0,393	0,003	0,277	0,482

Table 6.12 shows all the HTMT ratios for SB provided sufficient empirical evidence for discriminant validity as their CI did not include 1 or cross zero. However, contrary

to the prediction in the model (**H6d**), the direct effect of the SB on BI was not significant ( $\beta = -0.036$ ,  $t=0.797$ ,  $p=0.421$ ) in this study (see Figure 6.3 below). Thus, hypothesis **H6d**, which predicted that SB directly influences BI, was not supported. However, as Ramayah et al. (2018) stated, the lack of statistical significance for the main effect of SB on BI does not reduce SB's moderation effects on the relationships between BI and its antecedents predicted in the conceptual model.

What is important in testing for moderation effects is that the moderator construct satisfies all the quality criteria for the outer and inner model assessments. The direct effects of the moderator on the target (BI) is not a condition for its moderation effect on the relationships between the target construct and its antecedents (Hair et al., 2017). According to Hair et al. (2017), what is important for moderation tests in PLS-SEM is that the outer and inner model assessments be significant. Given that both the outer and inner model assessments for SB were statistically significant, the model evaluation procedure was continued to test for the moderation effects of the SB on the relationships between BI and its direct antecedents as shown in the conceptual model (Figure 4.1 in chapter four). To determine the significance of the direct effects of SB on BI, the sample was bootstrapped 5000 times as recommended in PLS-SEM. The results are shown in Figure 6.3.

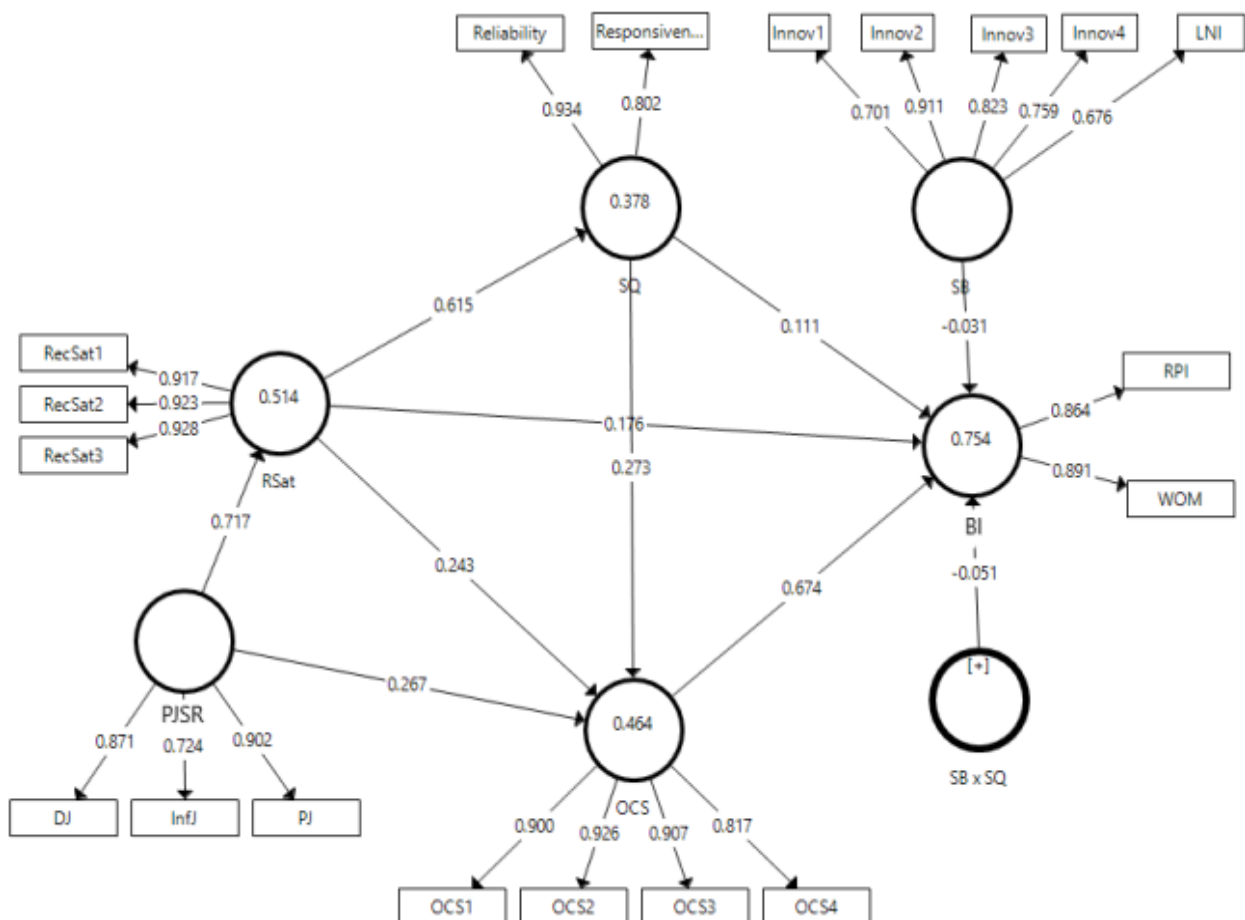


**Figure 6.3:** Bootstrapped results for the main effects of SB on BI

As shown in this Figure 6.3, the direct influence of SB on BI was not significant ( $t=0.797$ ).

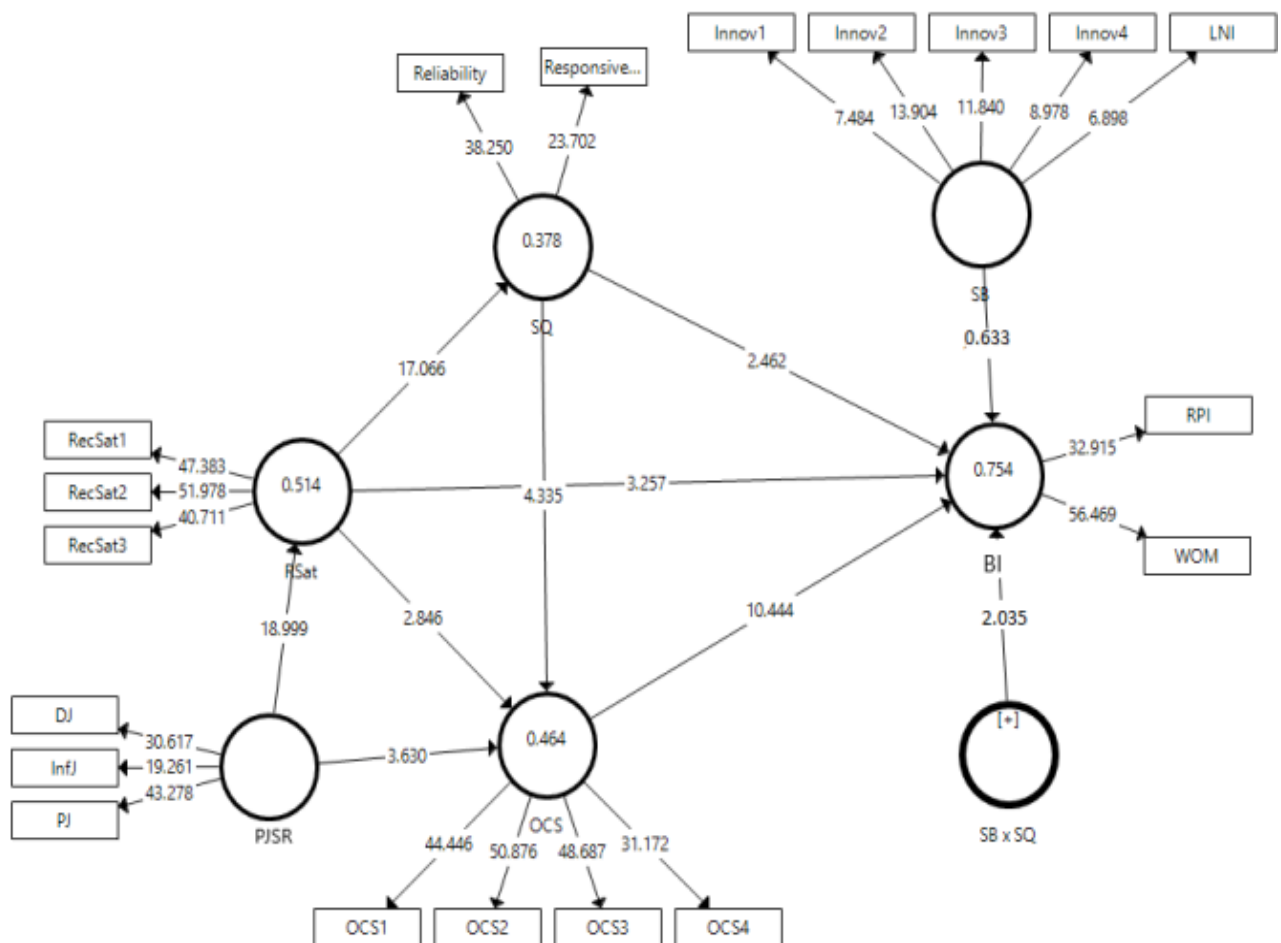
### 6.6.2. Moderation effects of SB

Hypotheses **H6a**, **H6b** and **H6c** predicted that SB would moderate the SQ->BI, OCS->BI and RSat->BI relationships, respectively. These moderation effects were tested. The results showed that only the moderation effects of SB on the SQ->BI relationship (Figure 6.5) was significant though negative ( $\beta = -0.051$ ,  $t = 2.035$ ,  $p = 0.037$ ). The moderation effects of SB on the RSat->BI ( $\beta = -0.050$ ,  $t = 1.509$ ,  $p = 0.132$ ) and on the OCS->BI ( $\beta = -0.040$ ,  $t = 0.867$ ,  $p = 0.386$ ) were not statistically significant even though they were also negative. Thus, hypothesis **H6a** was supported, but hypotheses **H6b** and **H6c** were not supported. Because **H6b** and **H6c** were not statistically significant, only **H6a** was further examined, as shown in Figure 6.4 and Figure 6.5.



**Figure 6.4:** Moderation effects of SB on the SQ->BI path

As shown in Figure 6.4, the moderation construct (SBxSQ) negatively affected the relationship between SQ and BI ( $\beta=-0.051$ ), which shows reciprocal moderation effects. These results suggest that controlling for all other things (*ceteris paribus*), the simple effect of SQ on BIs is ( $\beta =0.111$ ) when SBs are on average equal to -0.051. However, an increase by one standard deviation unit in the SB will lower the strength of the influence of SQ on BI by the same magnitude from 0.111 to 0.06 (i.e.  $0.111-0.051= 0.06$ ).

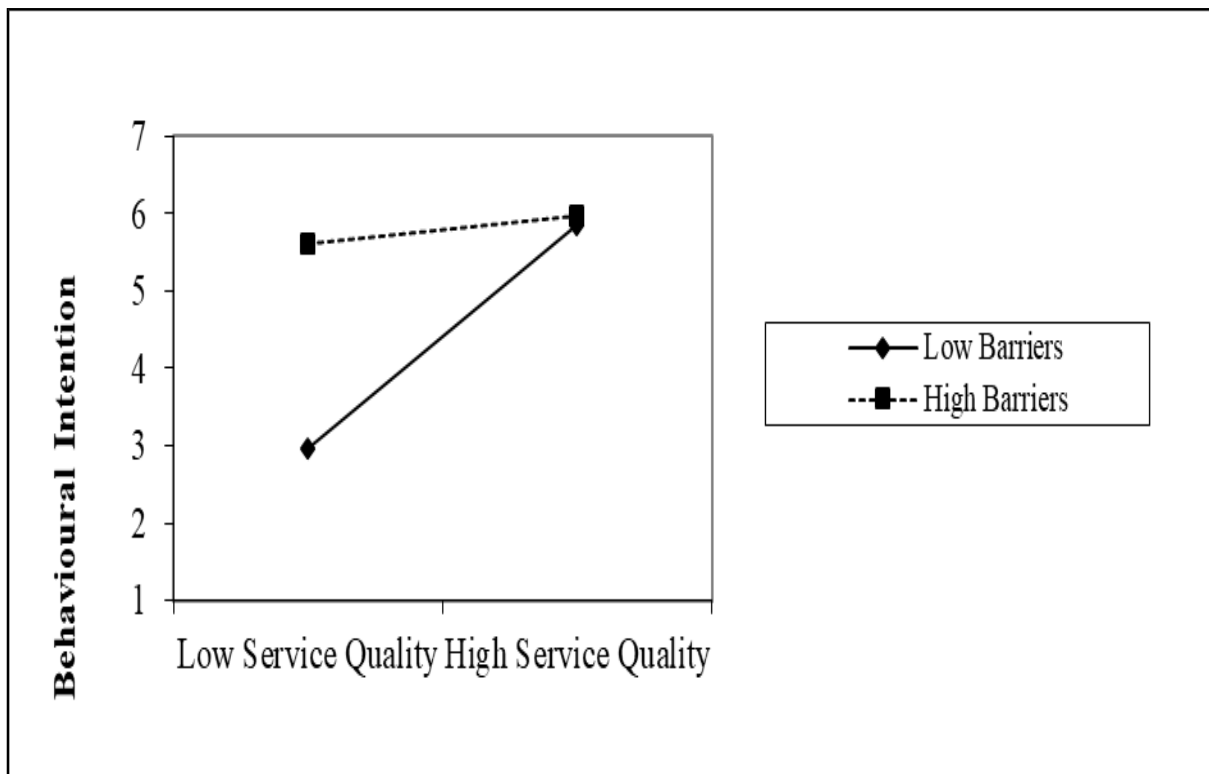


**Figure 6.5:** Bootstrapped results of the moderation effects of SB on the SQ->BI

On the other hand, theoretically, when the SBs are decreased by one standard deviation unit, the strength of the relationship between SQ and BI will increase by the same magnitude from 0.111 to 0.162 (i.e.  $0.111- (-0.051) = 0.162$ ), controlling for all other factors. These results suggest that the more customers perceive strong SBs, the weaker the effects of SQ as a criterion for guiding their BIs.



Conversely, when there is no or low SBs, their BIs will mainly depend on their perceptions of SQ. Similarly, when there are high SBs, the influence of SQ on their BIs diminishes. The moderation effects of SB on the relationship between SQ and BI were graphically illustrated as in Figure 6.6.



**Figure 6.6:** Graphical illustration of the moderation effects of SB on SQ->BI

The gradient or slope of the low barriers line, representing low levels of SBs, had a steeper slope (0.724), which was significant ( $t=7.268, p=0.000$ ). The upper line, which represents higher levels of SBs, had a flatter slope (0.090) and was not significant ( $t=0.830, p= 0.405$ ). These simple slopes support the earlier explanation that the influence of SQ on BIs is increased or strengthened when SBs are low, whereas the presence of high SBs weakens the influence of SQ on BIs of the customer. For the completeness of the results, the effect size ( $f^2$ ) of the moderator (SB) was examined in SmartPLS 3.2.9 algorithm. The results revealed that the effect size of SB was 0.013, which indicates a medium effect size (Hair et al., 2017), and therefore is worthy of management attention.

### 6.6.3. Summary of hypotheses testing

The results of the mediation roles of the endogenous variables and the moderation roles of SB are summarised in Table 6.13.

As shown in Table 6.13, of the seventeen hypotheses tested in this study, only three were rejected.

**Table 6:13: Summary of the decisions on the seventeen hypotheses**

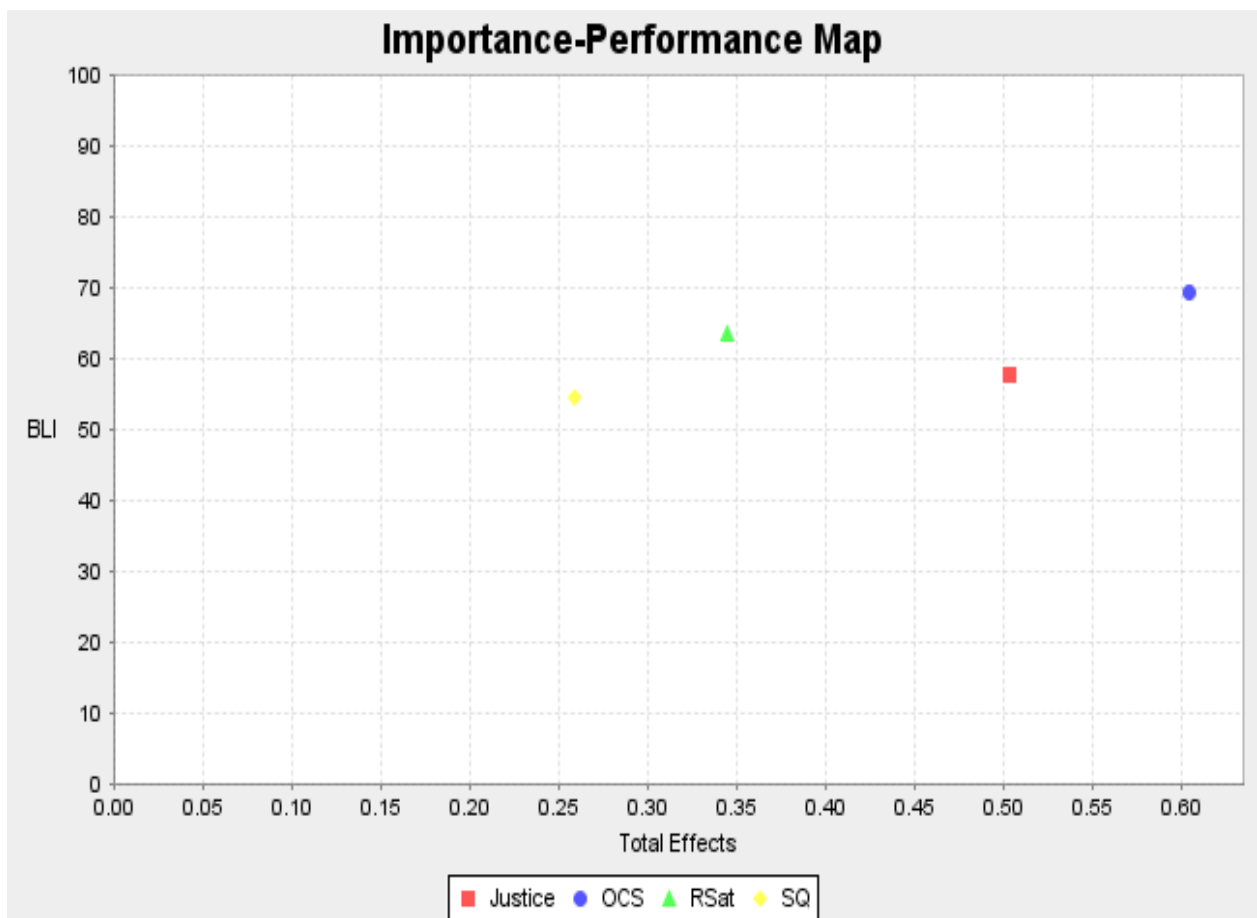
Hypothesis	Path	$\beta$ -value	t- value	p-value	Decision
H1a	PJSR->RSat (direct effect)	.717	18.668	0.000	Accepted
H1b	PJSR->OCS (direct effect)	.267	3.640	0.000	Accepted
H2a	RSat->SQ (direct effect)	.615	16.811	0.000	Accepted
H2b	RSat->BI (direct effect)	.169	3.214	0.000	Accepted
H2c	RSat->OCS (direct effect)	.243	2.900	0.002	Accepted
H3a	SQ-> OCS (direct effect)	.273	4.228	0.022	Accepted
H3b	SQ-> BI (direct effect)	.107	2.378	0.003	Accepted
H4	OCS->BI (direct effect)	.682	12.001	0.000	Accepted
H5a	RSat mediates the PJSR->OCS	.175	2.749	0.006	Accepted
H5b	OCS mediates the RSat->BI	.166	2.926	0.004	Accepted
H5c	SQ mediates the RSat->BI	.066	2.396	0.018	Accepted
H5d	SQ mediates the RSat->OCS	.168	4.148	0.000	Accepted
H5e	OCS mediates the SQ->BI	.186	3.822	0.000	Accepted
H6a	SB moderates the SQ->BI	-0.051	2.035	0.037	Accepted
H6b	SB moderates the OCS->BI	-.040	0.867	0.386	Rejected
H6c	SB moderates the RSat->BI	-.050	1.509	0.132	Rejected
H6d	SB has a direct effect on BI	-.036	0.805	0.421	Rejected

## 6.7. IMPORTANCE-PERFORMANCE MAP ANALYSIS (IPMA) (RO4)

To fully explore the managerial implications of this study, the importance and performance of all the antecedents of BI and their indicators were investigated using the Importance-Performance Map Analysis (IPMA) (Ringle & Sarstedt, 2016) in line with Research Objective 4 (RO4). The X-axis is the “Importance” based on the total effects of the predictor constructs, while the Y-axis is the “Performance” based on the rescaled average scores of the unstandardised predictor construct.

### 6.7.1. Importance-performance matrix analysis (IPMA) for constructs

The results of the IPMA for BI for the constructs are shown in Figure 6.7. As shown in Figure 6.7, OCS is situated at extreme the far top right (high importance-high performance quadrant) followed by PJSR. RSat is just past the mid-point of the importance axis and just above the mid-point on the performance axis. In relative terms, OCS was considered the most important variable in explaining the favourable BIs of customers as it is situated on the far right on the Importance (x-axis) scale and almost 70% on the performance (y-axis) scale. While the PJSR construct shows high importance, its position shows it is not performing well.

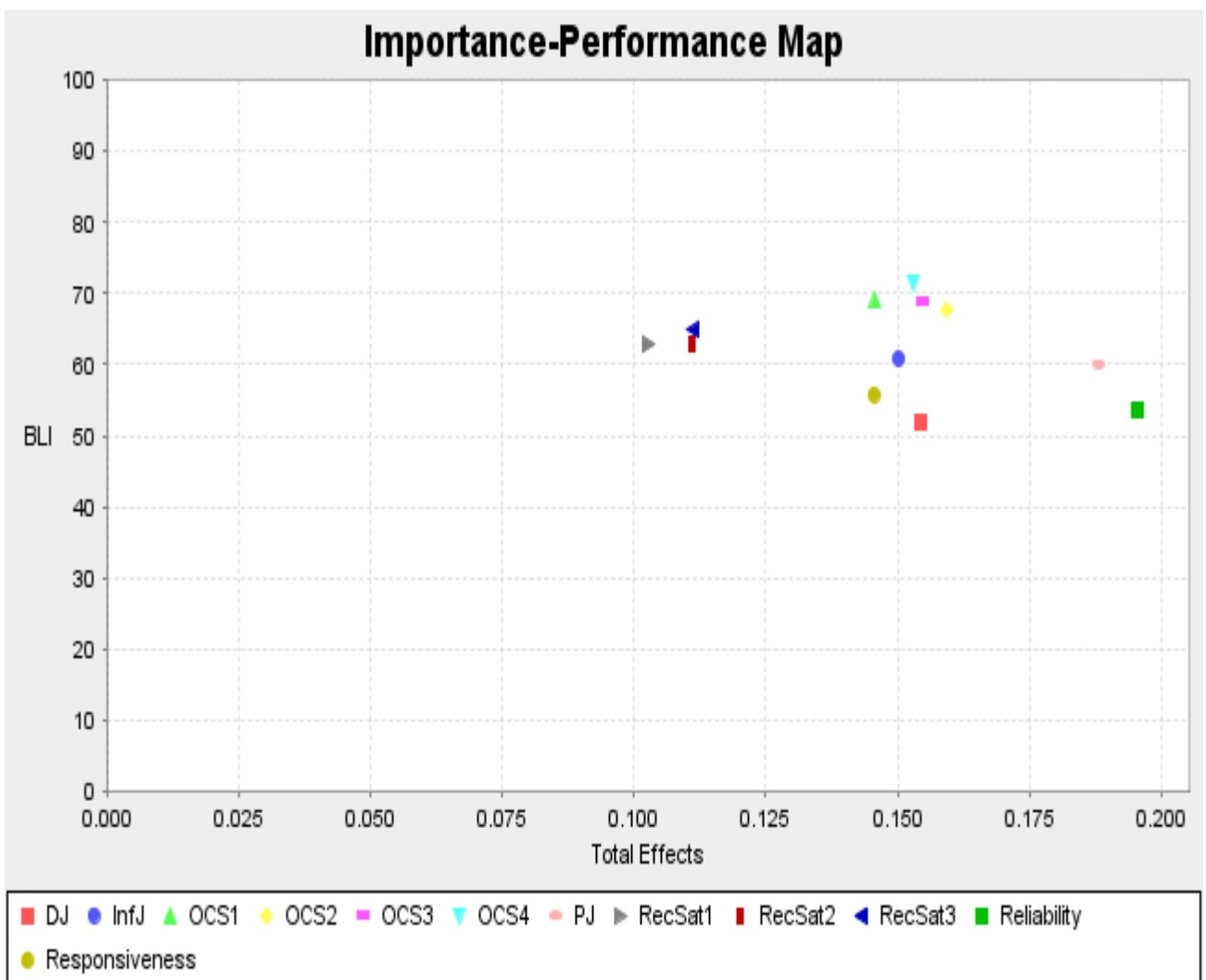


**Figure 6.7:** The Importance-Performance Map Analysis of predictor constructs

SQ was the only construct in the top left (low importance-high performance quadrant) side of the midline of importance (x-axis) and slightly above the 50% mark on the performance scale. These results suggest that SQ was not considered an important variable in predicting BI and that its influence (performance) on BI was moderate.

### 6.7.2. Importance-performance matrix analysis (IPMA) for indicators

The importance-performance matrix analysis (IPMA) of the level of the indicator is shown in Figure 6.8. The *Reliability* indicator was situated on the extreme far top right. Closer to the Reliability indicator was the PJ for perceived justice. The performances of the *Reliability* and the PJ indicators were just average, with the performance of PJ slightly above that of Reliability. There is much room for improvement in terms of these indicators. As shown in Figure 6.8, all the indicators of OCS are in the top-right (high importance-high performance) quadrant.



**Figure 6.8:** Importance-Performance Map of indicators

Similarly, the indicators InfJ, DJ and Responsiveness had relatively high importance, but their performances were just average. The IPM results in Figure 6.8 also revealed that except for RecSat1, the indicators for RSat (RecSat2 and RecSat3)

were slightly on the right of the midpoint on the importance scale while their performances were just above the 50% mark on the performance axis. Based on the IPM results in Figure 6.8, there is a great need to improve all these indicators' performances.

## 6.8. CHAPTER SUMMARY

This chapter presented the results of the study in line with the objectives of the study. The demographic statistics show a balance of the respondents in terms of their gender, education, income and geographical location. The most popular MNO was Vodacom. Most of the respondents were prepaid customers who made an independent choice on the MNO they were using.

The PLS-SEM results were presented in two stages as recommended by Hair et al. (2017). The  $R^2$  value for BI in the proposed model was 0.75, showing that the proposed model had a high explanatory power of 75% of the variance in BI. The  $Q^2$  value for BI, which measures the in-sample predict relevancy of the dependent variable, was 0.547. This figure reveals that the proposed model had high in-sample predictive relevance. The model's predictive capacity was examined as the differences between the RMSE and MAE and the naive benchmark of the linear regression model (LM). The results showed that all the RMSE and MAE values from PLS were smaller than their corresponding values from linear regression (LM), supporting the view that the model had high out-of-sample predictive capacity. The conclusion reached out of these results was that the proposed model in Figure 6.1 had a high explanatory and predictive capacity. Thus, research objective one (RO1) was achieved.

The direct effects of the constructs were investigated. The results showed that all the direct relationships hypothesised were significant even though the direct influence of SBs on BI was not. Thus, RO2 was satisfied.

The explanatory roles of the predictor variables were provided through mediation analysis. The hypothesised mediation tests showed that PJSR influenced BI through indirect effects only. Likewise, RSat had a complementary partial mediation role in the PJSR->RSat->OCS structural path. Similarly, SQ had a partial mediation role in

the RSat->SQ->BI and RSat->SQ->OCS structural paths. Overall satisfaction (OCS) had a complementary partial mediating role in the RSat->OCS->BI and the SQ->OCS->BI structural paths. The direct influences of SQ and RSat on BI, though significant, were comparatively weak. OCS had the largest influence on BI compared to those of SQ and RSat. The impact of PJSR, SQ and RSat on OCS were almost of the same strength and magnitude. Thus, the explanatory roles of RSat, SQ and OCS were revealed and described. Hence research objective two (RO2) was satisfied.

The moderation effects of the SBs were investigated. The results show that the moderation effects of SB on the SQ->BI was significant, but its moderation effects on the RSat->BI and the OCS->BI relationships were not significant. The moderation effects of SB show that the influence of SQ on BI increases when there is no or low SBs. High levels of SBs did not influence the SQ->BI relationship. Thus, research objective three (RO3) was satisfied.

The predictor variables' order of importance and performance were examined using the importance-performance map analysis (IPMA). The IPM of constructs showed that OCS was the most important construct, followed by PJSR then RSat, while SQ was not considered important. OCS had the highest performance, followed by RSat, then PJSR. The performance of SQ, though above half, was weak. The IPM for indicators revealed that the Reliability and procedural justice (PJ) were high on the importance (X-axis) scale but low on the performance (Y-axis) scale. These findings reveal that there is a great gap in improving the performance of these indicators. Thus, research objective four (RO4) was satisfied.

## CHAPTER 7: DISCUSSION OF THE FINDINGS

### 7.1. INTRODUCTION

This chapter provides a discussion of the results presented in Chapter 6 consistent with the study's objectives. The discussion follows the order in which the results were presented in Chapter 6, starting with results relating to Research Objective one (RO1) to Research Objective four (RO4) in that order. The chapter commences with a discussion of the explanatory and predictive capacity of the proposed model (RO1a and RO1b) in Section 7.1. This is followed by a discussion of the direct relationships of the predictor variables in Section 7.2, which addresses part of Research Objective 2 (RO2). The explanatory roles of the latent variables (RO2) are discussed under mediation analysis in Section 7.3. A discussion of the results of the moderation effects of switching barriers (SBs) (Research Objective 3, RO3) is provided in Section 7.4. The results of the importance-performance (IPMA) (Research Objective 4, RO4) are discussed in Section 7.5. The chapter concludes with a summary of the key points from discussing the results in Section 7.6.

### 7.2. THE EXPLANATORY POWER AND PREDICTIVE RELEVANCE

The main purpose of this study was to develop an integrated explanatory-predictive model for the formation of behavioural intentions (BIs) in situations involving service failure and service recovery and validate it with empirical evidence from the mobile services industry. In line with Research Objective one (RO1a), the first step was to identify the key predictor variables in the formation of BIs from which an integrated conceptual was developed in Chapter 4. RO1a and RO1b, addressed Research Question 1 (RQ1), which sought to determine the extent to which the identified predictor variables (perceived justice (PJSR), service recovery satisfaction (RSat), service quality (SQ) and overall customer satisfaction, OCS) explain and predict the formation of BIs. To address RO1a and RO1b, this study used the coefficient of determination ( $R^2$ ), to validate the proposed model's explanatory power and  $Q^2$  to examine the in-sample predictive capacity, while the difference between RMSE, MAE and their corresponding LM values were used to investigate the out-of-sample predictive relevance. The next sections render detailed discussions of the findings of these metrics.

### **7.2.1. The explanatory power of the model (RO1a)**

As previously stated in Chapter 5, the research methodology, the explanatory power of a conceptual model in social sciences, is determined by its coefficient of determination measured by the  $R^2$  value. The findings of this thesis show that the  $R^2$  value for the proposed integrated model was 0.75 (75%), representing the total variance in BIs explained by the four predictor variables, consisting of perceived justice (PJSR), service recovery satisfaction (RSat), service quality (SQ), and overall customer satisfaction (OCS). Put differently. This finding suggests that 75% of the changes in BIs was due to the four predictor variables in the model. An explanatory ( $R^2$  value) 75% achieved in this study was deemed a large improvement in modelling of the formation of BIs (Hair et al., 2017) compared to previous studies on BIs using the theory of reasoned action (TRA) and the theory of planned behaviour (TPB), which show that these models explained on average between 40% and 50% (Sutton, 1998).

Furthermore, the meta-analysis of Morwitz (2014) shows that the previous  $R^2$  values of BIs explained on average between 10% and 46%. One possible explanation for the relatively high  $R^2$  value obtained in this study could be the inclusion of critical evaluative factors such as perceived justice, service recovery satisfaction, service quality and overall customer satisfaction in the formation of BIs, which were not included in the previous studies reviewed by both Sutton (1998) and Morwitz (2014). This finding is important because it responds directly to the call by several researchers (Kuma et al., 2013; Shmueli et al., 2016, 2019; Hofman et al., 2017; Malter et al., 2020) that models meant to explain and predict consumer behaviour should be more comprehensive by including key factors that contribute to the determination of the BIs construct. The relatively high  $R^2$  value (75%) supports the argument by Vlachos and Vrechopoulos (2008) that incorporating more predictor variables in the development of models that explain the formation of BIs improves their explanatory power.

The model's high explanatory power ( $R^2 = 75\%$ ) suggests that the predictor variables selected in this study and the combination of the proposed causal theoretical relationships properly specify why and how BIs are formed. This affirms Shmueli et al.'s (2019) explanation that the explanatory power of a model depends on the



combination of the underlying causal theoretical relationships among the predictor variables. The high explanatory power in this study also coheres with the explanation of Hofman et al.'s (2017) argument that the aim of developing an explanatory model should be to optimise the combination of the causal relationships that explain how the phenomenon of interest occurs. In other words, these results suggest that designing a fair service recovery process may improve the BIs of the subscribers through improved recovery satisfaction and overall satisfaction. That explanation is supported by empirical evidence from many empirical studies (Ellyawati, 2017; Esen & Sonmezler, 2017; Alhawban et al., 2021), who also reported similar results in Indonesia and Turkey and Egypt, respectively. The conclusion made by these researchers was that service failures lower the chances of favourable BIs and increase the chances of consumer resentment and the formation of unfavourable BIs towards a supplier.

Past studies have invariably assumed that BIs are determined by the three dimensions of perceived justice (PJSR) (Nikbin et al., 2012), service quality and customer satisfaction (Cronin et al., 2000; Caruana and Malta, 2002) or service recovery separately (Han et al., 2019). However, the  $R^2$  value of 75% in this thesis supports Vlachos and Vrechopoulos (2008) and Giovanis et al. (2016). They claim that the explained variance in BIs of the previous studies based on single or two variables either understated or overstated the influence of other factors not included in those models. Giovanis et al. (2016) found that the ultimate behavioural decision of the consumer to continue or terminate their relationship is an aggregate of several service evaluation constructs.

### **7.2.2. The in-sample ( $Q^2$ ) and out-of-sample predictive relevance ( $RO1b$ )**

Both the Stone-Geisser criterion ( $Q^2$ ), which is based on the blindfolding procedure to measure the in-sample predictive relevance and the root mean square error (RMSE) and the mean absolute error (MAE) differences (out-of-sample predictive capacity) were used to determine the predictive relevance of the model. The  $Q^2$  value of 0.547 for the BI construct, which is significantly higher than zero, affirms Hair et al.'s (2019) explanation that such a model has high in-sample predictive relevance. The positive differences between the linear regression model (LM) and the corresponding values of the RMSE and MAE conform with Shmueli et al.'s

(2019) criterion that if none of the indicators in PLS analysis has higher RMSE or MAE values compared to the naïve LM benchmark ( $LM > PLS$  or  $LM - PLS > 0$ ), the model has high out-of-sample predictive power.

In the absence of evidence to the contrary, the  $R^2$  value,  $Q^2$  value for the BI construct, and the high out-of-sample predictive capacity obtained in this study would suggest that the current model for the formation of BI could be accepted as an improvement in the explanation and prediction of BIs of subscribers than the average  $R^2$  value of 46% reported in the meta-analysis of Gelbrich and Roschk (2011). The high explanatory power in this study suggests that the developed model could explain the formation of BIs at the conceptual level based on the hypothesised causal relationships. At the same time, the high predictive relevance suggests that the BIs of future observations can be predicted successfully from the given predictor variables when all of them are considered simultaneously. This explanation coheres with literature on predictive models, as explained by Shmueli and Otto (2011) that in determining the predictive power of a model, all the predictor variables must be included. In summary, the high explanatory power and the predictive relevance would suggest that the developed model can be used to successfully predict the formation of BIs based on perceived justice (PJSR), service recovery satisfaction (RSat), service quality (SQ) and overall customer satisfaction (OCS). The results provide a good reason to conclude that the study's research objective 1 (RO1) was addressed.

### **7.3. DIRECT RELATIONSHIPS AMONG THE VARIABLES (RO2)**

It is not possible to perform mediation analysis (RO2) without direct relationships. For that reason, the discussion on the explanatory roles of the latent variables (RO2) was broken down into a discussion of the direct relationships first before the indirect relationships in the conceptual framework in Figure 4.1 in Chapter 4. The findings relating to these hypotheses will be discussed in the next sections.

#### **7.3.1. The components of perceived justice (PJSR)**

Even though there was no hypothesis linking the underlying dimensions of PJSR construct to any other construct in the conceptual framework of this study, it is worth providing a brief discussion of them because they form the foundation of the PJSR

construct. Accordingly, this section provides a brief discussion of the significance of these dimensions of the PJSR construct to clarify how the PJSR construct would influence service recovery satisfaction (RSat) and overall customer satisfaction (OCS).

The findings in this study show that only distributive justice (DJ), procedural justice (PJ) and informational justice (InfJ) were statistically significant while interpersonal justice (IJ) was not. This finding contradicts some of the previous studies (Zhao et al., 2012; Awa et al., 2015; Bahri-Ammari & Bilgihan, 2019), where IJ was found to be significant. However, the same finding seems to confirm other researchers' assertions (Nguyen et al., 2012; Prasongsukarn & Patterson, 2012) that the significance of the dimensions of perceived justice is context-specific.

It is no surprise that the impact of IJ was not significant in this study. There could be several explanations for this finding. The first explanation could be that previous researchers, for example, Zhao et al. (2012), combined interpersonal and information justice (InfJ) into one dimension of interactional justice. In such cases, the positive influence of the IJ dimension on perceived justice (PJSR) could have been reflecting the effects of InfJ embedded in the combined IJ dimension. Second, some of the items employed to measure IJ, like "*apology, explanation and communication*", are aspects of InfJ in the current study. Third, mobile services and service breakdowns are delivered through technology without face-to-face contact between the service provider and the subscriber most of the time, which could further explain the weak effect of IJ. Since IJ arises from interpersonal interactions, the lack of human contact in the delivery of mobile services could be why IJ was not significant in this study. Therefore, IJ would not influence the customers' evaluation of the fairness of a service recovery because courtesy, politeness and empathy of the employees tend to have a stronger emotional appeal when experienced face-to-face than online, which could explain the non-significance of IJ in the current study.

### **7.3.2. The influence of perceived justice (PJSR) on RSat and OCS**

The significance of PJSR in the formation of BIs were hypothesised in **H1a** and **H1b** in the integrated conceptual model in Figure 4.1, which predicted that PJSR had a direct impact on post-recovery satisfaction (RSat) and overall satisfaction (OCS)

respectively. As revealed by the beta values of the causal relationships between PJSR and RSat and OCS shown in Figure 6.1 of Chapter 6, PJSR had a positive and significant direct effect on RSat and OCS. This result support Söderlund and Colliander's (2015), who reported that customers' perceptions of justice directly influenced their overall satisfaction in the context of electronic products. The statistical explanation of the positive and significant impact of PJSR on RSat and OCS suggests that statistically, these variables move in the same direction (Hair et al., 2017). This implies that customers who perceive the service provider as fair are likely to have contended with the service recovery solution of the service provider. Practically, this suggests that after a service failure, customers may be more understanding and/or forgiving if they perceive the service provider's actions to restore the social equity as fair (Mostafa et al., 2014; Oliver, 2015). The significant dimensions of the PJSR construct (DJ, PJ and InfJ) in this study suggest that MNOs can achieve perceived fairness and protect their reputation by offering a sincere apology while quickly attending to the network problem and replacing whatever the customer has lost due to the network failure. This explanation conforms to the findings of Awa, et al., (2015) who reported that recovering customers who suffered a service failure in the mobile telecommunication industry alleviated the reputational and market damage of the MNO.

The positive effects of the PJSR on RSat also supports the Social Exchange Theory (SET), which is based on the view of equal partners in an exchange relationship in which the exchange itself must be deemed to be equitable. According to the SET, customers will continue to do business with their current suppliers if they perceive the social exchange relationship between them and the service provider to be balanced. This finding seems to conform to previous studies, which reported that a subscriber's sense of social imbalance between money spent to acquire the service and the service provided results in feelings of perceived unfairness or deprivation (Awa et al., 2015). Controlling for other factors, the finding that PJSR had a strong influence on RSat suggests that subscribers will perceive equity if the network is always available (Awa et al., 2015). This conforms to the utilitarianism theory, which holds that the actions of a service provider are judged as better (fair) or worse (unfair) according to their tendency to maximise the happiness of an individual. In the context of mobile services, customers' input to the social exchange process is their

payments for the utilisation of the network of the MNO. There is equity when customers can connect on the network as they wish all the time. The SET (Adams, 1965) proposes an element of social inequity when a service failure occurs, which makes the network unusable by the customer. Consequently, if the network failure is not fixed, customers are likely to perceive unfairness in the social exchange process, making them more disappointed with the MNO.

The findings that PJSR positively influenced overall customer satisfaction confirms Gelbrich and Roschk's (2011) and Bortoli and Pizzutti's (2017) results that an organisation's response to a service failure occurrence leads to justice perceptions, which in turn, generates a post-recovery transaction-specific and cumulative satisfaction. According to Bortoli and Pizzutti (2017), each service failure and the subsequent service recovery process create a justice episode, which the customer, in turn, aggregates into overall PJSR. The results also conform to Oliver's (2015) disconfirmation theory, which suggests that customers evaluate the outcomes of the service recovery solutions against their expectations. Perceptions of justice have an impact on emotions, such that in-service failure situations, these emotions create a negative impression of a supplier in the customer's mind (Choi & Choi, 2014). Adequate or fair recoveries reduce these emotions and generate a positive impression of the supplier through customer forgiveness. So when customers experience a service failure, they expect the service to provide a fair solution to the problem. A positive disconfirmation occurs when customers perceive the service recovery solution to exceed their expectations of fairness. This would mean that customers may be tolerant and feel more committed to a service provider if they perceive that an organisation has tried its level best to provide a fair solution to the problem. This may suggest that the "means" (offering a combination of a sincere apology, prompt fixing of the problem) and "end" (outcome of the service recovery solution) have the potential to create a positive overall impression of an organisation in the mind of the customer. In contrast, a negative disconfirmation arises when the organisation's actions to a service failure problem are perceived to be unfair. An unfair service recovery solution disappoints a customer twice, resulting in a customer leaving the organisation, which is consistent with the double deviation theory (Ellyawati, 2017).

What is noteworthy is that perceiving justice (PJSR) impacts on RSat and OCS is not the same. PJSR had a stronger impact on RSat than on OCS. The results in Table 6.11 revealed that the total effect of PJSR on RSat was stronger ( $\beta=0.717$ ) than its total effects on OCS ( $\beta=0.562$ ). Furthermore, PJSR accounts for 51.4% ( $R^2$  of RSat in Figure 6.1,  $\beta = 0.514$ ) variance in RSat. This result coheres with the study of Awa et al. (2015), where PJSR was the main predictor of RSat. The works of Maxham and Netemeyer (2002), which revealed that PJSR had a stronger effect on RSat than on OCS, provide further support to findings in this study. A possible explanation for the differential impact of PJSR on these constructs is that when subscribers experience a problem with a network, their immediate focus is on how long it will take the MNO to fix the problem. This explanation supports the previous findings by Chen and Kim (2019) and Ali et al. (2021), which revealed that the desire of the customer to have the service failure problem. These service failure responses constitute a justice episode, which is aggregated to generate a customer's overall impression about the organisation.

The differential impact of PJSR on RSat and OCS also mirror the results of Orsingher et al.'s (2010) meta-analysis, which demonstrated that PJSR is stronger on post-recovery satisfaction because it is a transaction-specific measurement. This explanation is consistent with Oliver's (2015) view that OCS is an aggregate of several service encounters, such that the impact of PJSR may not be as strong as it is on RSat. Conversely, if a supplier were to fail to provide a service recovery, this would exacerbate the customer's loss, thereby disappointing them twice; first when the service breakdown occurs and second when there is a lack of effort by the MNO to recover the service failure, which may lead to customer switching.

### **7.3.3. The impact of RSat on SQ, BIs and OCS**

The direct impact of RSat on SQ, BIs, and OCS were predicted in **H2a**, **H2b**, **H2c**, and respectively. The mediating role of RSat in the relationship between PJSR and OCS, respectively, was predicted in **H5a**. The results show that all these hypotheses were significant and supported. Their discussion will be given in the next sections.

#### *7.2.2.1. Impact of RSat on SQ*

The findings in Figure 6.1 indicate that RSat had a strong positive and significant impact on SQ ( $\beta=0.615$ ), and RSat had the strongest association with SQ than its associations with BIs and OCS. These findings support the results of Chang, Jeng and Hamid (2013) and Chao et al. (2019), who examined this direct relationship and reported that RSat had a direct influence on SQ. Though the structural path between RSat and SQ is strong, the coefficient of determination ( $R^2$  value) for SQ in Figure 6.1 was 0.378 or 37.8%. Thus, RSat accounted for substantial variance in SQ (Hair et al., 2017), considering the multi-dimensionality of the SQ construct. Furthermore, the positive relationship between RSat and SQ shows that the two variables move in the same direction. This means that when subscribers are happy with the service recovery solution, their perceptions of the quality of service are also enhanced.

The occurrence of a network problem or service failure decreases the network connectivity of the MNO. Subscribers would perceive the mobile network as unreliable; thus, lose confidence in the reliability of the MNO services. Consequently, a quick response to fix the service failure problems would restore the confidence of the subscribers. This explanation suggests that service breakdowns may not be the sources of frustration that trigger perceptions of poor SQ but the response of the MNO to such service breakdowns. This is consistent with Awa et al. (2015), who reported that subscribers might anticipate some problems with network signals, but they expect the MNO to fix them within the shortest possible time.

#### *7.2.2.2. Impact of RSat on BI and OCS*

Consistent with hypotheses H2b and H2c, the findings in chapter five show that a subscriber's satisfaction with a recovery solution had a positive and significant impact with BI and OCS, respectively. The direct impact of RSat on OCS was expected and is consistent with the findings by Cronin et al. (2000) and Jones and Suh (2000) that customers' transaction-specific satisfaction had a positive effect on OCS. The results also support the empirical findings of Maxham and Netemeyer (2002) that the customers' satisfaction with a service recovery solution (RSat) influenced their overall rating of the performance of the service supplier (OCS). The explanation for the direct influence of RSat on OCS resonates with Oliver's (2015) additive theory of the satisfaction construct, which holds that cumulative satisfaction

is an aggregation of the customers' satisfaction with all the previous specific transactions. Customers can relate to all individual specific service failures and the service provider's recovery actions when evaluating the service provider's performance.

Consistent with existing literature (Petzer et al., 2017; Cheng et al., 2018), recovery satisfaction was expected to affect BIs. Therefore, a satisfactory restoration of a service contends customers, triggering positive experiences and repeat purchases. This suggests that every service failure can lower the organisation's overall performance rating, which may trigger unfavourable BIs. This explanation is consistent with many previous studies (Maxham & Netemeyer, 2002; Homburg et al., 2005; Keiningham et al., 2014), which reported overall satisfaction as a summary of the customer's satisfaction with several specific encounters. Although RSat is a transaction-specific satisfaction, its effect on BI suggests that satisfaction with a recovery solution impacts customers' overall satisfaction and affects their BIs. The additive theory suggests that OCS absorbs most RSat effects on BI while only having a knock-off effect on BI. The weak association between RSat and BI ( $\beta=0.169$ ) can be attributed to the fact that recovery satisfaction is determined by a customer's feelings (unconscious reactions) while BIs are determined from a cognitive (conscious appraisal) evaluation. The other reason is that RSat directly influences SQ and OCS before it impacts BIs. Hence by the time, it reaches BIs, the overall effect is minimised.

#### **7.3.4. The impact of service quality (SQ) on BI and OCS**

The effects of SQ on BI and OCS were hypothesised as **H3a** and **H3b**. These hypotheses are supported in Table 6.9. The beta values of their structural paths of the SQ->BI and the SQ->OCS were  $\beta=0.107$  and  $\beta=0.273$ , respectively (see Figure 6.1 in chapter 6). The findings that SQ had a direct influence on OCS resonate with existing literature which reported that customer satisfaction was an outcome of service quality in the airline industry (Hussain et al. (2015) and in the telecommunication industry (Srivastava & Sharma, 2013). However, unlike in these previous studies, not all the dimensions of SQ suggested by Parasuraman et al. (1988) were significant in this study. Of the five dimensions of SQ (reliability, assurance, tangibles, empathy and responsiveness), only the *reliability* and



*responsiveness* were statistically significant in this study, while the rest were not. This may be due to a couple of reasons related to the industry context of the study. First, several previous studies on SQ (Yuen & Thai, 2015; Aryee et al., 2016; Ngo & Nguyen, 2016; Dawi et al., 2018; Manling & Segoo, 2020) were based on contexts in which the human-related dimensions of SQ (reliability, assurance, empathy and responsiveness) and related physical dimension (tangibles) were present. The assurance and empathy dimensions of SQ are related to the interpersonal interactions between the employees of the MNO and the subscriber, while the tangible dimension is linked to the physical facilities of the service provided (Seth et al., 2005; Abd-Elrahman, 2018; Franceschini, & Mastrogiacomo, 2018). As mentioned by Pihlström (2008) and Awa et al. (2015), the delivery of mobile services does not involve face-to-face interaction between the purveyor and the buyer. In fact, according to Akroush et al. (2019), subscribers rarely visit the MNO shops for accessing mobile networks except on rare occasions when there is a need to complain about a network problem. These could be the reasons why these dimensions were not significant in this study.

While the respondents' reasons to choose the reliability and the responsiveness dimensions as the only determinants of service quality may not be obvious, this could be attributed to the nature of service quality of technology-delivered services. For example, previous studies by Iqbal, Hassan and Habibah (2018) and Hussan, Iqbal and Habibah (2020) found that customers expect delivery of technology-based services to be more effective, flawless and more reliable than people-delivered services.

The direct influence of service quality on overall customer satisfaction found in this study is consistent with previous works of Abd-Elrahman (2018) and Akroush et al. (2019) conducted in the Cellular industry, as well as the work of Virima et al. (2019) for the provision of Internet services in Zimbabwe. This result also conforms to the findings of Arslan, Iftikhar and Zaman (2014) and Rahhal (2015), who reported that customers' overall satisfaction was a direct outcome of service quality in the mobile telecommunication industry in Pakistan and Syria, respectively. Like the results of this study, these previous researchers also found that the direct effect of service quality on overall customer satisfaction was only through the reliability and

responsiveness dimensions and not any other dimensions. As claimed by Iqbal et al. (2018), the advancement in Information and Communication Technology (ICT) has enabled service providers to provide convenience to access their services. These authors also mention that to a customer. Convenience means being able to access the service whenever, wherever you wish. In the context of this study, it suggests that subscribers expect to be able to connect to the mobile network whenever and wherever they wish. Disconnection from the network would mean inconvenience. The length of time a customer takes without a service (time of repair) measures the responsiveness of the MNO. If service providers are to restore convenience, customers expect them to minimise network outages or deal with a network outage within the shortest possible time (Iqbal et al., 2018). Otherwise, they will be disappointed. These disappointments will accumulate to determine the overall satisfaction of the customer with an MNO. That explanation is congruent with the utilitarianism theory (Alan, 2016), which asserts that customers are impressed by a mobile network if they can fully utilise it whenever and wherever they need it. According to Alan (2016), availability complements reliability and both measure network stability. As the findings in this study suggest, continuous availability (reliability) of the mobile services increases their utilisation, which in turn would make customers satisfied. The contrary of this view suggests that an unstable (unreliable) mobile network would decrease its utilisation and hence make subscribers discontented.

The stability (reliability) of a network is a bedrock parameter for evaluating the overall performance of an MNO. This explanation supports the works of previous researchers (Awa et al., 2015; Lekobane & Selelo, 2017) who reported that respondents considered the reliability of a Cellular network as the most important evaluation criterion that determines their satisfaction with an MNO. The findings are in accordance with the view that mobile network disruptions prevent their normal utilisation by the customers. The number and frequency of outages are measures of reliability. Therefore, frequent outages frustrate customers and reduce their perceptions about the dependability (reliability) of an MNO and their overall impression of the firm. That explanation is congruent with the work of Meuter et al. (2000) and that of Iqbal et al. (2018), who found that systems failures in technology-based service delivery were frustrating to customers. In the same study, customers

were also frustrated with process/system failures when they could not connect to mobile networks and/or perform their transactions. It is reported that the reliability and responsiveness positively impacted the overall satisfaction of subscribers and their BIs.

Furthermore, the finding that only the reliability and responsiveness dimensions were prioritised in this study would suggest that subscribers were mainly concerned with what Grönroos (1984) called the functional quality (utility) of Cellular services. Such an explanation lends support to Meuter et al.'s (2000), Pihlström (2008) and Iqbal et al.'s (2018) contention that customers are worried about the functionality of technology-driven electronic services and would be disappointed with erratic system failures. These findings suggest that the extent to which a Cellular network is stable (smooth functionality) is a critical determinant of perceived service quality, which in turn will impact the subscribers' intention to repeat purchase and spread positive word-of-mouth (WOM) to others.

In this study, SQ had a relatively weak direct impact ( $\beta=0.107$ ) on BI. This seems to contradict previous studies by Cronin et al. (2000), Caruana (2002) and Ismail et al. (2017), who reported a strong association between SQ and BI. Two issues peculiar to this study are among the several possible explanations for this observation. The first issue relates to the scope of the study. In their studies, Cronin et al. (2000) and Caruana (2002) did not include RSat such that the direct impact of SQ was free from other variables besides OCS. The increase in the number of factors that account for the formation of BI in the current model could have contributed to the reduced direct effect of SQ on BI. Therefore, it can be inferred that the relative impact of SQ on BI revealed in the previous studies was overstated as they ignored some important variables pertinent to the SQ-BI relationship. The second point could be related to the context of the study. For example, Ismail et al. (2017) conducted their study on customers who received treatment from army medical organisations. It could be possible that SQ was considered so critical in forming BIs about where to get medical treatment in the customer's next visit. In the context of the current study, the mobile telecommunication industry, a possible explanation could be that the influence of SQ on BIs was overshadowed by the presence of OCS (customers' overall impression of the MNO).

The performance of the industry in terms of the quality of service was just average. The mean score for the SQ construct (4.45) was above the midpoint of the scale (3.5) (see Table 5.2 in chapter 5), suggesting that, in general, the performance of the mobile industry was slightly above the expectations of the subscribers. This demonstrates that subscribers perceived the mobile networks as satisfactorily stable (reliable) and that MNOs promptly fixed any major network breakdown. Given this explanation, it would be expected that the mean score of the OCS and BI would also be low if SQ was the main determinant of these constructs. In contrast, the mean scores for OCS and BI were 5.16 and 5.04, respectively. A closer look at the proposed model and the structural linkages shows that the antecedents of OCS consisted PJSR, RSat and SQ, while those of BI were RSat, SQ and OCS. Therefore, the high mean scores of OCS and BI could be because of the better performance of the industry in PJSR (mean score= 4.59) and service recovery (RSat) (mean score= 4.87) (see Table 6.2 in Chapter 6).

### **7.3.5. The impact of overall customer satisfaction (OCS) on BI (H4)**

The results in Figure 6.1 (Chapter 6) reveal that OCS had the highest positive impact on BI. These results show the dominance of OCS in the formation of BIs in this industry. The results support Oliver's (2015) assertion that OCS is the most proximal and dominant determinant of customers' favourable BIs. The results are also congruent with several empirical studies (Cronin et al., 2000; Maxham & Netemeyer, 2002; Ismail et al. 2017; Dawi et al. 2018; Meng & Segeo, 2020), which consistently found that OCS had a strong direct impact on BIs. Even studies in the mobile services industry (Gerpott & Rams 2001; Kuo, Wu & Deng, 2009; Zhao et al., 2012) reported that OCS directly impacted the customers' intentions to continue using the same MNO.

Similarly, the influence of OCS on BI found in this study conforms to Szymanski and Henard's (2001) meta-analysis on satisfaction studies. These authors established that OCS had the strongest impact on repurchase intentions in 88% of 50 satisfaction articles, with beta values ranging from 0.11 to 0.91. The results of this study also suggest that, even in the presence of RSat and SQ, the customer's overall satisfaction is the strongest factor assimilated into their decisions and choices of a

supplier. The direct influence of OCS on the formation of behavioural (repurchase) intentions can be explained from the perspective of economists (Bruin, Gilli & Pelligra, 2008; Göbel, Vogel & Weber, 2013) call the positive reciprocation and negative reciprocation (retaliation) behaviour of human beings. According to these authors, reciprocity is a gesture of respect and esteem returned to another because of what they have given in the first place. It articulates the obligation the giver feels to do unto the other as they did unto them. Applied to the finding in this study, the reciprocating nature of human beings implies that when customers perceive the performance of a service organisation to please them, they feel obliged to repay that by talking good about it and forming repurchase intentions. In contrast, when they are not happy or consider a service firm's actions to be hostile or nasty, they retaliate by spreading negative word-of-mouth and defecting to an alternative supplier.

#### **7.4. THE MEDIATING ROLES OF RSAT, SQ AND OCS (RO2)**

One of the study's main objectives was to investigate and substantiate the causal mechanisms that underlie the relationships among the predictor variables, which often refers to the mediation analysis. The mediation roles of service recovery satisfaction (RSat), service quality (SQ) and overall customer satisfaction (OCS) in the formation of BI emanate from their interrelationships postulated in the overall conceptual framework for the study in Figure 4.2 in Chapter 4.

##### **7.4.1. The mediating role of RSat**

The conceptual model suggests that RSat would be an intermediary in the relationship between perceived justice (PJSR) and overall customer satisfaction (OCS) and between PJSR and service quality (SQ). Since both the indirect path PJSR->RSat->OCS (see Table 6.11) and the direct path PJSR -> OCS (see Table 6.9) were significant, it was concluded that RSat partially mediated the relationship between PJSR and OCS. This shows that part of the effects of PJSR on OCS is transmitted through RSat as the partial mediator. The results in Table 6.11 show that the total effect of PJSR on OCS was 0.562. The variance accounted for (VAF) reveals that the total indirect effect of PJSR on OCS explained 52.5% (0.295/0.562), leaving only 47.5% (0.267/0.562) to be transmitted directly. The strength of the total indirect paths suggests that the impact of PJSR on OCS is stronger when transmitted through recovery satisfaction than directly. This strength of the total

indirect effect suggests that while satisfactory recoveries may be necessary for service recovery, they may not be enough to increase the customer's overall satisfaction without PJSR. This explanation is consistent with Oliver's (2015) additive theory discussed in the preceding paragraphs. The mediation result of RSat is consistent with the findings of Maxham and Netemeyer (2002) that transaction-specific satisfaction partially mediates the effects of PJSR components on OCS in the context of service recovery. Moreover, in the mobile services context, Zhao et al. (2012) assessed the effects of PJSR on customer satisfaction and continuance intention and found that RSat partially mediated the relationship between PJSR and cumulative satisfaction (OCS).

In summary, the findings in this study provide a deeper understanding of the ripple effects of PJSR on BI where service failure and recovery are involved. While the direct effects of PJSR on RSat and OCS discussed in this study have been tested before in different contexts (Maxham & Netemeyer, 2002; Gohary, Hamzulu & Alizadeh, 2016; Matikiti et al., 2019), to the researchers' knowledge, the spillover effects of PJSR on the formation of BIs had never been tested before. The present study put forward that RSat would mediate the PJSR  $\rightarrow$  OCS relationship. Empirical evidence in this study revealed that RSat was a complementary partial mediator in the PJSR  $\rightarrow$  OCS relationship, which previous studies had not examined before. Taken together, the results in this study provide empirical evidence that RSat and OCS are two distinct types of satisfaction and that in the context of service failure and recovery, the former is a predictor of the latter.

#### **7.4.2. The mediating roles of SQ**

The conceptual model shows that SQ would mediate the RSat  $\rightarrow$  BI and the RSat  $\rightarrow$  OCS relationships (**H5c** and **H5d**, respectively). The findings in this study suggest that the total effects of RSat on BI was 0.515 and statistically significant (see Table 6.11). However, the computed variance accounted for (VAF) (deconstruction of the total effect) shows that 67.4% of the total effect of RSat on BI was transmitted through the indirect paths, which are RSat  $\rightarrow$  SQ  $\rightarrow$  BI and RSat  $\rightarrow$  SQ  $\rightarrow$  OCS (see Table 6.11 in Chapter 6). This suggests that the influence of RSat on BI is stronger through its indirect paths than its direct path. This finding would suggest that

emphasis on RSat does not directly affect BI on its own, but rather, its effect on BI is felt stronger when it goes through SQ and OCS as partial mediators.

Further deconstruction of the total indirect effect of RSat on BI provides a deeper explanation. Specifically, the computed VAF values suggest that the RSat->SQ->OCS->BI structural path explain 22% ( $0.115/0.515$ ) of the total indirect effect, while the RSat->OCS->BI route explains 32% ( $0.166/0.515$ ). These findings may suggest that even though the indirect influence of RSat on BI was stronger through OCS as a single partial mediator, the serial mediation of SQ and OCS in the relationship between RSat and BI cannot be ignored since it explains 22% of the total indirect effect. Even though the RSat->SQ->BI structural path was statistically significant, the computed VAF value of 0.00 ( $0.066/0.515$ ) may suggest that the indirect influence of RSat on BI through SQ alone did not exist. The statistical significance of this route may have been caused by using a large sample size in this study. These findings conclude that SQ is a partial mediator in the relationship between RSat and OCS but not a partial mediator in the relationship between RSat and BI. The roles of SQ found in this study and the associated explanations seem to support the claim that focusing on the determinants of BIs in isolation would mask the relative strengths of the predictors.

#### **7.4.3. The mediating roles of OCS**

The proposed model in Figure 4.1 shows that OCS provide the most important single central link between PJSR, RSat, SQ and BIs. The nomological networks of these constructs suggest that a change in one will have a ripple effect on others. The central mediation role of OCS suggests that to achieve overall satisfaction, MNO need to focus their attention on its antecedents, which are PJSR, RSat and SQ.

The total effect of RSat on BI was 0.515, and its total indirect effect on BI was 0.347 (see Table 6.11). The computed VAF shows that the total indirect effect of RSat on BI accounted for 67.4% leaving only 32.6% for the direct path. This finding suggests that the effect of RSat on BI is stronger when transmitted through indirect paths than through direct paths. Put differently, this result suggests that SQ and OCS absorb a bigger proportion of the effect of RSat on BI. Similarly, the total indirect effect of SQ on BI explained 63.3% of its total effects on BI, suggesting the much of the influence

of SQ on BI is felt through its effect on OCS as the mediator. These findings imply that OCS played a critical role in mediating the effects of the other three predictor variables on BIs. Such findings are consistent with the existing literature based on bivariate relationships (Caruana & Malta, 2002; Ismail et al., 2017). For example, Ismail et al. (2017) investigated the relationship between SQ, OCS and BI and found that SQ explained 55.1% of the variance in OCS, which in turn explained 55.5% of BI. It was then concluded that SQ influenced BI through OCS and that OCS was a full mediator in the SQ->BI relationship. However, unlike in the current study, the method used by Ismail et al. (2017) was not able to test for partial mediation. The total indirect effect of SQ on BI was found to be 0.294 (see Table 6.11 in chapter 6). However, the bulk of the effect of SQ on BI (0.186 or 63%, see Table 6.11 in chapter 6) is transmitted through the SQ->OCS->BI indirect path. This seems to be consistent with previous studies that suggest that SQ would have a greater impact on BI through OCS.

In summary, the central mediating role of OCS shown in this study suggests that OCS is a third-order construct, which depends on predictor variables. Such an explanation suggests that RSat and SQ are distal antecedents of BI, while OCS is a proximal determinant of BI.

### **7.5. THE MODERATING EFFECTS OF SWITCHING BARRIERS (SBs) (RO3)**

The primary interest of testing for moderation in this study was to examine how the presence of SBs would change the strength of the causal effects of the predictor variables on BI, which had been established in the mediation tests. The results revealed that the moderation effects of SB were only significant for the SQ->BI relationship but not on the RSat->BI and the OCS->BI relationships. This means that the moderation tests in this study suggest that the presence of SBs only changed the effects of SQ on BI, but the main effects of RSat and OCS on BI were not affected by the presence of SBs. On the contrary, the significant moderation effect of SB on the SQ->BI suggests that the main effects of SQ on BI would differ according to the levels and changes in SBs.

The non-significance of the moderation effects of SB on the OCS->BI was surprising as it was contrary to results of previous studies (Jones, Mothersbaugh & Beatty,



2000) in the banking and hair saloon industries in the USA context. Specifically, Jones et al. (2000) reported that the influence of core-service satisfaction on repurchase intentions decreased under conditions of high SBs, but high SBs had no influence on repurchase intentions when core-service satisfaction was high. On the contrary, and specifically, these findings support the results of Chuah, Rauschnabel et al. (2017), who reported that SBs did not have a moderating effect on the satisfaction-loyalty link for mobile Internet customers in Malaysia.

While the explanation for the exhibited results in this study is not obvious, a possible explanation could be ascribed to the differences in methodology and approach used by the previous studies and the current study. Most of the previous studies examined the SB->BI and the OCS->BI causal relationships separately. The non-significant moderation effects of SB on the OCS->BI conforms with Jones et al.'s (2000) finding that the effects of SBs on BIs is overshadowed when overall customer satisfaction is high. With an average mean score of 5.16 out of 7, which is 74%, the overall satisfaction of customers in this study can be considered high.

Only the reward-based positive SBs (innovativeness [Inn] and local network influence (LNI) dimensions of the SB construct were significant lock-in strategies in this study. Both findings are not surprising in the context of the mobile telecommunication industry. This finding could be attributed to the type of subscription of the respondents. The majority of the respondents (401 or 99%) were pre-paid subscribers. Typically, pre-paid subscribers are free from contractual obligations with a mobile operator. As a result, they feel free to switch as and when they want to do so as their mobility in the market is entirely their voluntary choice. That explanation is supported by the findings of Doganoglu and Grzybowski (2007) in Germany and those of Gzajkowski and Sobolewski (2010) in Poland, who found the mobility of pre-paid subscribers between mobile operators, was mitigated or constrained by non-contractual barriers. Another possible explanation could be drawn from the concept of cost-benefit analysis and the theory of aggregated marginal gains. The doctrine of cost-benefit analysis holds that rational individuals will calculate and aggregate the costs and benefits associated with their choice and follow the choice that maximises benefits over costs. Applying this concept to the explanation of the findings exhibited in this study would imply that if negative SBs

existed, they were overshadowed by the benefits derived from the reward-based (positive) SBs. As explained in Chapters 3 and 4, reward-based SBs make customers desire to stay with an MNO, not because they feel hostage to the service provider.

It is also possible that the results reflect the propensity of the age groups towards technology connectivity. Most respondents were in the age group below 40 years (263 respondents constituting (90%), (see Table 6.1 in Chapter 6) and the majority of them have attained at least a first degree (220 respondents constituting or 54%), see Table 6.1 in Chapter 6). The high propensity of elite young generations towards adopting new technology could be why perceived company innovativeness was conceived as a positive switching barrier. This is in alignment with Chuah, Marimuthu et al. (2017), who showed that subscribers in the age group between 18 and 34 years had a high propensity for technology in Malaysia.

The possible explanations of why company innovativeness (Inn) and local network influence (LNI) dimensions were significant SBs can be understood by referring back to the definitions and conceptualisations of these variables. A couple of possible reasons could explain why company innovativeness was perceived as a significant lock-in switching barrier (SB) in this study. First, the significance of perceived company innovativeness as SBs in this study could be attributed to the nature of the industry. As explained in Chapter 3, in the context of this study, company innovativeness, which refers to the ability of an MNO to introduce new value-added services, is a key determinant of survival in this industry. The influence of perceived company innovativeness as a positive barrier to switching can be ascribed to the natural desire of people living in the digital globe to be up to date with technological developments. Being perceived as an innovative company will make customers feel proud that they will not be behind in technological advancements. Such a desire will motivate subscribers to want to associate with an MNO they perceive to be more innovative on the market. There is a difference between subscribers “wanting to stay” and being “compelled to stay” in a relationship with a service provider. Wanting to stay refers to the voluntary desire to continue with a relationship, whereas being compelled to stay is an involuntary forced or imposed decision. Consumers desire to stay with a supplier when they perceive benefits while forced to stay with a supplier

due to switching costs or contractual obligations. Subscribers would want to stay with a company that frequently introduces new technology to always be updated with technological developments. In that regard, perceived company innovativeness leads to favourable BIs not because customers feel captive to MNO demands. That explanation is congruent with the findings of Malhotra and Malhotra (2013). Their empirical investigation found that the perceived company innovativeness (in terms of introducing value-added services) was strongly influential on customer loyalty in the mobile telecommunication industry in the USA. Another dimension could be that company innovativeness appeals and attracts subscribers to want to stay with a mobile operator, especially the younger generation with a propensity for technology. That explanation is congruent with the findings of Chuah, Marimuthu et al. (2017), whose empirical evidence show that perceived company innovativeness increased the attractiveness of an MNO to its Generation Y (people aged 18 and 34 years), also known as “Millennials”, “digital natives” or “the Connected generation” in Malaysia.

Another possible reason why innovation was a switching barrier in this study can be attributed to the human tendency to continuously seek better quality. Innovation drives customers to keep their mobile service provider if the company demonstrates greater innovation, thereby preventing them from switching frequently. This explanation is in line with the findings of several previous studies (Han et al., 2015; Wirtz et al., 2015), who, in separate studies and contexts, reported a common finding that consumers’ perception of company innovativeness increased their desire to stay with their service provider and reduce their propensity to switch. Thus, frequent introduction of new value-added mobile services (service innovation) creates positive SBs for themselves that enhance customer retention. If an operator does not upgrade its network to the latest technology, it will lose its market position. Similarly, if an operator does not innovate its equipment and frequently introduce new services, it will lose customers.

Likewise, the explanation of the positive influence of LNI as a lock-in SB exhibited in this study can be understood by referring to its conceptualisation. The concept of local network influence (LNI) assumes that MNO operates a differential tariff system

where on-net (calls to the same network) tariffs are lower than the off-net (calls to other networks in the same market) tariffs. Therefore, to maximise utility, consumers would naturally prefer to call numbers on the same network. As a result, the choice of an MNO would be influenced by the number and distribution (or ratio) of members of his or her family, friends or other colleagues frequently called, subscribed to the same network. The higher the number of calls made on-net tariffs, the lower the cost of communication through mobile phones. Theoretically, this implies that the total cost to the subscriber will be lower the higher the number of on-net calls he or she makes. That explanation is congruent with the rational choice theory (Cox et al., 2016), which posits that consumers apply the cost-benefit analysis when making purchasing decisions. However, this explanation should not be interpreted to imply that subscribers would totally ignore the issues of SQ because of the benefits realised from on-net connectivity. Rather, subscribers may opt for quality rather than continue with a poorly performing MNO simply because their social others use it. In such a situation, customers will opt to have multiple SIM cards. Perhaps, this could be one reason why many subscribers had more than one SIM card. That means that MNOs must be both innovative and provide a high quality of service for customers to have a dual benefit.

The significance of LNI as positive switching barriers exhibited in this study is supported by Czajkowski and Sobolewski (2010) and their later findings (Czajkowski & Sobolewski, 2016) in Poland. Specifically, the results of Czajkowski and Sobolewski (2016) actually revealed that LNI represented a smaller but significant component of the lock-in switching barrier. Most importantly, the findings of Czajkowski and Sobolewski (2016) revealed that the number of family members and friends using the same network was the main driver or predictor of MNO choice. In their earlier study in 2010, these authors had discovered that the size of the social network group a particular subscriber belongs to have the strongest influence on the subscriber's choice of a mobile operator than the price absolute size of the mobile operator and other factors.

Likewise, the empirical findings of Birke and Swann (2006) in Britain and those of Doganoglu and Grzybowski (2007) in Germany also support the moderating effects of the local network effects exhibited in this study. Specifically, Birke and Swann

(2006) found that an individual's choice of a particular mobile operator was heavily influenced by the choices of others in the same household, while Doganoglu and Grzybowski (2007) found that network effects played a significant role in the subscribers' choice of a mobile operator and their continued use of it.

The discussion on the moderation effects of SB on the SQ->BI can also be explained by considering the statistical significance of the interaction construct, denoted as SBxSQ in Figure 6.5 in Chapter 6. The results revealed that this interactional construct (SB x SQ)'s effects on BI were negative. This finding is in line with Jones et al. (2000) and Kim et al. (2004). Jones et al. (2000) found the positive interaction effects of switching barriers on the satisfaction-repurchase intentions relationship in the USA's banking and hair saloon industries. However, the direct effect of switching barriers on behavioural (repurchase) intentions was insignificant. In the mobile telecommunication industry in Korea, Kim et al. (2004) reported that switching barriers did greatly influence loyalty intentions.

The negative sign of the interaction construct on the SQ->BI relationship is a sign of a reciprocal relationship. This reciprocal relationship simply means SBs have a buffering effect on the influence of SQ on BI, which means the presence of SBs weakens the effect of SQ on BI to certain levels. The findings support the empirical findings of Kim et al. (2015), who reported that the relationship between SQ and BI becomes weaker under high SBs and is stronger under low SBs. This reciprocal relationship is illustrated graphically in Figure 6.6. The explanation for the configuration of Figure 6.6 is that when SBs are low or non-existent, consumers depend more on their perceptions of SQ as a criterion for their BIs to stay with a service provider or switch. Practically this relationship means that when a mobile operator is perceived to be highly innovative, customers will still stay with it even if the quality of service is not perceived to be good. However, this should not be interpreted to imply that the presence of positive SBs (innovativeness and LNI) would significantly and consistently downplay the importance of SQ as a determinant of BIs, especially in this case where SQ consists of the reliability of a mobile network and responsiveness of an MNO to fix network problems. The flat graph of high SBs in Figure 6.6 suggests that the relationship between SQ and BIs is not affected by the presence of SBs. Theoretically; it means that when service quality is high, the

influence of SBs on the customers' decisions will be overshadowed. A plausible explanation for this is that only when the quality of service falls below a certain threshold will the innovativeness of an MNO be considered a justification for loyalty. Overall, these findings suggest that the moderation effects of SBs on BIs increase under perceptions of poor SQ. Perceptions of innovativeness become particularly important when SQ is perceived to be poor, such that they mitigate, at least to some extent, the subscribers' reactions to leave the service provider. However, when both SQ and innovativeness are high, the results suggest that the influence of innovativeness is blurred.

## **7.6. THE IMPORTANCE-PERFORMANCE (IPMA) (RO4)**

The analytic value of the model was examined through the importance-performance matrix (IPMA) of the BIs construct to substantiate the predictive nature of the model. The IPMA results in Figures 6.11 and 6.11 in Chapter 6 provided an insight into the underperforming but more important and overperforming but less important constructs and indicators, respectively, for management action. Most previous studies showed the relative weighting of the antecedents based on the magnitude of their mean scores and/or regression analysis. However, such approaches do not guide management actions as they only show the importance but not the performance of a construct.

### **7.6.1. The Importance-Performance map for predictor variables**

The results of the IPMA for constructs on Figure 6.7 show that OCS, PJSR and RSat were situated in the top right quadrant (high importance-high performance) of the grid with OCS on the extreme far top right. The IPMA grid for constructs in Figure 6.7 in Chapter 6 shows that PJSR, RSat and OCS were considered highly important in forming BIs, and therefore, their performance should be a cause for concern. The high importance accorded to the PJSR, RSat and OCS suggests that these constructs are critical in predicting the formation of BIs by customers. OCS was considered to be the most important construct in the formation of BIs in this study. The result is congruent with the assertions of Oliver (2015), which were empirically confirmed by Maxham and Netemeyer (2002b), who reported that overall customer satisfaction had the strongest influence on repurchase intentions in mobile telecommunication industry. The result is also in accordance with Olorunniwo et al.

(2006), who reported that overall satisfaction had a stronger impact than SQ in a service factory setting. The findings also show that the higher the influence of a predictor constructs on the target, the important it will be rated. This result confirms the principle that when customers are satisfied with a company's performance, they are likely to come back. The explanation for that is that customers go into a relationship to satisfy a need. In other words, need satisfaction is the given top priority by customers.

The position of SQ suggests that this construct was considered the least important construct in the determination of BIs relative to others in the model. This result is in contradicts the findings of previous studies in mobile telecommunication (Selelo & Lekobane, 2017), life insurance services (Ramamoorthy et al., 2018) and pay-TV (Dawi et al., 2018), where SQ was reported to be an important determinant of BIs. This variation may be attributed to the methodical differences. Previous studies did not seek to integrate SQ and other key determinants of BIs and therefore could not perform the importance-performance analysis. Previous studies (Cronin et al., 2000; Caruana, 2002) have shown that the SQ-BI relationship is strong, yet it is shown to be weak in this study. The possible explanation is where mediation happens, OCS weakens the influence of SQ on BIs, something not picked up in previous studies.

The performances (y-axis) of all the constructs were not that good. Judging by the fact that the constructs were situated just above the average (50%) mark on the y-axis, the results suggest that the players' overall performance in this industry was not perceived as impressive. Overall, the results of the IMPA grid theoretically suggest that controlling for other variables, a unit increase in the performance of the OCS, will increase the chances of the formation of favourable BIs by 68.2% (0.682 see Table 6.11 in chapter 6). In contrast, a decrease in the value of OCS by one unit will decrease the chances of the formation of BIs by the same magnitude of its total effect (0.682).

### **7.6.2. The Importance-performance map for indicators**

The importance-performance analysis of indicators was conducted to gain more specific information on how management could increase the performance of the constructs. The results in Figure 6.8 in Chapter 6 show that, except for item RecSat

1 (*the company provided a satisfactory solution to the network problem*), all the other indicators of the constructs were perceived to be important as they were all situated to the top right (high importance-high performance) quadrant of the IPMA grid. According to Minta & Stephen (2017), the upper right quadrant of the IPMA shows the respondents' element that is considered important. The performance of these elements is critical for the formation of positive BIs. The performance of all the indicators was between 50% and 70%. This result suggests that the industry is doing well in these indicators, but there is room for improvement, especially on those indicators just above 50%.

In the descending order of importance, the IPMA for indicators suggests that subscribers considered the reliability dimension of SQ of the Cellular network to be the most important indicator that influenced their BIs, followed by PJSR (*despite the hassles caused by the network problem, the cellular company responded very quickly*). The high importance of the reliability indicator was surprising, considering that SQ was considered the least important in the IPM grid for constructs. In contrast, it also makes sense that the reliability of the mobile network improves the functionality of the mobile network from which subscribers derive the value of convenience. This explains why this indicator was judged to be the most important.

The DJ indicator (*the cellular company provided adequate compensation for the problem suffered*) was third in importance but very poor in performance. This suggests that perceived adequate compensation would increase customers' perception of fairness of a service recovery solution (Urueña & Hidalgo, 2016; Abney et al., 2017; Amin et al., 2020). As expected, all the four indicators of OCS were clustered around the same place in the top right quadrant, but their performance was not that good. This suggests that overall customer satisfaction is critical for the formation of BIs (Ramamoorthy et al., 2018). The InfJ indicator (*the apology and explanations provided for the causes of the problems were thorough and reasonable*) and the responsiveness dimension of SQ were considered important, but in this study, the results show that MNOs were not performing well on them. This could be detrimental because studies in PJSR (Ellyawati et al., 2012; Söderlund & Colliander, 2015) have shown InfJ to be a critical dimension of PJSR, which affects overall customer satisfaction. Similarly, Iqbal et al. (2018) showed that



responsiveness was an important dimension of SQ that influenced customers' satisfaction with technology-based service delivery. Therefore, poor performance in these items will have a ripple effect on OCS, which in turn will affect the formation of BIs.

## 7.7. CHAPTER SUMMARY

This chapter discussed the findings in Chapter six in line with the research objectives in Chapter One. The coefficient of determination ( $R^2 = 0.75$ ) showed high model explanatory power. There is a big improvement in the explained variance of the BIs construct considering that the  $R^2$  values of previous BI models, were on average, 46% (Gelbrich & Roschk, 2011; Morwitz, 2014). The estimated in-sample predictive relevance ( $Q^2$  value) of 0.547 demonstrated that the model had high predictive relevance. The out-of-sample predictive capacity (RMSE-LM and MAE-LM values) showed that the model had high predictive capacity. These two results show that RO1 involving the development of a comprehensive explanatory-predictive model for the formation of BI was satisfied.

An analysis of the explanatory roles of RSat, SQ and OCS showed that RSat is a partial mediator in the PJSR->OCS relationship, while SQ was shown to be a partial mediator in the relationships between RSat and OCS. OCS was shown to be the centric mediator that links PJSR, RSat, and SQ to BIs. Although SQ played a mediating role in the relationship between RSat and OCS, it did not mediate the RSat->SQ->BI relationships. Its failure to mediate the latter relationship means that SQ and OCS mediated the relationship between RSat and BI in series.

SBs were shown to have reciprocal moderating effects on the SQ-BIs relationship. When SBs are high (high innovativeness), how service quality impacts behavioural intentions to leave becomes immaterial due to lock-in effects. Hence attrition will be low. On the other hand, should SBs be low (low innovativeness), when service quality is low, the attrition level (BIs to leave) will be high as nothing prevents the customers from switching. This suggests that as the perceptions of company innovativeness increased, the strength of the influence of SQ on BI decreased.

The IPMA grid for the indicators of these constructs showed that the most important indicator is the reliability dimension of the SQ construct, followed by the procedural justice indicator and later the distributive justice indicator of compensation. The performance of all the indicators was poor as they were all cluttered just on the 50% mark on the performance axis (y-axis).

## **CHAPTER 8: CONCLUSION and RECOMMENDATIONS**

### **8.1. INTRODUCTION**

The purpose of the previous chapter was to present and discuss findings drawing on mainstream literature. The current chapter builds on the preceding Chapter by providing recommendations on the formation of BIs and conclusions. In its entirety, the current Chapter provides a recap of the study's empirical findings and shows how they addressed the research questions and research objectives of the study. The Chapter also explains the study's main contributions and provides theoretical and managerial implications of the empirical findings. The Chapter concludes with a description of the study's limitations and suggestions of what future researchers could do to extend this study.

### **8.2. CONCLUSIONS BASED ON LITERATURE**

The overall goal of the thesis was to develop a comprehensive predictive-explanatory model for the formation of behavioural intentions (BIs) for the purchase of mobile services. This goal arose from the postulation that researchers generally agree that BIs are precursors to actual behaviour (Morwitz, 2014; Ajzen, 2015). This postulation is important in developing consumer behaviour models that predict the likely behaviour of consumers relevant to enhancing customer retention and/or reducing customer defection. The existing models of BIs are of limited practical use, which led to the conclusion that a comprehensive, integrated model for the formation of BIs is required. Besides being only explanatory, the existing models of BIs are bivariate and therefore cannot be used to predict the formation of BIs in the consumer's mind in real-life situations.

Furthermore, the existing models of BIs have been developed from different streams of study, making it difficult for practitioners to imagine how these factors would relate to one another in the formation of BIs when they are all considered simultaneously in real-life situations. In addition, the existing explanatory models of BIs (Cronin et al., 2000; Caruana, 2002; Brady et al., 2005) do not point to the specific actions management should take. Taken together, the gaps in the literature (Hofman et al., 2017) led to the conclusion that a comprehensive model that ties the explanatory

aspect of a model to its predictive relevance (Shmueli et al., 2019) and the importance and performance of the evaluative factors was required.

The mobile telephone industry has a serious challenge of subscriber multi-loyalty, where customers are not fully committed to one service provider. This makes predicting the future purchase behaviours of the subscribers difficult, which threatens the company's survival (Giovanis et al., 2016). Therefore, managers in this industry require more comprehensive models of BIs for the prediction of consumer behaviour.

An extensive literature search from psychology shows that the basic model that seeks to predict customers' BIs is the Theory of Planned Behaviour (TPB), which assumes that BIs are determined by attitude, subject norms and perceived behavioural control (Ajzen, 1991, 2015). However, managers can use Cronin et al.'s (2000) service evaluation model to evaluate their service performance, which assumes that BIs is an outcome of intercorrelations among several service evaluation factors. This study builds and extends this model by including various other factors that have been identified as critical determinants of BIs in other disciplines. Incorporating more factors would enhance the predictive and explanatory power of the developed comprehensive BIs model (Giovanis et al., 2016; Hair et al., 2017).

Considering that fitting all factors identified into one model would present a logistical nightmare, only the key broad determinants or predictors of BIs were used. Extant literature on services management suggests that the formation of BIs for repurchase decisions is based on many factors. Traditionally, service quality (SQ), overall customer satisfaction (OCS) (Cronin et al., 2002; Caruana, 2002; Giovanis et al., 2016), have been cited as the main considerations for making repurchase decisions. However, where service failures are involved, customers also take into consideration their satisfaction with service recovery solutions (RSat) (Van Vaerenbergh et al., 2014; Awa et al., 2015; Vaerenbergh et al., 2019) and perceived justice (PJSR) (Roschk & Gelbrich, 2014; Matikiti et al., 2018; Han et al., 2019) as part of their performance evaluative factors. It means that RSat and PJSR constructs should be incorporated into any model that purports to predict consumer behaviour where service failures are involved.

It is also noteworthy that evaluative service deliverables (PJSR, RSat, SQ and OCS) are not sufficient to explain why customers eventually stay with a supplier (Bansal et al., 2005). The extent to which customers perceive the presence of switching barriers (SBs) may prohibit them from leaving their current service provider, even if they are dissatisfied (Malhotra & Malhotra, 2013; Nagengast et al., 2014; Dawi et al., 2018). Even though there seems to be a consensus that customer retention might not be totally attributable to the attractive factors alone, studies that have incorporated SBs into a model of BI are scarce in the literature. However, for service industries such as the mobile telecommunication industry, SBs may play a critical role in the customers' repeat purchase decision-making (Chuah, Rauschnabel, et al., 2017; Diaz, 2017).

### **8.2.1. Recapping the relationships of the determinants of BIs**

Consumer behaviour literature suggests that BIs are commonly measured as the repeat purchase and word-of-mouth intentions that arise from a post-experience cognitive evaluation process (Giovanis et al., 2016). There is adequate empirical evidence suggesting that PJSR directly affects RSat (Singh & Crisafulli, 2016; Tsao, 2018; Matikiti et al., 2019) and on OCS (Ellyawati et al., 2012; Siu et al., 2013; Söderlund & Colliander, 2015). Similarly, evidence from the literature suggests that RSat has a direct effect on SQ (Chao et al., 2019), on BI (Abney et al., 2017; Matikiti et al., 2018; Han et al., 2019; Amin et al., 2020) and OCS (Mostafa et al., 2014; Liat et al., 2017). Further search on the relationships between the identified factors in this thesis also revealed empirical evidence suggesting that SQ has a direct effect on OCS (Olorunniwo et al., 2006; Ngo & Nguyen, 2016; Ismail et al., 2017) and also that OCS is the main predictor of BIs (Cronin et al., 2000; Oliver, 2015). The conclusions from the evidence on the reviewed literature led to the development of the framework shown in Figure 4.1.

The framework in Figure 4.1 illustrates both direct and indirect linkages between and among the evaluative constructs in the study, derived from fragmented studies. However, it was not clear whether these predicted interrelationships would be statistically significant if they were all considered together at the same time in a single model, as shown in Figure 4.1. This dilemma led to several hypotheses about the possible explanatory roles of RSat, SQ and OCS in the model.

### **8.3. CONCLUSIONS BASED ON THE FINDINGS OF THE STUDY**

The conclusions on the empirical findings were drawn from the findings that served as responses to the study's research questions and objectives. This was effected by rephrasing the research questions and objectives before responding to each question and rendering a conclusion informed by empirical findings. Consequently, the following section draws on the research questions, their responses and the conclusion on each response.

Before exploring research objective one (RO1a) through to three (RO3), the strength and directions of the direct causal relationships among the determinants of BIs (PJSR, RSat, SQ and OCS), their interrelationships were examined. The results of the direct effects on Table 6.9 and Figure 6.1 in Chapter 6 suggest that direct relationships are correctly specified and hypothesised in the model. An important emerging point tied to the problem statement is that the previously established bivariate relationships between these factors hold even when considered jointly in a single model.

Only three indicators of the PJSR construct, namely, distributive justice, procedural justice and informational justice, were significant in this study, while interpersonal justice was not. This finding seems to suggest that, following a service failure, providing a solution perceived to be adequate by customers prevents mitigating against their defection (Mostafa et al., 2014; Roschk & Gelbrich, 2017, Han et al., 2019). The influence of RSat on SQ was far stronger than its influences on BI and OCS.

Although the literature suggests a contentious debate about the antecedent nature between SQ and OCS, the findings in this study subscribe to the views of some researchers (Alan, 2016; Ngo & Nguyen, 2016) that SQ is a precursor of OCS. The results also show that OCS had the strongest direct impact on BIs than RSat and SQ and that SQ influenced OCS only through its reliability and responsiveness dimensions. Taken together, these findings show the ripple effects of a company's service recovery solution and smooth functioning of the mobile network on SQ and the customers' overall satisfaction and their BIs. The major insight of these findings

is that in the event of a service failure, the solution to mitigate customer defection should therefore start with providing a satisfactory service recovery solution.

### **8.3.1. Recapping of the research questions (RQs)**

#### **8.3.1.1. Research question 1**

**RQ1:** To what extent do the causal relationships among evaluative variables, namely, perceived justice (PJSR), service recovery satisfaction (RSat), service quality (SQ), overall customer satisfaction (OCS), predict and account for the variation in the formation of BIs?

Research question (RQ1) led to the Research Objectives (RO1a and RO1b), which sought to construct and empirically validate an integrated explanatory-predictive model that combines PJSR, RSat, SQ, OCS and switching barriers (SBs) in a single model for the prediction of BI. Often studies try to understand the BI construct by adopting the 'service quality-satisfaction-BIs paradigm. However, this approach may overlook some critical factors, including perceived justice, service recovery, and switching barriers (Lu, Tu & Jen, 2011). As argued by Lu et al. (2011), these factors have to be considered simultaneously because the BI decisions of consumers are an aggregate of all these evaluative factors. The literature synthesis on the formation of BIs from different disciplines led to the development of the conceptual framework in Figure 4.1 in Chapter 4, showing the direct and indirect causal linkages between and among the factors.

The causal-explanatory power of that model was measured using the coefficient of determination ( $R^2$  value) of the BI construct (Hofman, Sharma & Watts, 2017). The predictive relevance was measured using the in-sample  $Q^2$  value (Hair et al., 2017; 2019) and the out-of-sample predictive capacity using the difference between the root mean squared error (RMSE) and mean absolute error (MAE) and their corresponding linear regression model (LM) values (Hair et al., 2017, 2019; Shmueli et al., 2019).

The results in Figure 6.1 show that the proposed model's coefficient of determination ( $R^2$ ) was 0.75 or 75%. Hair et al. (2017) proposed that this value is far better than those obtained in previous studies, which ranged between 10% and 46% (Morwitz,

2014). The results also show that the model had a high in-sample predictive relevance ( $Q^2 = 0.547$ ) for the BI construct found in this study, suggesting that the model could be relied upon in predicting the likely BIs of the participants in the sample surveyed (Hair et al., 2019). Furthermore, the out-of-sample predictive capacity of the model shown in table 6.10 in Chapter 6 suggests that the proposed model could be relied upon for predicting the likely BIs of the participants outside the surveyed sample (Hair et al., 2017, 2019; Shmueli et al., 2019).

These results convey several important insights. First, the high coefficient of determination ( $R^2$  value) suggests that the selected evaluative factors in this study provide a plausible explanation of the BI construct when they are considered simultaneously than if they are considered separately. This confirms two things: 1) that incorporating more factors in a conceptual model improves its explanatory power (Giovanis et al., 2016; Hofman et al., 2017) and 2) that the causal relationships between and among the evaluative factors in the model were correctly specified (Hair et al., 2017). These two emerging points make an immense contribution to the call for more comprehensive models of BIs (Lu, Tu & Jen, 2011; Giovanis et al., 2016). Second, the high in-sample ( $Q^2$  value) and the out-of-sample predictive relevance reflect that the proposed model provides an explanatory-predictive model for the formation of BIs in the consumer's mind (Hofman et al., 2017; Shmueli et al., 2019). The estimated SRMR value of 0.036 provides further evidence that the developed model could be relied upon. Taken together, these findings suggest that the proposed model is a plausible attempt to close the gap in the literature about developing a model of BI that is both inclusive, explanatory and predictive (Hofman et al., 2017).

### **8.3.1.2. Research question 2**

**RQ2:** What are the explanatory roles of RSat, SQ and OCS in the formation of post-consumption BIs when they are considered simultaneously in a single model?

Research equation two led to Research Objective two (RO2), which sought to explicate the explanatory roles of RSat, SQ, and OCS in the proposed model. The results show that the drivers of BIs are interconnected into a complex nomological network. The first insight is the influences of these factors on the formation of BIs in



the consumer's mind are dependent on one another. Also emerging from the causal mediation analysis is that OCS is the most influential evaluative factor through which all other variables affect BIs. From a practical perspective, the main point arising from this mediation analysis is that a holistic approach that considers all these drivers of BIs simultaneously is required (Giovanis et al., 2016). Otherwise, excluding anyone, these causal factors in the formation of BIs may lead to incorrect causal conclusions.

### **8.3.1.3. Research question 3**

**RQ3:** What is the extent to which switching barriers (SBs) moderate the relationships between the BIs construct and its direct antecedents?

The findings in the study show that there is a significant reciprocal relationship between the moderation construct (SBxSQ) and BI. The results further show that at the indicator level, the results of the study show that only the reward-based type of SBs moderate the SQ->BI relationship through its innovativeness (Inn) and local network (LN) dimensions. From this result, it can be concluded that controlling for all other things, the more customers perceive the presence of SBs, the less important they rely on service quality for making repatronage decisions. Conversely, when customers do not feel constrained by SBs, their perceptions of the quality of service delivered plays a critical role in their repatronage intentions. Several important insights can be identified. The first one is that while lock-in strategies increase repatronage intentions, companies must be cautious not to play down their mandate to deliver quality service (Tulu, 2015; Selelo & Lekobane, 2017). Second, in the event of unavoidable service failures, the benefits associated with reward-based SBs may cushion the company against poor service quality or poor service recovery (Han et al., 2015; Chuah, Rauschnabel, et al., 2017). Third, mobile telecommunication companies may create strong bonds with customers if they are perceived to frequently introduce new technology or new products to the market. Together, these emerging points suggest that creating a climate that promotes innovativeness and creativity among employees and investing in their technical skills may create a competitive advantage.

#### **8.3.1.4. Research question 4**

**RQ4:** To what extent do customers consider each of the evaluative variables (PJSR, SQ, RSat and OCS) important in determining their BIs and what is the performance of these predictor variables in the formation of BIs?

The main concern of the management is not only about how the factors explain a phenomenon but rather to identify the order in which these factors are prioritised by customers so that they can match it to their performance (Ringle & Sarstedt, 2016; Chin et al., 2020). The results of the importance-performance map (IPM) analysis tool in Figure 6.7 in Chapter 6, revealed that OCS is the most important construct in the formation of BIs, followed by PJSR, RSat and SQ in that descending order. OCS had the highest performance, followed by RSat, PJSR and SQ in that descending order. Judging from these findings, the industry's overall most important take-home point is that there is great room for improving the performance of these constructs (Ringle & Sarstedt, 2016). The results in Figure 6.8 show that the most important item was the service reliability dimension of SQ, followed by procedural justice (PJ). All the other indicator items, except those of RSat, were cluttered at one place in the high importance-high performance quadrant of the IPM grid. Overall, the results in Figure 6.8 also suggest that to impress customers in this industry. There is a need to improve the reliability of the mobile networks, responsiveness to service failure and provision of adequate compensation.

### **8.4. STUDY CONTRIBUTIONS**

The findings in this thesis make several contributions to both theory and practice that respond to specific calls for research in business management and consumer behaviour.

#### **8.4.1. Contributions to existing knowledge**

Many issues seem to be valuable knowledge brought and discussed in this thesis. These issues can be summarised as follows: The thesis targets one of today's main business sectors in Lesotho, which has been described as vulnerable to a high customer attrition rate. In most cases, managers cannot address the causes behind this customer attrition or how to deal with it. The thesis shows mobile network operators how they can establish, maintain, and manage customer longevity by

developing proper perceived justice systems, service recovery systems, effective system backup infrastructure, and effective training of employees. The majority of previous BIs were based on bivariate relationships. The complex process underlying the formation of BIs in the customer's mind cannot be fully understood or sufficiently explained by a single factor alone (Giovanis et al., 2016). The current thesis uses a different method of expanding the understanding of the formation of BIs by synthesising a number of different evaluative factors and positive switching barriers in one model. Few studies on the formation of BIs have explored the effects of positive switching barriers as contingent factors, let alone combined with service evaluative factors in one model. Thus, this study provides a new approach to viewing switching barriers explaining the formation of BIs from a cognitive perspective, especially where service failures are prevalent, like in the mobile telephone industry. Moreover, existing literature shows that modelling of BIs has been largely based on an explanatory approach and that the models are scattered in SQ and satisfaction (Cronin et al., 2000; Caruana, 2002; Ismail et al., 2017) and in-service recovery (Awa et al., 2015; Kruger et al., 2015) literature. The fundamental challenge of the previous models of BIs has been their limited practical use. The main problem of the previous models of BIs is that they were based on behavioural patterns that only applied to past situations and were not futuristic (Hair & Sarstedt, 2021). The current thesis expanded on that and provided a model of BIs, which is both strong in explaining past behaviour but at the same time being futuristic.

In the reviewed literature, the researcher could not find any models of BIs developed on the evaluation of PJSR, RSat, SQ and OCS in consumer behaviour literature (Hofman et al., 2017). Furthermore, because previous studies examining the links among these constructs in a single model were rather scarce in the reviewed literature, the synthesis of structural causal relationships among these factors to explain consumers' BIs decision processes constitute an original contribution of this study. This research is among the first empirical research that employs an intervariable approach to conceptualise and develop an integrated explanatory-predictive model of BIs that is practically relevant for decision-making in business management. In that sense, the integration of diverse models and variables into a single theoretical model is considered to be a significant contribution to theory extension because a model's predictive power, which has generally been missed in

the previous models of BIs, is a crucial element in any study of human behaviour (Shmueli et al., 2019).

It should be emphasised that this study does not imply that the previous models of BIs produced inaccurate findings, but, as claimed by Hofman et al. (2017), Shmueli et al. (2016, 2019), Hair and Sarstedt (2021), were limited in their scope and conceptualisation, making them be of little practical relevance. The diversity of the evaluative determinants of BIs in this study makes the approach employed in this thesis more illuminating than the previous studies because it offers a more dynamic perspective of understanding the underlying causes and prediction of BIs, as well as a description of theoretical constructs and the relationships among them (Gregor, 2006, Shmueli et al., 2016).

#### *8.4.1.1. Contributions to the methodological approaches of modelling BIs*

Perhaps the most important theoretical contribution of the current study is developing a theoretical model of BI that combines both explanation and predictive analysis in one model. In doing so, this study makes a critical contribution to increasing the relevance of modelling human behaviour in consumer research, a concern echoed by many journals and leading researchers (Hofman et al., 2017; Shmueli et al., 2019; Malter et al., 2020). This contribution makes sense if one considers that the field of consumer behaviour has evolved from descriptive modelling of human behaviour and now emphasises the understanding and prediction of the ever-changing real word consumption behaviour (Malter et al. 2020).

Historically researchers have sought to provide explanatory and interpretive models of the BIs construct (Shmueli, & Koppius, 2011; Shmueli et al., 2019; Hair & Sarstedt, 2021) at the expense of the predictive capacity of those models (Hofman et al., 2017). Yet, the predictive capacity of a model is critical for forecasting human behaviour (Sainani, 2014). The purpose of explanatory models is to identify causal relationships that specify how and why a specific phenomenon occurs (Hofman et al., 2017), that is, to determine cause and effect between variables. In contrast, predictive statistical modelling aims to identify a range of factors that best predict new or future observations with high accuracy using the developed statistical metrics from the survey sample (Sainani, 2014; Hofman et al., 2017). As pointed out by

Shmueli et al. (2011), the goal of developing predictively accurate models is different from that of developing correct models. This implies that even if the specified explanatory theoretical model is correct, it may not produce accurate predictions of future observations (Hofman et al., 2017; Shmueli et al., 2019; Hair & Sarstedt, 2021). This leads to the realisation that without specifying their predictive capacity, theoretical models that explain human behaviour will not be of much practical use to managers interested in forecasting future consumer behaviour (Gregor, 2006; Shmueli, 2010; Shmueli, 2016). Therefore, considered separately, explanation or prediction alone has very little value (Shmueli et al., 2016, 2019), requiring researchers to reconsider their methodological choices of modelling BI models. Despite the important predictive and explanatory approaches to model building, it appears there is no theoretical model that combines both in a single model (Hofman et al., 2017). Given this background, developing a model with explanatory and predictive capacity makes a huge methodological contribution to the existing body of knowledge (Sainani, 2014; Evermann & Tate, 2016).

Traditionally, the usefulness of every model of buyer behaviour should be evaluated from the perspectives of its concepts, method and aims, which are encapsulated under what Malter et al. (2020) call the three **R**'s—namely, rationality, rigour and relevance. Much of the work in consumer behaviour have provided the rationality of the buyer's behaviour by explaining the direct causal relationships between BI and its determinants but have not expanded beyond this understanding to introspect how the economic rationality and decision-oriented information processing in the consumer's mind lead to the final intention to purchase (Hofman et al., 2017). The emerging view in consumer behaviour still regards a consumer as a rational being but expands on it by asserting that purchase decisions are based on evaluating several dimensions instead of only one or two (Malter et al., 2020). This school of thought has influenced and challenged researchers to investigate what happens in the mind of a consumer in order to understand the psychological processes behind purchasing behaviour. The desire to introspect the mind of the consumer places more importance on the rigour (quantitative techniques) with which the model is developed and on its relevance (usefulness outside of academia). Despite the emphasis on model relevance, this view and approach were not prominent in studying human behaviour in the past (Malter et al., 2020). An appropriate balance of

theory and practice has become the most important thing in consumer research. Given this reality, this study makes a critical contribution to the methodological approaches of model building in terms of its rigour (the Smart PLS-SEM method used) (Hair et al., 2017, Shmueli et al., 2019; Hair and Sarstedt, 2020) and the practical relevance (predictive usefulness) of the theoretical model developed (Shmueli et al., 2016, 2019, Malter et al., 2020).

Although the direct relationships examined in this study have been studied before, the originality of this study lies in the synthesis and simultaneous examination of several determinants of BIs in a single study. The simultaneous examination of the direct and indirect relationships between and among the determinants of BIs, though advocated for by Giovanis et al. (2016), were unavailable in the reviewed literature in this study. In that regard, the current study provides a new perspective of introspecting the psychological process of the consumer by combining all these factors in one study. The study also makes a new uncovering that RSat is a key driver of SQ and accounted for more than half of the variation in SQ. This is a new relationship as the existing models of BI in the reviewed literature in this thesis had not pursued this relationship. Thus, the positive influence of RSat on SQ has expanded our understanding of the precursors to SQ in the formation of BIs in situations involving service failures and service recovery, which previous studies reviewed in this study (Abney et al., 2017; Matikiti et al., 2018; Han et al., 2019) have not shown before.

The other contribution of the study emanates from the use of mediation tests to validate the underlying mechanisms about how the nomological causal relationships among the evaluative constructs would lead to the formation of BIs. Bivariate models of BI were developed on a narrow range of questions and simple hypotheses (Caruana, 2000; Nikbin et al., 2012), and this attracted many unanswered questions. Findings from the bivariate models of BIs in the literature suggest that the relationships between perceived justice(PJSR), service recovery (RSat), service quality (SQ), overall customer satisfaction (OCS) and BIs are simple and direct. However, evidence from this study suggests that the mediation results of this study reveal that RSat, SQ and OCS are partial mediators in the formation of BIs. Research integrating the multiple mediation outcomes of these evaluative constructs

in a single conceptual model of BIs remain limited. Thus, one of the key contributions of this study is the extension of the boundaries of the knowledge or understanding of the formation of BI (Lu et al., 2011). The motivation for mediation analysis is to improve understanding, to confirm/refute theory most of the studies that examined the collective influence of BI determinants (Giovanis et al., 2016) did not include mediation. Thus, by showing how the effect of PJSR is transmitted through the other evaluative factors to influence the formation of BIs, the mediation analyses in this study expand the conceptualisation of previous models of BIs, which previously overlooked the role of mediation in these causal relationships (Nitzl et al., 2016; Hair et al., 2017). The effect of PJSR on OCS was partially transmitted in serial via RSat and SQ, while the effect of RSat on BI was also partially transmitted in series via SQ and OCS. This is new knowledge, which was unravelled in this study, extending our understanding of the nomological networks among these factors, which could be used for further model development. Previous models (Cronin et al., 2000; Caruana, 2002) on the relationships among SQ, OCS and BI had also shown that OCS was a mediator in the SQ->BI relationship. The current study contributes to that body of research but adds that PJSR and RSat are antecedents of OCS, and their effects on BIs were also partially transmitted through OCS.

The current study also extends the use of mediation analysis by using the variance accounted for (VAF) approach (Ramayah et al., 2017). The VAF is a new advanced method of explicating the explanatory roles (fundamental processes) of the determinants of BIs, which previous studies (Caruana, 2002; Nikbin et al., 2012; Ismail et al., 2017) did not employ. The computation of VAF expands the simple mediation analyses, which oversimplifies the complex dynamics through which the exogenous variables (RSat, SQ, and OCS) influence the endogenous variable (BI) in real-life situations that scientists study these phenomena. The VAF criteria (VAF < 0.2, no mediation;  $0.2 \leq \text{VAF} \leq 0.8$ , partial mediation; VAF > 0.8, full mediation) proposed approach provides an advanced methodological approach by which definitive conclusions to reject or accept mediation hypotheses can be made (Hair et al., 2017). In that regard, this study strongly contributes to the methodological approach to the traditional way by which mediation has been tested because this has been missing in the previous studies (Ramayah et al., 2017).

One of the key contributions of this thesis emanates from the inclusion of the importance-performance analysis in this study. Previous studies on BIs focused on estimating the path coefficient of the model. However, there have been persistent echoes by journal editors and researchers that studies of consumer behaviour need to offer actionable implications for managers and policymakers (Ringle & Sarded, 2016; Malter et al., 2020). Given this view, the inclusion of the IPM analysis as a thesis is an extension of the service evaluation model, which was itself a modification of the Theory of Planned Behaviour (TPB) model (Ajzen, 1991). The findings of the IPM analysis that OCS was the most important construct, followed by PJSR, RSat and SQ in that order, extend the standard results of the multi-attribute models like the TPB or the service evaluation, by reporting valuable implications for practitioners and managers.

#### **8.4.2. Contribution to the future developments of consumer behaviour**

One of the key thematic developments in the field of consumer behaviour, which has generated a persistent debate among the researchers, is that consumer behaviour models must have more relevance to actual business (Malter et al., 2020). In response to this debate, business schools have shifted from descriptive studies to more theoretically driven predictive models of BIs. Therefore, the research on BIs must not only focus on the outcome decision but also connect the consumer's service experiences, desires, and expectations to the cognitive evaluation and thought process that leads to the outcome decision (Malter et al. 2020). By developing an explanatory-predictive model of BI from scholars of diverse theoretical backgrounds and methodological training, this study contributes to shaping what consumer behaviour should focus on as a field of study in the future (Malter et al., 2020).

#### **8.4.3. Contributions to practice**

Several managerial implications can be drawn from the findings of this thesis. In light of the main purpose and context of the study, the managerial implications regarding customers' repatronage and word-of-mouth (WOM) decisions will assist managers of The Cellular companies to understand the mechanisms by which BIs are formed. As earlier stated, this could be one of the pioneering studies that managers could use for formulating strategic decisions. The developed model of BI unravelled the



formation of BIs as a complex cognitive process involving a customer's evaluation of PJSR, PJSR, RSat, SQ and OCS. Integrating these factors into a single model provides a template that informs managers on how customers make repatronage and WOM decisions. Considering that such a template did not exist in the extant literature on consumer behaviour, this model is important to managers for many reasons. First, because the likely future behaviour of customers guides managerial actions, the prediction of BIs is an important input to the formulation of appropriate strategic decisions for customer retention. Thus, managers may use the out-of-sample predictive capacity of the developed model to predict the likely purchase intentions of customers who were not part of the surveyed participants to project their sales revenues.

The other managerial implication emanates from the empirical findings pertaining to research objective two (RO2), which unravelled the interconnections among the drivers of BIs. The direct effects shown on the model in Figure 6.1 demonstrate that the evaluative factors are dependent on one another. This implies that managers who focus and deploy resources in only one or selected evaluative factors may fail to optimise OCS, influencing BIs. In summary, the empirical findings show managers how the spillover effects of PJSR will affect RSat, SQ, OCS and eventually the repatronage and WOM decisions of the customer. This implies that managers should employ a holistic approach in formulation strategies for customer retention. Once managers are clear about how these factors connect to one another, they will be better positioned to design appropriate strategies and make effective decisions to deploy resources to retain a customer.

The other managerial implication arises from the fourth objective of this study. It was mentioned that cellular companies use lock-in strategies as switching barriers to protect themselves against customer defection, especially where service delivery is inconsistent (Chuah, Rauschnabel, et al., 2017). While this strategy may sound good, the results in this study show that only the positive SBs (company innovativeness and benefits of using the same network) moderate the SQ->BI relationship. This is an important finding to managers as it sheds light on how SBs intervene in the relationship between SQ and BI. This suggests to managers that when customers perceive a company to be more innovative than its competitors

(positive SBs), that can reduce the propensity of customers to switch even if the quality of service delivery is perceived to be poor. In that way, SB and SQ complement each other in preventing customer defection. Thus, managers must realise that they must employ innovativeness as a lever of increasing competitive advantage. Even when service network breakdowns happen, customers may still not defect to other companies as innovativeness persuades them to stay with the same mobile service provider. This implies that in order to retain customers, the only viable option is to create and promote a culture that promotes employee innovativeness and creativity while at the same time offering technical training on mobile services to employees. Managers could achieve that by giving incentives to employees for being creative and keeping their employees up to date with technological advancements in mobile network technologies. That strategy may assist in ensuring that the designing of new products or mobile services is in tandem with technological developments. This implies that mobile network operators have to continuously monitor the market changes through market research to identify the technological developments so that they can incorporate them into their strategies. Since using the same network with friends was shown to retain customers, managers could introduce more benefits like redeemable loyalty points. The findings that subscribers viewed using the same network among their friends as important suggests that managers should maintain their current practice of giving some benefits like redeemed points to retain customers. Such actions may entice customers to stay with the company even if they perceive the quality of service to be inconsistent.

The other significance of this thesis emanates from the use of the importance-performance map of analysis (IMPA) as outlined in research objective four (RO4). The importance and performance of a construct impact decision-making in the formation of BIs (Ringle & Sarstedt, 2016). Some service evaluative constructs significantly affect satisfaction and the formation of favourable BI of a customer, while others do not (Chin et al., 2020). As a result, an underperformance of an important service evaluative construct may dissatisfy customers leading to their defection, while the performance of a nonessential service evaluative construct does not enhance customer satisfaction and BI. The most important implication of the IPM

analysis is that it directs managers to areas that require their high or low attention for subsequent deployment of resources to prevent wastage of scarce resources.

The results of the IPM analysis in Figure 6.7 in chapter six show that except SQ, all the other constructs (OCS, PJSR and RSat) are in the high importance-high performance quadrant. In their descending order of importance, OCS was ranked highest, followed by PJSR, then RSat. At face value, these results would imply that management should prioritise and focus their highest attention on customer satisfaction followed by justice and service recovery satisfaction, in that order. SQ is the least important and performance. Judging by these findings, it would appear like deploying resources to improve the SQ construct would be illogical since it would have little impact in enhancing the formation of favourable BIs. However, combining the results of mediation analyses with those of the IMP analysis for indicators will tell a different story. For example, the decomposition of the total effect of a construct into its direct and indirect effects revealed that the effects of RSat and SQ on BI are strongest when transmitted through OCS as the intermedator. Table 6.11 in chapter six also show that the total indirect effects of RSat ( $\beta = 0.441$ ;  $p = 0.000$ ) and SQ ( $\beta = 0.186$ ;  $p = 0.0000$ ) were stronger than their direct effects on BIs shown on table 6.8 in chapter six ( $\beta = 0.169$ ;  $p = 0.0000$  and  $\beta = 0.107$ ;  $p = 0.0000$  respectively). The point that seems to be emerging from this analysis is that managers should invest and deploy resources to improve the SQ's performance as this ultimately improves OCS, which will improve BIs. The implication is that, instead of just taking a policy direction based on a single finding, management decisions should be considered from a holistic perspective, where all issues concerning the factors are considered simultaneously.

In terms of performance, the results in Figure 6.7 show that the industry is performing slightly above average in all these constructs. OCS had the highest performance rating of around 69%, followed by RSat (64%), PJSR (57%) and SQ (55%), in that descending order. Although the recommendations from the interpretation of the IPMA results suggest that management of cellular companies should keep up the good work of satisfying customers, there is still room for companies to improve their performance across all the constructs. The specific actions of management to improve the performance of the constructs can be

obtained from the IPMA analysis of the indicators. The results also show that there is a big room for improvement for the PJSR construct. PJSR was ranked the second most important, yet its performance is only 57%. This finding shows that there is much for the improvement of PJSR. Therefore, it can be recommended that management identify and deploy adequate resources towards activities that influence PJSR to improve its performance.

The results of the IPMA analysis of indicators in Figure 6.8 in Chapter 6 show that all the indicator items are in the high-importance-high performance quadrant. At face value, these results suggest that management should keep up the good work of satisfying customers since customers generally perceive them to be performing well in these indicators. Relative to others, the results reveal that customers considered service reliability (network availability or dependability) the most important, followed by procedural justice. From a customer's perspective, network reliability refers to a situation where the mobile network is available when and where required. Contrary to its high importance rating, the network reliability performance from the detailed IPM in PLS-SEM was only 54%. The other lowest-performing indicators were company responsiveness (56%) and distributive justice (52%). These findings have several managerial implications.

The low performance of network stability has several practical implications for management. For the network to be reliable, managers must invest in a fibre network transmission system. This makes the network more stable or reliable because it is an underground system less vulnerable to natural disasters like heavy storms, strong winds or falling trees. Furthermore, managers must also invest in the fibre network links between routers or network points so that when one point is down, customers can still access their network from the other links. Even with these systems in place, still, network breakdowns can be caused by circumstances beyond the control of the cellular company. For example, network availability may be affected by power outages during load shedding in an area. To optimise network dependability or stability, managers should invest in standby infrastructure or reliable backup power solutions like backup solar or ordinary batteries or fuel generators at key network boosters in the area. Customers may experience a network problem due to inadequate network capacity that causes serious congestion resulting in frequent call

drops during conversations or intermittent disconnections. To avoid these problems, managers must invest in infrastructure that increases the area's network capacity to cater to the expected demand. This can be achieved by investing in the infrastructure that expands the network bandwidth in the respective areas.

The IPMA results also show that there is room for improvement in the responsiveness indicator. To improve the responsiveness of their organisations, managers must invest in the technical skills and competencies of their employees by providing regular training to them. Besides providing technical training, employees need training on handling customer complaints because some customers may complain if they feel greatly inconvenienced by the network breakdown. To improve their responsiveness to customers, managers must invest in a network active monitoring infrastructure. This can be done by investing in a good network management system (NMS) like the U2000, which will enable the company to detect active and nonactive network nodes in different areas. The company should also invest in a network operations centre that monitors its network stability 24/7, which is manned by adequately trained technical people. The network operating centre should have a strong backup team of adequately trained and well-resourced field engineers on standby 24/7. Once a network fault is detected at the network operating centre, it will be communicated to the field engineers, who will rush to fix the problem. The company should use broadcast messages to advise customers about the problem, what the company will be doing and how long it may take the engineers to fix it.

The findings of the IMPA analysis of constructs show that the performance of the PJSR construct was only 57%. The IMPA analysis of indicators shows that procedural justice (PJ) and informational justice (InfJ) performance in Figure 6.8 are 60% and 61%, respectively. This suggests that the low performance of the justice construct was caused by the low performance on the distributive justice (DJ), which is 52%. To improve the performance of the justice construct, management must pay attention to their method and policy of compensation when a network breakdown causes some economic loss to the customer. Managers must invest in a process system that detects the actual economic losses customers suffer in terms of airtime or data bundles and automatically reimburse them. If executed well and from a

holistic approach, the suggested management actions suggested above may lead to a competitive advantage. Therefore, managers should give these recommendations the attention they deserve to improve their performance in the identified areas for the retention of customers.

#### **8.4.4. Contribution to positive social change**

The results of IPMA and the suggested managerial recommendations may have implications for social change. For example, an investment into network stability and responsiveness gives a company a competitive advantage, but it will have a positive impact on the development of a society. Societies across the globe have become so much reliant on cellular services to provide communication connectivity and access many critical services online. Because of this, management's effective and efficient deployment of resources to improve the quality of cellular services will contribute to the economic development of a country. Management can use the information and recommendations from this thesis for effective deployment of resources for improving service delivery in this industry, which may benefit society at large. A positive social change is achieved if a country has reliable and stable network systems that enable high connectivity among the members of society. High and strong cellular connectivity will enable society to access several services, including education, mobile payments and mobile banking online.

#### **8.5. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH**

Despite the significant contributions to theory and practice, this study was not without limitations. However, these limitations do not invalidate the study's findings, given the scientific and statistical rigour of the study. The first limitation arises from the lack of generalizability of the findings. The study was conducted in the mobile telecommunication industry's service sector. This limits the generalisability of its findings to other service industries. As a result, future research could be replicated in other industries to determine if the results could be validated. The second limitation arises from the use of a cross-sectional sample. This undermines the capacity of the study to capture the temporal changes in the BIs and the research constructs. Future studies could use a longitudinal study or a tracing study that captures the temporal nature of BIs. The other limitation is to do with the context of the study. The study was conducted in a country with one dominant culture of Basotho and only two main

cellular companies. Culture may affect customers' attitudes and perceptions of justice, service recovery and service quality expectations, while the number of players in an industry may limit the level of competition. Therefore, researchers may replicate this study in the cellular industries in different cultures such as South Africa, where there are more players.

As mentioned in chapter one, the number of variables used as determinants of BIs was not exhaustive, introducing another limitation to the study. Future studies could incorporate additional variables specific to the Cellular industry like call quality, functional quality, network quality, process quality, trust, company image and/or customer commitment into the proposed framework of BIs. These factors may be included in the same model to test their influence on the formation of BIs when they are considered together simultaneously.

## **8.6. CONCLUDING REMARKS**

This chapter aims to present the conclusions, contributions and limitations of the thesis and recommendations for future study. The chapter highlighted that the main purpose of the thesis was to develop a comprehensive, integrated model for the formation of BIs in real-life situations. This objective emanated from the major gap that there is a paucity of models that simulate the formation of BIs in real-life situations, as most studies were founded on literature reviews and theoretical models. The several fragmented explanatory models BIs were based on bivariate relationships while the predictive capacity of these models has been ignored. The assessments of the existing bivariate models of BIs have been based exclusively on the explanatory power, without any clear managerial implications. The importance-performance analysis of key drivers of BIs has been under researched in the literature on consumer behaviour. These gaps led to the need for a model that addresses all these gaps in a single model. The first challenge was to identify the factors to be incorporated into the single integrated model. Literature shows that perceived justice, service recovery, service quality and overall customer satisfaction are the most common determinants of BIs cited by researchers.

Further analysis also revealed that switching barriers are contingent factors, which customers will consider in making their repatronage decisions. So these factors were then uniquely integrated into a conceptual framework for the study for validation

using empirical data. The empirical results show that the developed model had high explanatory power and a high out-of-sample predictive power. It is hoped that this model will have a better practical use than its bivariate predecessor BIs models.

The findings of this thesis also show the causal mechanisms through which the effects of perceived justice are transmitted to BIs through a complex nomological network of relationships involving the service recovery, service quality and overall customer satisfaction constructs. Hair et al. (2017) call for researchers to be always up to date with methodological developments. In response to this call, this thesis substantiated the TPB and the service evaluation models by including the importance-performance map (IPMA) analysis to complement the explanatory and predictive analysis of the model. The mediation analysis results showed that managers should pay attention to overall customer satisfaction because it was the main mediator through which perceived justice, service recovery, and service quality influence BIs. The managerial implications from the IPMA analysis also revealed that overall customer satisfaction was the most important construct, which management should prioritise. The interconnectedness of the manifest constructs (PJSR, RSat, SQ and OCS) implies that a holistic approach in which all the manifest variables are considered at the same time is appropriate for the successful prediction of BIs. An analysis of the indicator items shows that service reliability was the most important dimension, but its performance was very low. Various recommendations have been suggested for the improvement of this variable and others for building a competitive advantage. This thesis is one of the first studies that has uniquely combined the explanatory, predictive and importance-performance analysis in a single model, a methodological approach, which has been missing from the previous studies.



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## BRIEF BIOGRAPHY OF THE CANDIDATE

Mr Douglas Musiiwa is a full time lecturer in Marketing in the Department of Business Administration and a Faculty of Social Science Third year Tutor at the National University of Lesotho. He received his MBA degree from the University of Zimbabwe, a Graduate Diploma in Marketing from The Institute of Marketing Management (IMM) in South Africa, a Diploma in Accounting from ACCA and a BSc Hon in Chemistry from the University of Zimbabwe. His qualifying dissertations at both MBA and IMM post graduate diploma levels were based on marketing topics.

Mr Douglas Musiiwa has more than 16 years experience in teaching at university, backdating to 2005. He started teaching as a part time lecturer at the Zimbabwe Open University (ZOU) in the Harare region. He has been teaching various courses in marketing including Strategic Marketing Management, Integrated Marketing Communications, Principles of Marketing, Quantitative Techniques, Business Statistics and Consumer Behaviour and Entrepreneurship at undergraduate level. His main research interests are in Consumer Behaviour, Entrepreneurship, Strategic Marketing Management and Leadership.

Prior to joining the academia world full time in 2016, Mr Musiiwa worked in the corporate world where he assumed different roles from being a Commercial Marketing Assistant, Regional Sales Representative for Southern African Cluster and Technical Manager at ExxonMobil. He left to become General Manager at Exor Petroleum Pty LTD in Zimbabwe. Later he became General Manager at PG Industries Zimbabwe, a corporate involved in Building Supplies, before joining The Biodiesel Company of Zimbabwe (A Renewable Energy company established by the government of Zimbabwe), as Managing Director in 1997.

## ACREDITED PUBLICATIONS AND CONFERENCES ATTENDED

### ***Journal Publications***

1. Khaola, P.P. & Musiiwa, D. (2021). Bolstering innovative work behaviours through leadership, affective commitment and organisational justice: a three-way interaction analysis. *International Journal of Innovation Science*, 1757-2223. DOI 10.1108/IJIS-10-2020-0205
2. Musiiwa, D. & Khaola, P., Rambe, P. & Chipunza, C. (2020). The impact of perceived justice on behavioural intentions in retail banking: an investigation of explanatory roles of recovery and overall satisfaction. *The Retail and Marketing Review*, 6 (2): 80-96 (Accredited by DHET, SA).
3. Musiiwa, D., Khaola, P. & Rambe, P. (2019). Effects of emotions on entrepreneurial attitudes, self-efficacy and intentions of university students. *African Journal of Hospitality, Tourism and Leisure*, Article 4, Vol. 8 (Special Edition). (Accredited by DHET in SA).
4. Musiiwa, D. & Khaola, P. (2019). Generation Y and their brand switching tendencies in the cellular industry: The explanatory role of Brand loyalty. *International Journal of Research in Business, Economics and Management*, 3(3): 72-90.

### **Published Conference Proceedings**

Musiiwa, D. Sehalahala, B. & Khaola P. (2018). Factors influencing switching intentions of generation Y in the cellular industry: The role of brand loyalty. *Proceedings of the 30<sup>th</sup> Southern African Institute of Management Scientists (SAIMS) conference*, Stellenbosch University, Stellenbosch, South Africa, September 16-19.

### **Refereed Abstracts and presentations**

Khaola, P. & Musiiwa, D. (2019). Feelings for entrepreneurship: Do emotions affect entrepreneurial attitudes, self-efficacy and intentions? *The 2<sup>nd</sup> International Conference on Entrepreneurship Development*, Central University of Technology, Bloemfontein, South Africa, April 3-5.

## APPENDIX A: QUESTIONNAIRE



### CROSS-SECTIONAL SURVEY QUESTIONNAIRE

Dear Participant

My name is Douglas Musiiwa, a doctoral student with the Central University of Technology in South Africa. I am conducting a study to develop an integrated conceptual framework on the formation of consumer behavioural intentions in the Cellular industry. I like to invite you to participate in my survey of individuals who are using cellular phone services.

Please note that your participation in this survey is voluntary and that you are free to withdraw your participation at any point in time without any negative consequences. However, your assistance in completing this survey questionnaire is of great importance to the success of this survey and my studies.

In completing this questionnaire, please focus **only on one** Cellular company you use or prefer to use most of the time.

This is an anonymous survey; therefore ***do not put your name, cell phone number, ID number, or any contact details anywhere on the questionnaire.*** Data collected from this survey will strictly be confidential to the researcher and to the university. The results of the survey will be reported in aggregate form and will be used for academic purposes only.

For any questions or concerns about the research, please feel free to contact the researcher on 0026662001625 by whatsapp or on e-mail address [douglasmusiiwa@gmail.com](mailto:douglasmusiiwa@gmail.com) or Professor Rambe on email [prambe@cut.ac.za](mailto:prambe@cut.ac.za).

In completing this questionnaire, please note that there are **no right** or **wrong** answers.

You should be able to complete the questionnaire within 15 minutes. Please complete all questions as incomplete questionnaires will not be usable for the study.

Thank you for your support



D. Musiiwa (Researcher)

## SECTION A

*In this section, we are interested in your demographic information. Please answer these questions to the best of your knowledge.*

1. Is the choice of the Cellular company you are using your independent decision?

YES  NO

2. Which Cellular company **do you prefer to use most of the time?** (please choose **only one** and write **"other"** only if the one you are using is not on the list below).

Vodacom	<input type="checkbox"/>	MTN	<input type="checkbox"/>
Cell C	<input type="checkbox"/>	Telkom mobile (8a)	<input type="checkbox"/>
Virgin Mobile	<input type="checkbox"/>	Econet	<input type="checkbox"/>

Other (specify) \_\_\_\_\_

3. Form of subscription: Pre-paid  Post-paid/Contract

4. How long have you been using this Cellular company?

Just 6 months  6months to 1 yr  1 to 2yrs  3 to 4 yrs   
Over 5yrs

5. Have you ever encountered any **problems** like loss of network signal and connectivity, loss of airtime or data bundles, rapid data bundle consumption, unavailability roaming facilities etc in the past?

YES  NO

6. Gender Male  Female

7. Age (years) 18-28  29-39  40-50  51-60  above 60   
years

Highest level of Education: Primary  Secondary Certificate  Diploma

Undergraduate Degree  Masters  PhD

8. Occupation (tick only one): Self-employed  Employed formal  Studying   
Not employed

9. Monthly earnings: None  below R5000  R5001-10000   
R10001-20000  R20001-25000  R25001-30000  Above R30 000

## SECTION B

*In this section, we are interested in knowing the extent to which the performance of your network provider satisfies you. Please indicate your opinion in the appropriate box against each of the statements below.*

		strongly disagree 1	slightly disagree 2	Dis-agree 3	neutral 4	slightly agree 5	agree 6	strongly agree 7
1	Overall, I am happy with the performance of my current Cellular company							
2	I feel good about the service of my Cellular company							
3	In general, the Cellular company satisfies my needs							
4	Overall, I my current Cellular company fulfils most of my mobile service needs.							

## SECTION C

*In this section, we would want to understand your future intentions about your current Cellular company. Please indicate your intended future relationship in the appropriate box against each statement below.*

		Strongly disagree 1	Slightly disagree 2	Dis-agree 3	Neutral 4	Slightly agree 5	Agree 6	Strongly agree 7
5	I intend to repurchase mobile services from the same company in the future.							
6	I intend to continue using my current Cellular company in the future.							
7	I intend to continue doing business with my current Cellular company.							
8	I would tell others about my current service provider in the future							
9	I would recommend my Cellular company to others in the future							
10	I would encourage my friends and colleagues to use the company I use.							
11	It is worth recommending the Cellular company to my friends and relatives.							

## SECTION D

*In this section we are interested in how you feel about the fairness of you Cellular company in correcting any problems (**loss of network signal and connectivity, loss of airtime or data bundles, rapid data bundle consumption, unavailability roaming facilities etc**) you might have experienced in the past.*

		strongly disagree 1	slightly disagree 2	dis-agree 3	neutral 4	slightly agree 5	agree 6	strongly agree 7
12	Whenever I suffered a loss because of a network problem, I got adequate compensation I deserved.							
13	In case of loss due to network problem, the Cellular company provided adequate compensation.							
14	The company gave me satisfactory compensation whenever I suffered a loss due to network problem.							
15	When I experienced a network problem, the Cellular company responded quickly to restore it.							
16	When I had a service breakdown, the procedures followed in correcting the problem were acceptable.							
17	When I experienced a problem with the network, the steps followed by the company in correcting my problem were fair.							
18	When I made an inquiry about the problem, the employees of company treated me kindly.							
19	The employees showed their concern for the inconvenience caused by the problem I had experienced.							
20	In correcting the problem, employees of the Cellular company also considered my views.							
21	The company informed me about the network problems they were experiencing.							
22	The causes and procedures taken to correct the problems were explained clearly and honestly.							
23	The explanations provided for the causes of the problems were thorough and truthful.							



## SECTION E

In this section we would want to find out if there were any constraints that would make it difficult for you to leave or **switch** your current Cellular company to join another one, if you would wish to do so.

		strongly disagree 1	slightly disagree 2	disagree 3	neutral 4	slightly agree 5	agree 6	strongly agree 7
24	The financial costs of switching to another Cellular company are just too much.							
25	There are financial charges associated with my switching.							
26	I anticipate that the monetary cost of switching would be too high.							
27	The company's innovativeness make me reluctant to consider others.							
28	The company always introduces new technology which is difficult to leave.							
29	I really like the variety of cellular services this company introduces.							
30	I will lose the most up to date mobile services this company always introduce if I leave.							
31	The benefits of low tariffs when I call my family or friends who use the same network influenced my choice.							
32	I have so many friends using this company that made me choose it.							
33	I cannot leave this company because my family members also use it.							
34	I cannot switch because the majority of my friends use the same network.							
35	In my view, the Cellular company I am using is better than other companies on the market.							
36	From the information I have, my current Cellular company fares better than others available on the market.							

## SECTION F

*In this section we interested in understanding your overall satisfaction with the actions taken by your company in correcting any network problems you could have experienced in the past.*

		strongly disagree 1	slightly disagree 2	dis-agree 3	neutral 4	slightly agree 5	agree 6	strongly agree 7
37	The company provided a satisfactory solution to the network problem I encountered.							
38	I was satisfied with the way the company rectified the network problem I encountered.							
39	Overall, the way the company rectified the network problems was satisfactory.							
40	I was satisfied with the way employees attended to the network problems.							

## SECTION G

*In this section, we seek to know whether the quality of service provided by your network company is **below your expectations, what you expect** or **above your expectations** (where 1= means performance is far below my expectations and 7 = means the performance is above my expectations or excellent)*

		Below expectations			As expected	Above expectations		
		1	2	3	4	5	6	7
41	The network connectivity of my Cellular company is ...?							
42	The network connectivity's dependability is ...?							
43	The quality of mobile services I receive right first time is...?							
44	The consistency in network connectivity and accessibility of mobile services promised is...							
45	The company's urgency to communicate any network problems and changes to service delivery charges is...							
46	The company's accessibility of the help line is...?							
47	The promptness of employees to pick customer calls on the help line is...?							
48	The response of employees in the company's shops and call center to customer s' complaint is...?							
49	The depth of knowledge shown by employees when attending to customer when problems and complaints is...?							
50	The attention given to the confidentiality my personal information is...?							
51	The way employees talk to customers is...?							

52	The attention given to customers by employees when there is a problem is...?							
53	The way employees deal with customers is...							
54	The level of interest assist customers shown by employees is ...?							
55	The appearance of the facilities of the company's shops and call centre is...							
56	The technology used by employees to attend to customers; technical problems is...?							
57	The neatness of employees in the company's shops and at the call centre is ...?							

**THANK YOU FOR PARTICIPATING IN THIS SURVEY**

## APPENDIX B: FACULTY CLEARANCE



Central University  
Technology, Free

CENTRAL UNIVERSITY OF TECHNOLOGY, FREE STATE  
SENTRALE UNIVERSITEIT VIR TEGNOLOGIE, VRYSTAAT  
YUNIVESITHI E BOHARENG YA THEKENOLOJI, FOREISTATA

### FACULTY RESEARCH AND INNOVATION COMMITTEE –FACULTY OF MANAGEMENT SCIENCES

### RESEARCH ETHICS APPROVAL LETTER

**Date: 2018-06-23**

This is to confirm that:

Applicant's Name	Douglas Musiiwa
Supervisor Name for Student Project	Prof P Rambe, Prof DY Dzansi, Prof C Chipunza, Dr E Amoakoh
Level of Qualification for Student	Doctor of Business Administration
Title of research project	Developing an Integrative Framework for Future Behavioural Intentions: The Explanatory Roles of Service Quality, Customer Satisfaction, Service Recovery, and Switching Barriers

Ethical clearance has been provided by the Faculty Research and Innovation Committee [2018-06-04] in view of the CUT Research Ethics and Integrity Framework, 2016 with reference number [2018064].

The following special conditions were set:

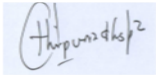
None

Specific conditions

The following specific conditions apply:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Wish you success with your research project.



---

(FRIC Chairperson)

## APPENDIX C: INSTITUTIONAL CLEARANCE



Central University of  
Technology, Free State

### ■ INSTITUTIONAL PLANNING AND QUALITY ENHANCEMENT

**MR DOUGLAS MUSIWA**

douglasmusiwa@gmail.com

PERMISSION FOR DOUGLAS MUSIWA TO CONDUCT SURVEY AT CUT CAMPUSES FOR HIS DOCTORAL STUDY ENTITLED "DEVELOPING AN INTEGRATIVE FRAMEWORK FOR FUTURE BEHAVIOURAL INTENTIONS: THE EXPLANATORY ROLES OF SERVICE QUALITY, CUSTOMER SATISFACTION, SERVICE RECOVERY, AND SWITCHING BARRIERS."

Dear Mr Douglas, Musiwa

This is to confirm that you have been granted permission to conduct survey at The Central University of Technology campuses for your Doctoral study entitled "Developing an Integrative Framework for Future Behavioural Intentions. The Explanatory Roles of Service Quality, Customer Satisfaction, Service Recovery, and Switching Barriers"

The conditions of the conditional permission are:

- The survey will not interrupt any of the official activities at the CUT;
- You will supply us with the copy of your report;
- The cost of all related activities will be covered by yourself;
- Recruitment of participants is the sole responsibility of yourself;
- Voluntary nature of the potential participant's decision to consent to participate should be strictly observed;
- You should not disclose a potential participant's decision to participate or otherwise to any other party;
- Permission does not compel, in any sense, participation of staff members or students in your survey.



ACTING SENIOR DIRECTOR: INSTITUTIONAL PLANNING AND QUALITY ENHANCEMENT  
PROF. A SZUBARGA  
26 FEBRUARY 2019

## APPENDIX D: CLEARANCE FROM NATIONAL UNIVERSITY OF LESOTHO

## THE NATIONAL UNIVERSITY OF LESOTHO

Telephone: +266 52213907  
+266 22340264  
+266 22340601  
Fax: +266 22340000  
Website: <http://www.nul.ls>



P O Roma 180  
Lesotho  
Africa

OFFICE OF THE REGISTRAR

5<sup>th</sup> March 2020

REF: REG/ADM-1.37  
LML/hym1

Mr. Douglas Musiwa  
National University of Lesotho  
Faculty of Social Sciences  
Department of Business Administration  
Roma

Dear Mr. Musiwa


**Re: Request to collect data at the National University of Lesotho**

The National University of Lesotho (NUL) is in receipt of your application to collect data at this institution. The title of the Study is **"Developing An Integrative Framework for Future Behavioural Intentions in the Cellular Industry: The Explanatory Roles of Service Quality, Customer satisfaction, Service Recovery and Switching Barriers"**.

After careful consideration of all relevant facts, the University has agreed to allow you to continue with your research as requested. It is hoped that the research outcome will be beneficial to both the institution of Higher learning and the country at large.

By copy of this letter the National University of Lesotho staff and students are requested to assist you to carry out your assignment.

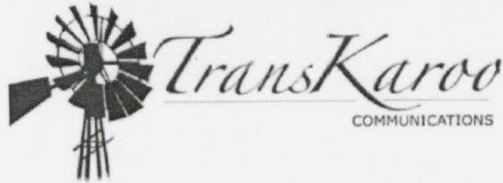
Yours sincerely



**L. Maqalika-Lerotholi**  
Registrar

Cc: NUL Staff and Students

## APPENDIX E: LANGUAGE EDITING CERTIFICATE



30 November, 2021  
Pretoria, South Africa

To whom it may concern,

I hereby confirm that I undertook the language editing for the thesis,

**DEVELOPING AN INTEGRATED PREDICTIVE-EXPLANATORY MODEL OF  
BEHAVIOURAL INTENTIONS FOR MOBILE CELLULAR SERVICES**

by

**Douglas Musiwa**

The work was well written overall. The changes were mostly in the areas of spelling, typos, punctuation, grammar, and there were a relatively small number of basic style issues.



Cillié Swart BA (Harvard) MBA (Kuehne)  
+27 (0)73 612 0278  
pjcswart@transkaroo.net



## APPENDIX F: ANTIPLAGIARISM SUMMARY REPORT

### TURNITIN PLAGIARISM SUMMARY REPORT

#### DEVELOPING AN INTEGRATED PREDICTIVE-EXPLANATORY MODEL OF BEHAVIOURAL INTENTIONS FOR MOBILE CELLULAR SERVICES

**Submission date:** 09-Dec-2021 12:36PM (UTC+0200)  
**Submission ID:** 1725398708  
**File name:** MUSIIWA\_THESIS\_--EDITED.docx (1.5M)  
**Word count:** 101983  
**Character count:** 575684

**Draft**

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#### ORIGINALITY REPORT

