



Received: 08 September 2016  
Accepted: 13 December 2016  
Published: 03 January 2017

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## MARKETING | RESEARCH ARTICLE

# Exploring customer loyalty in the South African mobile telecommunications sector

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**Abstract:** The South African mobile telecommunications environment has become increasingly competitive, thus there is increased focus on acquiring and retaining loyal customers in order to facilitate repeat purchases, guarantee future revenues and shield the customer base from competitive activity. In the light of the aforementioned, an online survey which comprised questions on loyalty, customer satisfaction, brand image, perceived quality and perceived value, was conducted among 110 customers of the South African (SA) mobile telecommunications industry. A number of hypotheses were formulated proposing relationships among the above-mentioned variables. The findings which resulted from structural equation and multiple regression modelling, revealed that customer satisfaction has the most significant positive effect on customer loyalty. Customer brand image and perceived value have a significant positive effect on customer satisfaction, but not customer loyalty. By implication, brand image and perceived value indirectly influence customer loyalty, through influencing customer satisfaction. The findings imply that the management of mobile telecommunications businesses in SA should focus on customer satisfaction and its antecedents, if they wish to develop a cadre of loyal customers.

**Subjects:** Social Sciences; Behavioral Sciences; Economics, Finance, Business & Industry

**Keywords:** mobile telephony; service; satisfaction; brand image; loyalty

### ABOUT THE AUTHOR



Krishna Govender

Krishna Govender has a PhD in Marketing from the University of Cape Town, and has been in academic for about 37 years, having lectured marketing, especially services marketing at both undergraduate and postgraduate levels. He has supervised many masters and doctorate candidates, published numerous papers in national and international peer-reviewed journals, as well delivered papers at national and international academic conferences. This paper is an output of an MBA dissertation produced by one of his students.

### PUBLIC INTEREST STATEMENT

Customer loyalty is a key consideration in business, because it is less effort for a business to generate repeat business from existing customers than to generate new customers. Loyalty can be associated with the organisation, product or brand and can result from *inter alia*, previous experience with some or all of the aforementioned. The focus has been on the antecedents or factors which impact loyalty, *inter alia*, and image, quality, and perceived value. Closely associated with customer loyalty is the issue of satisfaction; implying that someone who is satisfied with a product or service is likely to be loyal to this product or service. In the light of the above, this article reports on a study conducted among a sample of mobile telecommunications company customers, and it was determined that their level of satisfaction positively influenced their level of loyalty. However, there was no direct relationship between the samples perception of value, the brand, and quality and their level of loyalty.

## 1. Introduction and background

Mobile telephony in South Africa (SA) has played a pivotal role in bridging the communications gap (Rao, 2011), and whereas Telkom SA (the national telecommunications provider in SA) was struggling to address the backlog of fixed-line telephony, mobile telephony emerged as a viable and profitable means to provide ICT services to lower income segments (Vodacom, 2008). Africa was the first continent to have greater mobile than fixed-line penetration, and by 2012 the total number of mobile subscribers in South Africa was estimated to have grown to over 62 million (Bronkhorst, 2012), comprising approximately 10% of the total mobile subscribers in Africa (Maake, 2012). The telecommunications industry in South Africa is also highly competitive, and the players need to maintain a competitive advantage to prevent strategic drift (Arsal & Yatera, 2014), and in order to succeed, customer loyalty becomes pivotal (Santouridis & Trivellas, 2010).

There could be multiple factors that drive or erode customer loyalty. For example, if a customer is looking for cheap call rates but very fast and stable Internet, s/he might chose to use provider X to make mobile calls, but also have a portable modem or data SIM from provider Y. Such behaviour which is the opposite of total brand loyalty, becomes a significant challenge for telecommunications service providers. If a provider is losing out on the potential additional or future revenue, the growth of the company is severely compromised. Service providers are thus seeking to develop strategies to increase loyalty and entice customers to satisfy all their mobile communications needs with a single brand.

Customer loyalty will fade through switching or using multiple service providers if their mobile communication needs are not satisfied accordingly or if they could derive greater benefit from another service provider. In view of the multiple ways in which loyalty affects customer behaviour, this study seeks to understand the current state of loyalty in the respective South African market and investigate the key drivers of loyalty and customer behaviour.

The degree of rivalry in the South African telecommunications market is notably high. The market for voice related services is reaching saturation point which is forcing service providers to look for additional growth from alternate portfolios such as data. (Mzekandaba, 2012). Industry reports expect voice revenues to decline at a compound rate of -2% from 2014 onwards. Mobile data revenues on the other hand are anticipated to virtually double, from their 2011 figure of \$2.8 billion, to figures beyond \$5 billion in 2018 (Arsal & Yatera, 2014).

In a highly competitive market, such as mobile telecommunications, where margins are getting smaller and traditional products and services like mobile voice are reaching saturation, deriving more value from existing customers is undoubtedly a significant business challenge. Total loyalty of servicing all one's mobile communication needs is a function of the interplay between organisations and customers and the ability of companies to maximise the derived value perception of customers. If managers are able to adequately meet customer needs, this will enable the business to remain relevant in the market and ensure business continuity.

There are also very few academic sources that managers in the telecommunications market can access to gain a deeper understanding of issues such as churn, service provider switching, and loyalty in a local South African context. The study is thus applied and not fundamental in its purpose, because it aims to deal with a tangible business problem and provide solutions for it. Fundamental research on the other hand is more concerned with formulating general theories about a phenomenon (Roll-Hansen, 2009).

This article investigates the specific factors associated with loyalty in the South African mobile telecommunications industry, by examining the antecedents of customer loyalty. The objective is to propose and test a conceptual model involving certain antecedents of loyalty specific to the telecommunications sector and, highlight the importance of understanding the influence of these antecedents on business. This is done in order to make practical recommendations for telecommunications businesses to increase loyalty and reduce customer switching behaviour.

## 2. Research context

Mobile subscribers in South Africa are shared among three major providers, Vodacom, MTN and Cell C. As of July 2014, Vodacom was estimated to have a 43.5% market share, Cell C approximately 20%, and MTN 33%, due to having lost 5% of its previous subscribers to Cell C (Mawson, 2014). Telekom Mobile, the most recent 'kid on the block' was also included in the survey, although it only holds an estimate market share of 2.5% (Mawson, 2014).

It is necessary to distinguish between two types of telecommunications consumers, more specifically, those confined by a 24-month, fixed-term contract (post-paid), and those on a pre-paid plan. Both types of customers generally have similar core needs, but the extended needs or unique value they are deriving differs (Tubbs, 2012). Creditworthy customers with steady income generally choose the post-paid option, which involves lower data and telephony charges and inclusive devices (Research ICT Africa, 2012). The South African telecommunications market is by and large a prepaid market because, contract related price plans account for less than 20% of the overall mobile subscribers (World Wide Worx, 2012).

Although this study did not limit itself to a particular service provider nor to either pre-paid or post-paid customers, there was sampling bias towards post-paid customers due to the research method being an online survey. Assumedly, consumers with higher disposable income are more likely to have the means to complete an online survey.

## 3. Literature review

When looking at the general literature on customer loyalty, it becomes evident that the concept is somewhat ambiguous, and the common problem is that there is little agreement on what exactly constitutes customer loyalty. In early studies two dominant perspectives of loyalty prevailed: loyalty as behaviour and loyalty as attitude (Wong & Zhou, 2006). In this article, a working definition of customer loyalty this study aligns with Oliver (1997), who outlines customer loyalty as "a deep commitment to re-buy or re-patronise a certain product or service in the future irrespective of marketing efforts or situational influences that could cause the customer to switch to another brand."

Given the sheer complexity of definitions and debates around the concept of customer loyalty Bandyopadhyay and Martell (2007) are concerned that the meaning and operationalisation of brand loyalty has not been fully understood. The aforementioned writers see the greatest challenge is in the understanding and inclusion of attitudes in analysing loyalty, because it hardly ever leads to empirical data that can be applied across brands and categories.

In the light of the aforementioned and, although a rich body of research defines and analyses the concept 'loyalty' and the factors influencing brand loyalty, the purpose of the article is not to explore definitions, but, possible associations between and among certain variables, namely, customer satisfaction, perceived value, perceived quality and perceived brand image.

### 3.1. Customer satisfaction and loyalty

The relationship between customer satisfaction and customer loyalty is arguably one of the most crucial focus areas in marketing theory and practice because it is the culmination of efficient marketing programmes (Gupta & Zeithaml, 2006). When attempting to define customer satisfaction one typically encounters similar challenges to defining customer loyalty, and the challenge becomes evident through the debate on whether customer satisfaction is a process or the outcome of a sum of activities (Yi, 1990). Although Bae (2012) posits that several earlier researchers like Anderson (1996), established a positive relationship between customer satisfaction and loyalty, he however points out that there is an equal pool of research, indicating that the positive relationship between satisfaction and loyalty is not generalisable.

Customer satisfaction and customer loyalty are arguably one of the most crucial focus areas in marketing (Gupta & Zeithaml, 2006), but the challenge becomes evident through the debate of

whether customer satisfaction is a process or the outcome of a sum of activities (Yi, 1990). For the purpose of this research, such debates will be set aside and there is no departure from the widely accepted conceptualisation of customer satisfaction as a post-purchase or post-engagement evaluative judgement of a specific transaction (Bastos & Gallego, 2008).

Bae (2012) conducted a review of the existing body of research on the customer loyalty and customer satisfaction relationship. The aforementioned researcher posits that there are several earlier researchers like Anderson (1996), who established a positive relation between customer satisfaction and loyalty. Bae (2012) however points out that there is an equal pool of research indicating that the positive relationship between satisfaction and loyalty is not generalisable.

For the purpose of this research, Bae's (2012) argument poses a reminder that customer satisfaction alone is not a guarantee for future purchases or reduced switching behaviour. The literature suggested that the interplay between customer satisfaction and customer loyalty is likely to be one of the most crucial focus areas in marketing theory and practice because, it is the culmination of efficient marketing programmes (Gupta & Zeithaml, 2006). In the light of the above, the following is hypothesised to examine the relationship between customer satisfaction and loyalty in the mobile telecommunications sector in SA.

H4: Customer satisfaction is the main driver of customer loyalty.

### **3.2. Perceived quality, value, satisfaction and loyalty**

Service quality is generally accepted to play an important role in predicting and explaining customer behaviour (Heskett & Sasser, 2010). It thus plays a role in both, customer loyalty and customer satisfaction. Perceived quality, as mentioned earlier is one of the key drivers of brand equity in Aaker's (1996) model. Here, perceived quality describes the level to which a customer feels that a brand offers good quality products and services that can be measured according to a number of criteria. It is important to note that Aaker (1996) considers price to be one of these evaluation criteria next to availability of the product; the number of available line/brand extensions; and the overall product quality as reason to purchase. However, as mentioned above, this research will only consider price to be an element of perceived value. This is not due to any significant theoretical reasons but more for the sake of avoiding duplication. In this sense Zeithaml's (1988) understanding of perceived quality as the general consumer judgement about a product's overall excellence or superiority is regarded as apt for the purpose of this research.

Perceived quality as a variable is closely related to perceived value because perceived quality often serves as an evaluation criteria based on which customers determine value (Zeithaml, 1988). Choi and Kim (2013) review several studies on these variables and find that perceived quality either indirectly increases customer satisfaction (through the positive correlation between perceived value and perceived quality) or has a direct, positive effect on customer satisfaction. Similarly, Zaibaf, Taherikia, and Fakharian (2012) found that that functional quality and image have a positive and noticeable influence on perceived quality and, in turn, satisfaction in the hospitality industry. The aforementioned writers however note that there is no significant relationship between technical quality and perceived quality. These findings remind researchers in this field that one should not confuse the "actual" or objective quality of a product/service with the way in which the customer experiences the performance thereof.

Perceived quality as a variable is closely related to perceived value because perceived quality often serves as evaluation criteria on which customers determine value (Zeithaml, 1988). Choi and Kim (2013) found that perceived quality either indirectly increases customer satisfaction through the positive correlation between perceived value and perceived quality, or has a direct, positive effect on customer satisfaction.

Perceived value is an important consideration for both, customer loyalty and customer satisfaction, since it conceptualises the difference between how a customer evaluates all the benefits and the costs of an offering vs. the costs and benefits of known alternatives in the market (Keller & Kotler, 2009). A slightly different view describes perceived value as a trade-off between perceived benefits on the one hand and, monetary and non-monetary sacrifices on the other hand.

The actual relationship between customer value and loyalty can be ambiguous (Lynch & Holden, 2008). This is however more related to the issue of attempting to describe loyalty purely on the basis of perceived value. Setiowati and Putri (2012) investigated the impact that several factors relating to perceived value have on brand loyalty and customer satisfaction in the spa industry in Indonesia. Their study concludes that on a general level perceived value does indeed have a positive effect on both, customer satisfaction and brand loyalty. Similarly, Kaura (2012) finds that perceived price is an important antecedent to customer satisfaction as customers use it as a reference point to determine the quality (value) of a product. When customers perceive value to be low, this might compel them to look for alternative brands in order to maximise perceived value. This in turn results in declining loyalty (Anderson & Srinivasan, 2003).

Some leading researchers (Keller & Kotler, 2009), perceived value as an important consideration for both customer loyalty and customer satisfaction, since perceived value conceptualises the difference between how a customer evaluates the benefits and costs of an offering, vs. the costs and benefits of known alternatives in the market. Kaura (2012) found that the perceived price is an important antecedent to customer satisfaction, since customers use price as reference point to determine the value of a product. When customers perceive value to be low, this might compel them to look for alternative brands in order to maximise the perceived value, and this in turn results in declining loyalty (Anderson & Srinivasan, 2003).

In the light of the above, the following hypotheses are postulated, to explore the relationships in the mobile telecommunications industry in SA.

- H1: There is a relationship between perceived quality and customer satisfaction
- H3: There is a relationship between perceived value customer satisfaction
- H5: There is a relationship between perceived quality and loyalty
- H7: There is a relationship between perceived value and loyalty

### **3.3. Brand image, customer satisfaction and loyalty**

Brand associations are an integral part of Keller's (2008) customer-based brand equity model. As mentioned earlier, one of the desired outcomes of building brand equity is having more loyal customers. For the purpose of this research the concept of brand association and image will not be broken down into several aspects as in Keller's (2008) model, as this would add an undesirable level of complexity to the theoretical discussions. Moreover, there is no universally accepted definition of brand image or agreement on how to measure it as a variable. Nevertheless, in the context of this study it seems sufficient to view brand image as consistent with existing associative network memory models whereby brand image stands for the cluster of associations that a customer connects to a brand name in their mind (Dobni & Zinkhan, 1990). Brand image and associations thus become a vehicle for constructing meaning to a customer.

Romaniuk and Nencyz-Thiel (2013) collected data from purchase panels and consumer surveys to analyse the interplay between a consumer's past behavioural loyalty and their current disposition to cite brand associations. The results indicate a positive relationship because customers with higher re-purchase behaviour are more likely to cite positive brand associations. Sondoh, Wan Omar, Abdul Wahid, Ismail, and Harun (2007) conducted a study on consumer behaviour in the context of colour cosmetics and conclude that managers should strive to maximise brand image benefits in order to maximise customer satisfaction and loyalty. Correspondingly, Onyacha (2013) posits that a positive

brand image enhances customer loyalty for a Kenyan commercial bank as well as perceived quality, which in turn influences loyalty through enhancing customer satisfaction.

Thus, with respect to mobile telecommunications industry in SA, it is hypothesised that:

- H2: A positive brand image has an effect on customer satisfaction
- H6: A positive brand image has an effect on customer brand loyalty

Although several studies of the antecedents to loyalty were briefly discussed, there is however a noticeable gap, in that many of the studies are either not specific to the mobile telecommunications sector or they lack relevance for the South African context. Furthermore, many of the key concepts such as customer satisfaction, are not similarly defined and, also it is not very clear exactly how customer satisfaction relates to customer loyalty. Thirdly, whilst there are studies showing general trends such as the positive relationships between perceived quality and customer satisfaction, these results are difficult to generalise because in some settings the relationship is direct, in others it is indirect, and in some, the relationship is hard to determine. It is for the aforementioned reasons that this study was conducted among a sample in the South African mobile telecommunications market.

#### 4. Research methodology

Mertens (2005) suggests that the essence of research as a process is influenced by the researcher's paradigm, whereby theories serve as a means to uncover relationships between or amongst constructs. These constructs in turn, allow the researcher to explain a particular phenomenon by connecting local events to other similar events. Two common paradigms or theoretical frameworks in the discourse of research are positivist and the interpretivist paradigm. Positivism is often understood as the 'scientific method' and is generally used based on the assumptions that social phenomena can be studied and understood in the same value-free manner as the natural world. The researcher hence assumes to be in the position of applying the law of cause and effect to issues such as human behaviour (Creswell, 2003). Interpretivism on the other hand has roots in the practice of hermeneutics and is primarily concerned with the human experiences and the description thereof. The aforementioned paradigm assumes that reality is a social construct and that a researcher can never be fully detached from the object of inquiry (Mertens, 2005).

The core assumption of this study is that one does not need to become too preoccupied with the positivist vs. the interpretivist position when conducting applied research. In this sense, this study assumes that it is possible to make valid assumptions and recommendations about loyalty in the South African telecommunications industry and practical by following a pragmatic approach. Pragmatism as an epistemological position has a unique appeal because it avoids getting bogged down in philosophical questions about paradigms like truth and reality. Instead, the researcher should be free to investigate what is considered to be of personal and stakeholder value in a way that is appropriate for the research problem (Tashakkori & Teddlie, 1998).

In essence, the research design and analysis of this study shows both, positivist and interpretivist traits. It is positivist in the sense that it assumes that there are logical reasons for customers behaving in a certain way and that customers can attribute these reasons to their individual behaviour in a rational way. In addition, there is an underlying assumption that one can predict behavioural patterns of individuals based on quantitative information. On the other hand, there are strong interpretivist traits to this research because the content of the survey and the decision on which literature to apply for the development of the conceptual models are both the outcome of subjective interpretation.

An online survey was conducted since it requires less time and energy to administer, and there is less risk for bias. An emphasis on close-ended questions allowed for cross-tabulations and hence made it possible to identify key trends and compare responses to each other. The data obtained from

the survey provided inputs for multivariate statistical analysis, which tools are critical to address the research objectives and test the conceptual model and allow the researchers to make informed predictions about the impact of a change in the independent variables on the dependent variable.

The survey comprised two sections, the first featuring a number of category questions, which were closed-ended, and the second comprising the research variables, which included the following: loyalty, customer satisfaction, brand image, perceived quality and perceived value. The questions per variable were adapted and revised from previous related studies (Aydin & Özer, 2005; Craucamp, 2012; Nawaz & Usman, 2011). However, the researchers formulated the questions in such a way that they were relevant to the local mobile telecommunications sector. The questions were phrased in the form of a Likert scale, whereby 1 represented “strongly disagree” and 5 represented “strongly agree”.

The link to the online survey was provided in an email which introduced the researcher and the purpose of the study, and encouraged participation. In addition, the researchers requested participants to forward the survey to friends and family in order to increase the reach. Once the participants had clicked the link, they were redirected to the survey on the [www.kwiksurveys.com](http://www.kwiksurveys.com) server.

#### **4.1. Sampling procedure**

In 2013, the South African Audience Research Foundation (SAARF) estimated the adult household penetration of mobile telephony in South Africa to be at 97% (SAARF, 2013). Probability sampling was used where each member of the population had an equal chance of being selected. However, because an online survey can only be administered if the researcher is in possession of the respondent’s email address or linked via social media, convenience sampling was preferred. The researchers sent a covering mail to known email addresses of friends, colleagues and family members. In addition, a simple description of the purpose of the research with a link to the online survey was posted on Facebook, LinkedIn and Twitter. This allowed the researcher to speak to a wider community and encourage social media contacts to participate. In order to increase the sample size the researcher also added an element of snowball sampling to the cover email by encouraging participants to forward the invite to their friends, colleagues and family members.

Because this study applied multivariate statistical tools to test the hypotheses, the sample needed to be both an acceptable representation of the total population, and of sufficient size to perform the relevant statistical analyses. The conceptual model comprises five variables, and it is suggested (Cody & Smith, 2006) that one should have at least 10 times the number of respondents for each variable undergoing factor analysis or correlation analysis. Although the researchers aimed for a sample size of not less than 50, they continued with the survey until the personal deadline of 112 respondents was reached.

#### **4.2. Data analysis**

The data was processed using STATA 12 and SPSS 21 software packages for windows. Structural equation modelling (SEM) which is a powerful combination of statistical techniques to test conceptual models (Steenkamp & Baumgartner, 2000) was conducted since it allowed the researcher to model causal relationship between multiple variables whether they are manifest or latent.

#### **4.3. Ethical considerations**

An important ethical aspect in research is the confidentiality of results, findings and the identities of participants. The researchers dealt with this aspect by not having a requirement on the survey for respondents to provide their name nor any of their contact details. Moreover, the survey tool is designed in such a way that remains anonymous and the researcher has no option of tracking responses against email addresses. The confidentiality of information was confirmed in the cover letter that was sent to respondents and the researcher clearly stipulated that this study is for pure academic benefit with no commercial intent. It would be unethical for example if the researcher sold this data to corporates without the consent of the participants. To add an extra layer of security the

**Table 1. Structural validity of items**

Dimension/variable	Item	No. of items	KMO MSA
Loyalty	I am loyal to my service provider	4	0.80
	I will not switch my service provider		
	If I was starting again, I would choose my current service provider again as my main service provider		
	In future, I intend to purchase additional products/contracts from the same service provider		
Customer satisfaction	Considering everything, I am satisfied with my service provider	3	0.73
	My service provider always meets my expectations		
	I feel that my service provider gives me exactly what I need		
Image	My service provider is well-liked	5	0.80
	My service provider has great and memorable advertising		
	My service provider is a respected brand		
	My service provider is very involved in the community		
	I like what my service provider stands for as a brand		
Perceived quality	My service provider excellent service quality	4	0.70
	The network coverage/reception is good		
	The internet speeds are fast		
	My service provider has great customer care		
Perceived value	I get value for money with my service provider	3	0.74
	The tariffs and fees at my service provider are fair		
	My service provider has good prices and promotions compared to competitors		
Keiser Meyer Olkin measure of sampling adequacy (total items)		19	0.90
Barlett's test of sphericity (approx. $\chi^2$ ; sig.)		1.17E3; $p < 0.01$	

survey data is kept securely on a password protected laptop to ensure that even in the case of theft nobody other than the researcher can access the data-set.

Because the researcher has a professional affiliation to the telecommunications industry, consent will be obtained should this study be published or presented at a conference to. This will ensure that there is no conflict of interest between the study and the business interests and confidentiality agreements of the employer.

Finally, this study was conducted with the appropriate validity tests and stipulation of limitations. This is important because it automatically prevents the researcher from drawing conclusions and recommendations that are not supported by the findings. As such, there is transparency about sample that was used to address the research objectives.

#### 4.4. Validity

For the purpose of verifying the structural validity of the online survey, the Kaiser-Meyer-Olkin (KMO) (Kaiser, 1970) measure of sampling adequacy (MSA) and Barlett's Test of Sphericity (Bartlett, 1950) were conducted. This was followed by principle component analysis (PCA), where the respective factor loadings for the identified components helped to understand the significance of the items in the questionnaire (Williams, Brown & Onsmann, 2012). In order to determine the number of components to sufficiently account for the variance in the data, the cumulative percentage of variance and eigenvalue >1 rule was applied (Kline, 1994). Table 1 reflects the outputs of KMO used to assess structural validity.

Given that the computed overall KMO MSA value (0.902) as reflected in Table 1 exceeds the standard minimum acceptable value of 0.6, the results of the structural validity analysis indicated sampling adequacy of the items comprising the research instrument. The probability of the Bartlett's

(1950) test of sphericity of the items in the research instrument (1.1733;  $p < 0.01$ ) also confirmed that Principal Component Analysis (PCA) could be performed. The latent root criterion was also applied to examine how evenly distributed the variance across the extracted components were, prior to rotation of the extracted components, which results are presented by Table 2.

As reflected in Table 2, the results from the final iteration produced four eigenvalues that are greater than 1, which implies that four components/factors were extracted and based on the rotation sums of squared loadings, approximately 71% of the total variance in the entire data-set was accounted for by these four components/factors. Kline (1994) recommends that variables with high loadings or correlations ( $r \geq 0.5$ ) of more than 1 component should be removed from the analysis. Factors that loaded on only one component via Varimax rotation with Kaiser Normalization, were retained in the analysis. Given that more than one component was extracted through the PCA technique, the pattern of item loadings was examined to detect if there were retained items that demonstrated a complex structure. The results of the factor loadings of the rotated component matrix are presented in Table 3.

**Table 2. Total variance explained based on rotation sums of squared loadings**

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	9.49	49.95	49.95	9.49	49.95	49.95	4.36	22.95	22.95
2	1.72	9.05	58.99	1.72	9.05	58.99	3.70	19.47	42.42
3	1.21	6.35	65.34	1.22	6.35	65.34	3.23	16.98	59.40
4	1.09	5.36	70.70	1.02	5.36	70.70	2.15	11.30	70.70

Note: Extraction method: principal component analysis.

**Table 3. Factor loadings—Extracted from principal component analysis**

Component	Item	Factor loadings
Component 1	I am loyal to my service provider	0.70
	I will not switch my service provider	0.64
	If I was starting again I would chose my current service provider again as my main service provider	0.81
	In the future I intend to purchase additional products/ contracts from the same service provider	0.71
	Considering everything I am very satisfied with my service provider	0.67
	My service provider always meets my expectations	0.49
	My service provider is well-liked	0.60
Component 2	I feel that my service provider gives me exactly what I need	0.55
	I get value for money with my service provider	0.78
	The tariffs and fees at my service provider are fair	0.92
	My service provider has good prices and promotions compared to competitors	0.83
Component 3	My service provider is a respected brand	0.56
	My service provider is very involved in the community	0.83
	I like what my service provider stands for as a brand	0.72
	My service provider excellent service quality	0.60
	My service provider has great customer care	0.51
Component 4	My service provider has great and memorable advertising	0.45
	The network coverage/reception is good	0.73
	The internet speeds are fast	0.85

**Table 4. Scale reliability of items**

Dimension/variable	Items	No. of items	$\alpha$ value
Loyalty	I am loyal to my service provider	4	0.83
	I will not switch my service provider		
	If I was starting again, I would chose my current service provider again as my main service provider		
	In future, I intend to purchase additional products/contracts from the same service provider		
Customer satisfaction	Considering everything, I am satisfied with my service provider	3	0.90
	My service provider always meets my expectations		
	I feel that my service provider gives me exactly what I need		
Image	My service provider is well-liked	5	0.80
	My service provider has great and memorable advertising		
	My service provider is a respected brand		
	My service provider is very involved in the community		
	I like what my service provider stands for as a brand		
Perceived quality	My service provider excellent service quality	4	0.80
	The network coverage/reception is good		
	The internet speeds are fast		
	My service provider has great customer care		
Perceived value	I get value for money with my service provider	3	0.90
	The tariffs and fees at my service provider are fair		
	My service provider has good prices and promotions compared to competitors		

#### 4.5. Reliability

The internal consistency of the survey instrument was examined using the Cronbach's alpha criterion (Leedy & Ormrod, 2013) and, the minimum acceptable value was an  $\alpha$  coefficient of 0.7. The results on the scale reliability test are presented in Table 4.

The overall value of the Cronbach's alpha coefficient ( $\alpha = 0.941$ ) for all 19 items retained exceeded the minimum acceptable ( $\alpha = 0.7$ ) score, a condition for overall reliability (Leedy & Ormrod, 2013). The results therefore indicate that overall, the survey instrument's items were reliable, and that the items measured a single unidimensional latent construct.

Structural equation modelling was used to estimate the structural parameters of the conceptual model. The 5% significance level standard criterion was used determine whether the independent variable has a significant or insignificant effect on the respective dependent variable (Gefen, Straub, & Boudreau, 2000). In instances where the  $p$ -value (under the SEM) or sig. value (under the OLS) is less than 0.05, the researchers concluded that the independent variable has a significant effect on the dependent variable. The results of the model's estimated parameters are provided in Table 5.

Ceteris paribus, the model's standardised estimates at 5% significance level indicate that brand image has a statistically significant positive effect on customer satisfaction, while its effect on loyalty, although somewhat insignificant, still remains positive. Moreover, a one percentage point increase in brand image leads to approximately 0.38% improvement in customer satisfaction. Perceived quality demonstrates an insignificant, yet positive effect on both customer satisfaction and loyalty. The perceived value demonstrates statistically significant positive effects on customer satisfaction, but not on loyalty. A one percentage point increase in perceived value is associated with approximately 0.44% improvement in customer satisfaction. Only customer satisfaction has a statistically significant positive effect on loyalty. Although the effects of the perceived value, image and

perceived quality are insignificant at a 5% level, the respective effects remain positive. Figure 1 summarises the SEM estimates relating to the conceptual model.

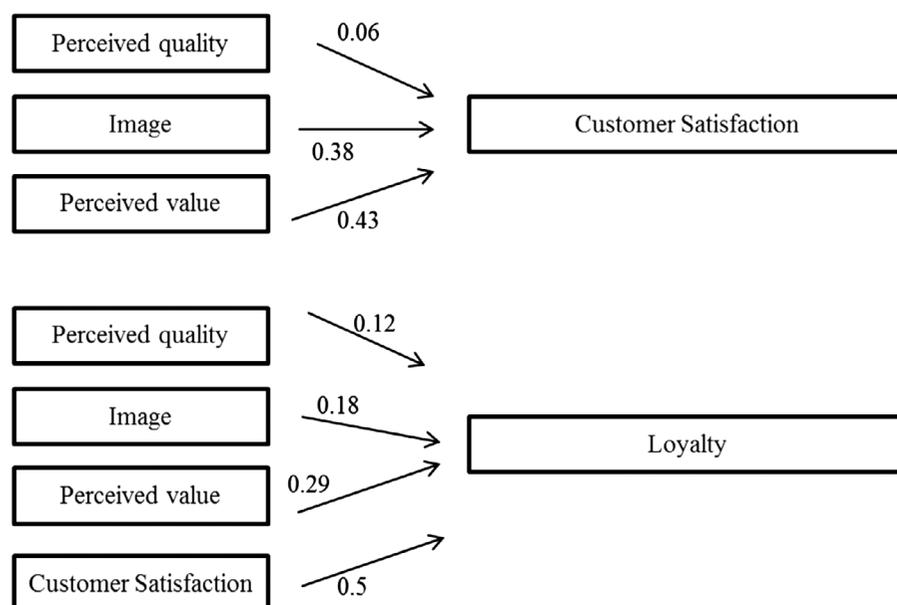
It is evident from Figure 1 that there was no need to modify the conceptual model due to the fact that all linear relationships are positive, although not all are statistically significant. In order to estimate the direct elasticity of perceived quality, perceived value and brand image on customer satisfaction, as well as the direct effects of customer satisfaction, brand image, perceived value and perceived quality on loyalty, multiple linear regression analysis technique was considered. In this respect, two models of regression were estimated, the results of which are presented in Table 6.

Based on the standardised estimates of the customer satisfaction model, both brand image and perceived value have statistically significant positive effects on customer satisfaction. Perceived value demonstrates a more remarkable effect on customer satisfaction, compared to brand image. The results indicate that a one per cent improvement in perceived value leads to nearly 0.44% improvement in customer satisfaction, while a change of one per cent in the brand image leads to approximately 0.38% improvement in customer satisfaction. Though positive, perceived quality exhibits a statistically insignificant effect on customer satisfaction. The results further reveal that only customer satisfaction has a significant positive effect on loyalty. A one per cent change in customer satisfaction leads to about 0.50% improvement in loyalty, while image, perceived quality and perceived value have insignificant effects on loyalty. Based on the adjusted  $R^2$ , about 49% of the total variation in loyalty is accounted for by customer satisfaction, image, perceived quality and perceived value. Table 7 presents a summary of the decisions on the various hypotheses postulated.

#### 4.6. Discussion of the main findings

It became evident that the vast majority (84%) of the respondents claimed to be either neutral or unlikely to change their main service provider, which reveals that a significant measure of loyalty exists amongst these consumers. This trend largely echoes the statement in the report from the McKinsey Consumer Insights Centre, which stated that brand loyalty is generally high in Africa, especially with consumers in sub-Saharan Africa. However, even though there was low willingness to change the main service provider, over 50% of the respondents claimed to use more than one service provider. This shows that there are several critical components of loyalty in the mobile telecommunications sector which managers need to take into account, and that it is also not sufficient to measure loyalty based merely on tenure and propensity to churn.

**Figure 1. SEM estimates according to the conceptual model.**



**Table 5. SEM estimates results**

Standardised	Coefficient	Std. error	Z	p >  Z	(95% CI)	
<i>Customer satisfaction</i>						
Image	0.38	0.10	4.12	0.00	0.20	0.56
Perceived quality	0.07	0.10	0.67	0.50	0.13	0.26
Perceived value	0.44	0.07	5.87	0.00	0.30	0.58
<i>Customer loyalty</i>						
Perceived quality	0.12	0.10	1.16	0.25	-0.08	0.31
Image	0.18	0.11	1.65	0.10	-0.03	0.39
Perceived value	0.03	0.10	0.30	0.77	-0.16	0.22
Customer satisfaction	0.50	0.10	4.93	0.00	0.30	0.70

The specific findings with respect to satisfaction, brand image, perceived quality, and perceived value are briefly discussed below.

**4.7. Brand image, satisfaction and loyalty**

The results (Tables 5 and 6) show that brand image has a statistically significant (although moderate), yet positive effect on customer satisfaction. As such, this study confirms H1, but is not fully conclusive with regards to H5. Consequently, these findings suggest that future studies on loyalty in the telecommunications sector should not omit image as an indirect antecedent to loyalty due to its impact on customer satisfaction. The aforementioned findings are in line with that of certain researchers, *inter alia*, Onyacha (2013).

**4.8. Perceived quality, satisfaction and loyalty**

The results (Tables 5 and 6) also do not support the argument that perceived quality has a statistically significant effect on customer satisfaction albeit the correlation in both instances is positive. Key studies on loyalty in the telecommunications sector do consider quality as an antecedent to loyalty but the application of loyalty as an independent variable is predominantly skewed towards customer service (Hossain & Suchy, 2013; Nawaz & Usman, 2011). Like image, perceived quality is also an important dimension of brand equity models and has thus a conceptual link to customer loyalty and customer satisfaction (Aaker, 1996; Keller, 2008). Perceived quality either indirectly increases customer satisfaction (through the positive correlation between perceived value and

**Table 6. Multiple linear regression results**

Independent variables	Unstandardised coefficients		Standardised coefficients	T	Sig.	95% CI for B	
	B	Std. error	$\beta$			Lower bound	Upper bound
<i>Model 1: Dependent variable—Customer satisfaction</i>							
Image	0.51	0.14	0.40	3.81	0.00	0.25	0.78
Perceived quality	0.10	0.11	0.10	0.65	0.52	-0.15	0.30
Perceived value	0.42	0.10	0.44	5.18	0.00	0.26	0.60
Model summary	R = 0.62		R <sup>2</sup> = 0.38		Adj. R <sup>2</sup> = 0.37		
<i>Model 2: Dependent variable—Loyalty</i>							
Customer satisfaction	0.45	0.10	0.50	4.43	0.00	0.25	0.66
Image	0.22	0.14	0.18	1.59	0.12	-0.06	0.49
Perceived quality	0.12	0.11	0.12	1.12	0.27	-0.09	0.33
Perceived value	0.25	0.09	0.03	0.29	0.77	-0.15	0.20
Model summary	R = 0.71		R <sup>2</sup> = 0.51		Adj. R <sup>2</sup> = 0.46		

**Table 7. Summary of decisions on hypotheses**

Hypothesis	Status	Comment
H1: A positive brand image has an effect customer satisfaction	Confirmed	Confirmed at the 5% significant level
H2: Perceived quality has an effect customer satisfaction	Not confirmed	Inconclusive at 5% significance level albeit correlation remains positive
H3: Perceived value has an effect customer satisfaction	Confirmed	Confirmed at the 5% significance level
H4: Customer satisfaction is the main driver of customer loyalty	Confirmed	Confirmed at the 5% significance level
H5: A positive brand image has an effect customer loyalty	Not confirmed	Inconclusive at the 5% significance level albeit correlation remains positive
H6: Perceived quality has an effect on customer loyalty	Not confirmed	Inconclusive at the 5% significance level albeit correlation remains positive
H7: Perceived value has an effect on customer loyalty	Not confirmed	Inconclusive at the 5% significance level albeit correlation remains positive

perceived quality) or has a direct, positive effect on customer satisfaction (Choi & Kim, 2013). Perceived quality just like perceived value is a highly complex, subjective and multidimensional concept, meaning that the aforementioned variable should ideally be broken down into further sub-concepts such as functional quality and service-related quality (Zaibaf et al., 2012).

**4.9. Perceived value, satisfaction and loyalty**

It also became evident (Tables 5 and 6) that perceived value has a statistically significant positive effect on customer satisfaction, thus this study confirms H3. It is also apparent that perceived value correlates with customer loyalty, although at a 5% significance level the relationship is statistically insignificant. Researchers such Kaura (2012) argue that the relationship between perceived value and loyalty can be ambiguous due to value being a highly subjective phenomenon and price not being sufficient as the main determining factor of value for money. Furthermore, there are studies from non-telecommunications industries which reveal that perceived value has a direct positive or indirect positive effect on both customer satisfaction and loyalty (Kaura, 2012; Setiowati & Putri, 2012). Low perceived value can encourage switching behaviour and erode loyalty (Anderson & Srinivasan, 2003); and key studies on loyalty in the telecommunications sector do consider perceived value as an antecedent to loyalty and support the argument for a positive correlation between the two aforementioned variables (Hossain & Suchy, 2013; Nawaz & Usman, 2011).

There are numerous marketing theorists who argue that value for money is an important building block for developing strong brands (Aaker, 1996; Keller, 2008). Correspondingly, if marketing strategy is seen as the effective synthesis of price, product, place and promotion, then managers should always strive to perform well on the value for money dimension (Keller & Kotler, 2009). Thus, it is recommended that future studies be conducted to retain value for money as an important dimension of customer satisfaction and indirect driver of loyalty through customer satisfaction as the mediating variable

**4.10. Customer satisfaction and loyalty**

It became apparent (Tables 5 and 6) that the positive correlation between loyalty and customer satisfaction is statistically significant, and higher than the correlation between loyalty and the other three variables, namely perceived quality, brand image and perceived value. This findings support the arguments of Gupta and Zeithaml (2006) where they state that marketers who are concerned with building brand loyalty must pay specific attention to directing their activities towards increasing customer satisfaction. Furthermore, the results are in line with that of several researchers in the mobile telecommunications industry who describe customer satisfaction as the main antecedent to loyalty, and have found a significant positive relationship between these two variables (Nawaz & Usman, 2011).

Even though, Boohene and Agyapong (2011) could not confirm customer satisfaction as a major driver of brand loyalty for Vodafone subscribers in Ghana, this research suggests that there is probably a positive relationship between satisfaction and loyalty in the mobile telecommunications sector. Nevertheless, in a situation whereby both loyalty and customer satisfaction are complex variables with multiple antecedents, one should continue to apply caution when trying to make informed predictions about one geographical market based on the findings of a different geographical market.

There are certainly South African studies on the telecommunications industry but the majority look at customer behaviour relating to mobile phones. Kruger (2013) for example investigated brand romance, attitude and loyalty in the South African cellular market and found, amongst other issues, that consumers stick to a device brand for a period of one to three years. Such findings, albeit interesting, have limited relevance to this research because devices are product brands whilst providers are service brands. Nevertheless, pointing out that loyalty to device brands is a concern for businesses suggests that there is potentially a larger consumer trend of declining affecting multiple industries and markets.

Cross-industry analyses can be useful when primary research on a field of interest within one industry is scarce. An interesting article on the financial sector claims that bank customers on a global scale are becoming less loyal to their banks and this trend is also noticeable in South Africa (Clarke, 2012). By referring to industry studies, the article claims that between 2011 and 2012 customer churn in the banking sector increased by 17.4%. Moreover, 70% of clients who have switched to another bank are reported to state high prices as a reason for the change (Clarke, 2012). Such findings are interesting because they suggest that fading loyalty could be a cross-industry phenomenon but they also cite price as the driving factor behind brand switching (which is a marker of very low loyalty).

In conclusion, customer loyalty is an important consideration for businesses because it promises a steady source of revenue through repeat purchases and upselling potential, and it can drastically reduce the need for promotional activities and hence reduce costs while increasing profitability (Li & Green, 2010). Thus, if the mobile telecommunication industry managers understand the factors that contribute to brand loyalty within their industry or brand category, then it is possible assess which of the factors (antecedents) need to be addressed as an organisation in order to combat declining loyalty.

### **5. Recommendations, limitations and future research**

The insights pertaining to this research can help managers and organisations adapt and develop strategies to compete more effectively in the mobile telecommunications environment, since this study has provided relevant insights on the effect of several variables on customer loyalty and alluded to strategies they could consider to increase loyalty and customer satisfaction beyond the positive effect of perceived value. Mobile telecommunications managers could also consider achieving greater brand differentiation through innovation, pricing and product development.

A limitation of this study relates to the nature of the sample and the online survey as the core research instrument. In order to increase the generalisability of the findings, one would have to select a sample size that is more representative of the entire market. Due to capacity and resource issues, this was however not possible. Moreover, because the researchers needed to have access to the email address of the sample or be connected to them via social media, the sample inevitably had a strong bias towards social circles and circle of influence.

Despite the many benefits of using an online survey, this method has limitations in that not every mobile telecommunications consumer has the means to readily access their email or participate in an online survey. In other words, the so-called digital divide in South Africa proves to be a limitation to the use of the online survey.

The literature review indicated that there are numerous studies and factors associated with customer loyalty. As a result, the chosen variables and number of questions per variable may not necessarily have done justice to this overwhelming body of research. In the ideal situation however, the researcher would have aimed for a much more in-depth survey and more coherent and standardised operationalisation of the variables.

Should scholars wish to conduct further research relating to the objectives of this study, it would be recommended to collect data through computer assisted telephonic interviews with a random sample of no less 2,000. The survey should be more comprehensive and operationalise the different variables in more depth through further permutations. By contacting a large pool of random customers telephonically, more valid conclusions pertaining to the total population could be drawn. Moreover, a larger sample size can lead to more accurate results when using multivariate statistical tools.

#### Funding

The authors received no direct funding for this research.

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#### Citation information

Cite this article as: Exploring customer loyalty in the South African mobile telecommunications sector, Simon Morgan & Krishna Govender, *Cogent Business & Management* (2017), 4: 1273816.

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