The Influence of Customer-Based Brand Equity on Customer Satisfaction and Brand Loyalty: Evidence from South African Mobile Telecommunications Industry

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—Abstract —

The South African mobile telecommunications environment has become increasingly competitive, with non-traditional players like FNB and Mr Price joining the fold. Therefore, to succeed and ensure survival in such an industry, it is imperative for mobile operators to build brand equity as it ensures customer retention, repeat purchase patronage and safeguards the customer base from competitive activity. In this regard, this study examined the influence of customer-based brand equity on customer satisfaction and brand loyalty in South Africa’s mobile cellular services. To this end, the influence of perceived quality, brand awareness, brand associations on customer satisfaction and brand loyalty in the South African mobile telecommunications industry was investigated.

A quantitative approach was undertaken with data collected by a survey from 240 Generation Y respondents through a structured self-administered questionnaire. Reliability and validity tests were performed to validate the scales used in the study. Correlation analysis and multiple regression analysis were performed to ascertain the influence and nature of relationships between the dimensions of brand equity and customer satisfaction as well as between customer satisfaction and brand loyalty.

Significant positive relationships were established between perceived quality, brand awareness, brand associations and customer satisfaction as well as brand
loyalty. Perceived quality had the strongest influence on customer satisfaction, followed by brand awareness and brand association respectively. Results also showed a significant positive relationship between customer satisfaction and brand loyalty.

The implication from the findings was that service providers of mobile telecommunications in South Africa should focus on customer satisfaction and its antecedents to develop a cadre of loyal customers. Brand managers should place significant effort primarily on building brand equity and brand equity dimensions, which have high importance towards customer satisfaction and ultimately brand loyalty.

**Keywords:** Branding, Customer-Based brand equity, Brand loyalty, Mobile telecommunications services; Generation Y

**JEL Classification:** M31 Marketing

1. **INTRODUCTION**

In South Africa, the cellular service industry has experienced exponential growth with approximately 88.2 million mobile connections representing a SIM penetration rate estimated to be 160 percent (BusinessTech, 2017). These figures show that mobile connections far exceed the population, thus, many people seem to have more than one SIM on more than one network (BusinessTech, 2017). In terms of market structure, Vodacom and MTN enjoy a duopoly, having been pioneers of mobile cellular services provision in South Africa after being granted operating licences in 1993 (Jooste, Strydom, Berndt & Du Plessis, 2008:388; Knott-Craig, 2008:33). After eight years of Vodacom and MTN duopoly, Cell C launched in 2001 (Jooste et al., 2008:388), having been supported by the South African government and regulators who were keen to increase competition in the mobile telecommunications market (African Telecoms News, 2012:20).

Over the years, many mobile operators have joined the fold. In 2006, Virgin Mobile launched as the first mobile virtual network operator (MVNO) operating on Cell-Cs network. In 2010, Telkom divested its shareholding in Vodacom, launching their own mobile service branded 8-ta, later to be rebranded as Telkom Mobile (McLeod, 2014:1). In 2015, another MVNO operating on the Cell C network was inaugurated, branded as Me & You Mobile, which was followed by the introduction of other mobile cellular services from non-traditional players Mr
Price and First National Bank who launched MRP Mobile and FNB Connect respectively (Seef 2015:1; McLeod, 2014:1). Accordingly, the South African mobile telecommunications environment has become increasingly competitive, inundated with a wide assortment of offerings (Jooste et al., 2008:388). Moreover, the introduction of the number portability option in 2007 that permits subscribers to change network providers whilst retaining their contact number continues to present a challenge to customer retention efforts by mobile cellular service providers (Jooste et al., 2008:240). In addition, the use of price and non-price competition has grown in intensity, as mobile cellular providers seek to protect their market share and encourage brand switching to grow their subscriber base (Knott-Craig, 2008:33). Consequently, this has promoted the use of multiple service providers as customers seek to capitalise on the different promotional offers from mobile cellular service providers (Morgan & Govender, 2017:2). For instance, a customer looking for cheap call rates, very fast and stable Internet, might chose to use provider X to make mobile calls, but also have a portable modem or data subscriber identity module (SIM) from provider Y. This kind of behaviour is the opposite of total brand loyalty and creates a significant challenge for mobile cellular service providers (Morgan & Govender, 2017:2). Therefore, to succeed and ensure survival in such an industry, it is imperative for mobile operators to build brand equity as it ensures customer retention, repeat purchase patronage and safeguard the customer base from competitive activity. Thus, the existence of intensive competition coupled with incidences of brand switching and erosion of profit margin challenges marketers to create sustainable competitive advantage. In this context, customer-based brand equity is perceived as a potent tool of enhancing competitive advantage (Chowdhury, 2012:62). As such, this study builds on the resource-advantage theory and signalling theory to examine the influence of customer-based brand equity on customer satisfaction and brand loyalty in mobile cellular services in South Africa.

1. PURPOSE OF THE STUDY

The primary objective of the study was to examine the influence of customer-based brand equity on customer satisfaction and brand loyalty in the mobile cellular services industry in South Africa.

2. LITERATURE REVIEW

In recent years, the concept of brand equity has gained considerable attention from researchers and marketing practitioners (Ahmad & Sherwani, 2015:59; Shen, Yuan, Zhang & Zhao, 2014:21). According to Aaker (1991:11), brand equity
refers to “a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm or to that firm’s customers.” Thus, the concept of brand equity may be viewed from the resource-advantage theory perspective to argue that customer-based brand equity constitutes a superior, intangible market-based asset that offers an organisation sustainable competitive advantage (Hunt, 1997:432). Apart from limited emulation by competitors, customer-based brand equity is inherently associated with performance metrics such as customer loyalty, customer satisfaction and improved financial performance (Budac & Baltador, 2013:444).

The financial and customer perspectives are evident from the brand equity definition. The financial-based brand equity examines the short-term and long-term contribution of the brand to the financial performance of an organisation (Li & Gu, 2009:63). According to Chowudhury (2012:62), customer-brand equity, which is the focus of this study, refers to the value attached to a brand by consumers and is the foremost driver of the brand’s profitability. In addition, Keller (1993:2) proposes that customer-based brand equity is ‘the differential effect of brand knowledge on consumer response to the marketing of the brand’. According to the signalling theory (Erdem & Swait, 2004:132), brand equity acts as an effective signal of quality and credibility as it significantly reduces the risk perceived by consumers. Thus, from this perspective, customer-based brand equity signals the strength of the brand to consumers. According to the customer-based brand equity (CBBE) model, the main antecedents of customer-based brand equity include brand awareness, perceived quality, brand loyalty and brand association.

3.1 Antecedents of customer-based brand equity

The dimensions of CBBE that embody consumer perceptions towards a brand include perceived quality, brand awareness, brand loyalty and brand association (Li & Gu, 2009:63). According to Aaker (2012), if managed well, these dimensions will create CBBE. Following is a brief discussion of each dimension.

Perceived quality refers to the customer’s perception of the superiority of a brand relative to its intended purpose and alternative brands (Hsu, Hung & Tang 2012:357). According to Balaji (2011:9), a brand possessing a high-quality perception elicits favourable customer preferences and purchase intentions. Furthermore, perceived quality adds to brand equity by providing a value proposition that triggers consumer purchase behaviour (Al-Hawari, 2011:152). Thus, an investment in service quality is seen as one of the most important

Brand loyalty refers to consumers’ repetitive and systematic purchase of a brand on a continual basis (Belaid & Behi, 2011:39). According to Chaudhuri and Holbrook (2001:82), brand loyalty is defined as “a deeply held commitment to re-buy or re-patronise a preferred product or service consistently in the future, thereby causing repetitive purchasing behaviour in spite of switching triggers from situational influences and marketing efforts.” The key indicators of brand loyalty are emotional attachment and sustained repeat purchase behaviour (Wilson, Zeithaml, Bitner & Gremler, 2012:41). The marketing advantages of enhancing brand loyalty include the financial value of having a portfolio of less price-sensitive consumers (Hawkins & Mothersbaugh, 2013:680) and loyal consumers acting as effective brand ambassadors (Hess, Story & Danes, 2011:14) who are less likely to be swayed by competitors’ marketing efforts and seldom switch to competing products (Hoyer, Macinnis & Pieters, 2013:252). Thus, brand loyalty translates into reduced marketing costs and an increased share of consumers’ spending (Gummesson, 2002:52).

It is important to note that brand loyalty largely depends on the extent of brand awareness in the target marketplace (Shen et al., 2014:24). According to Aaker (1991:6), brand awareness is the knowledge and salience of a brand in the minds of consumers and the level of brand awareness is determined by brand recall and recognition. Brand recall is how well a brand comes in consumers’ mind as soon as its product class is mentioned whilst brand recognition reflects consumers’ familiarity and preference of brand because of past exposure (Aaker, 1991:6). Thus, the process of enhancing brand awareness is considered a continuous process aimed at entrenching the brand as a part of the consideration set of the consumer (Khosravi, Shafei & Salavati, 2012:672). To stimulate brand awareness, marketers need to associate the brand with cues and connotations valued by consumers (Wang & Li, 2012:149). Brand associations consist of all brand-related thoughts, feelings, perceptions, images, experiences, beliefs and attitudes (Kotler & Keller 2006:188). This is important because favourable brand associations translate into brand market acceptance and consumer patronage (Shen et al., 2014:24).

From a customer perspective, brand loyalty reflects the degree of confidence bestowed on a brand and indicates the potential of a brand to satisfy consumer
needs better than competing brands (Hawkins & Mothersbaugh, 2013:680). This confidence is instilled through intangible benefits inherent in the brand that translate into consumer satisfaction (Torres-Moraga, Vasquez-parraga & Zamora-gonzalez, 2008:308). Customer satisfaction has been defined as the state in which the needs, wants and expectations of customers are met or exceeded leading to repurchase, brand loyalty and willingness to recommend (Beneke, Hayworth, Hobson & Mia, 2011:32). Conversely, customer dissatisfaction could lead to negative word-of-mouth and customer defection to a competitor, as dissatisfied customers often seek alternative organisations or products (Hoffman & Bateson, 2010:289).

3. METHODOLOGY

A quantitative descriptive research design was employed in this study. The target population comprised of Generation Y students who use cellular services from public universities situated in South Africa.

4.1 Participants and sampling method

As Generation Y consumers are identified as the prime target of most mobile cellular service providers (Juwaheer, Vencatachellum, Pudaruth, Ramasawmy & Ponnusami, 2014:65) and given their fickle nature (Lazarevic, 2012:45), it was deemed imperative to gain insights into the influence of customer perceived brand equity on customer satisfaction and brand loyalty on this premium market segment. To this end, Generation Y students are the target population.

Based on previous related studies conducted by Kim, Ma and Park (2009:222) and Gao, Sultan and Rohm (2010:578), a sample size of 260 was deemed adequate. Moreover, consideration of the sample size was based on the requirements of multiple regression analysis. According to Tabachnick and Fidell (2001:117), a sample size of $N > 50 + 8m$ (where $m =$ number of independent variables) is adequate to perform multiple regression analysis. Thus, the sample size considered in this study is 260 respondents, which is above the minimum of 82 respondents when four independent variables are involved, which is the case in this study.

Using the non-probability convenience sampling method, respondents were drawn from two universities. Respondents voluntarily participated in the study based on their own willingness and interest in the study. The respondents were requested to complete the questionnaires in their regularly scheduled classes with the
permission of their respective lecturers and ethical clearance was obtained from
the respective universities.

4.2 Data and instrument design

The questionnaire comprised of three sections: Section A consisted of questions on the demographic profile of consumers such as age, gender, ethnicity and monthly income. Section B covered questions on the dimensions of customer brandy equity such as brand awareness, perceived quality, brand loyalty and brand association. These dimensions were measured using items taken from the research conducted by Yoo, Donthu and Lee (2000:14). Section C covered questions on customer satisfaction and was measured using items adapted from a study conducted by Ahmad and Sherwani (2015:64). A five-point Likert scale was used ranging from 1=strongly disagree to 5=strongly agree. A pilot study with 50 respondents was conducted prior to data collection to enhance measurement item clarity and assess the internal consistency of the measurement items.

A structured, self-administered questionnaire was used to gather data through a survey. Out of the 260 questionnaires distributed, 250 were returned, of which 10 (leaving 240 questionnaires) were found to be unfit and unsuitable for analysis and had to be discarded, giving a sample realisation rate of 92 percent.

4.3 Reliability and validity

The Cronbach’s alpha coefficients for all the constructs ranged from 0.80 to 0.93 as shown in the Table 1, which is above the recommended threshold of 0.7, demonstrating the attainment of satisfactory levels of internal consistency (Tabachnick & Fidell, 2001).

<table>
<thead>
<tr>
<th>Research constructs</th>
<th>Number of items</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived quality</td>
<td>4</td>
<td>0.805</td>
</tr>
<tr>
<td>Brand loyalty</td>
<td>8</td>
<td>0.850</td>
</tr>
<tr>
<td>Brand associations</td>
<td>5</td>
<td>0.866</td>
</tr>
<tr>
<td>Brand awareness</td>
<td>4</td>
<td>0.799</td>
</tr>
<tr>
<td>Brand equity</td>
<td>4</td>
<td>0.853</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>8</td>
<td>0.932</td>
</tr>
</tbody>
</table>

Face or content validity of the questionnaire was ascertained by two subject experts in brand equity and marketing management who scrutinized, reviewed and confirmed that items and scales used in the research instrument were valid measures of the constructs in this study.
4.4 Data analysis

The Statistical Package for Social Sciences (SPSS) Version 22.0 was used to analyse the data. Correlation analysis and multiple regression analysis were performed in this study.

5. RESULTS AND DISCUSSION

5.1 Profile of the respondents

Of the 240 participants, 132 were females (53%) whilst 108 were males (47%). Most respondents (N=204, 85%) were between the ages 20-25 whilst 10 percent of the respondents were between the ages 26-30, representing a total of 24 respondents and lastly, the 31-35 year age group made up 5 percent of the respondents, which represented only 12 respondents. In terms of educational qualifications, 144 of the respondents were undergraduates (60%) and 96 were postgraduates (40%). Most of the research respondents (N=156, 65%) had an income below R5 000.

5.2 Correlation analysis

Table 2 indicates that the relationships between all the constructs in the study were positive and statistically significantly. It is evident from the size of (r) that strong positive relationships exist between the research constructs.

**Table 2: Correlation analysis**

<table>
<thead>
<tr>
<th>CONSTRUCTS</th>
<th>PQ</th>
<th>BA</th>
<th>BASS</th>
<th>CS</th>
<th>BL</th>
</tr>
</thead>
<tbody>
<tr>
<td>PQ</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BA</td>
<td>0.612**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BASS</td>
<td>0.780**</td>
<td>0.627**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0.745**</td>
<td>0.694**</td>
<td>0.678**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>0.739**</td>
<td>0.626**</td>
<td>0.673**</td>
<td>0.725**</td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed). **KEY-**: PQ=Perceived quality; BA= Brand awareness; BASS=Brand associations; CS= Customer satisfaction; BL= Brand loyalty.

5.3 Multiple regression analysis

Table 3 shows a positive relationship between brand awareness and customer satisfaction (β= 0.388, p=000). This finding validate arguments by Keller (1993:143) who reiterates that enhanced brand recognition exposes consumers repeatedly to a brand, which will cause consumers to experience the brand. When consumers are exposed to the brand through hearing, seeing or thinking about it, the brand can occupy their memory and can be recognised at any time, leading to
satisfaction from the brand. Thus, brands with meaningful names provide favourable brand cues and can easily be remembered by consumers.

Research findings indicated in Table 3 show a positive significant relationship between perceived quality and customer satisfaction among Generation Y consumers. The results (β=0.453, p=000) show that perceived quality is a strong predictor of customer satisfaction. Thus, if the level of service quality that is provided by the service providers is perceived to be great, it will most likely lead to customer satisfaction (Saravana & Rao, 2007:436). Similarly, Wang and Li (2012:60) found that service quality significantly impact on customer satisfaction.

Table 3: Multiple regression analysis results

<table>
<thead>
<tr>
<th>Dependant variable: Customer satisfaction</th>
<th>Beta</th>
<th>T</th>
<th>Sig</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: Independent variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand awareness</td>
<td>.388</td>
<td>7.885</td>
<td>.000</td>
<td>.591</td>
<td>1.692</td>
</tr>
<tr>
<td>Perceived quality</td>
<td>.453</td>
<td>6.845</td>
<td>.000</td>
<td>.319</td>
<td>3.135</td>
</tr>
<tr>
<td>Brand association</td>
<td>.352</td>
<td>7.632</td>
<td>.000</td>
<td>.212</td>
<td>4.717</td>
</tr>
<tr>
<td>R=0.804; R² = 0.646; Adjusted R² = 0.642; F change = 105.729</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependant variable: Brand loyalty</th>
<th>Beta</th>
<th>T</th>
<th>Sig</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2: Independent variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>.425</td>
<td>5.621</td>
<td>.000</td>
<td>.413</td>
<td>2.421</td>
</tr>
<tr>
<td>R=0.725; R² = 0.525; Adjusted R² = 0.523; F change = 276.274</td>
<td></td>
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</tbody>
</table>

Results shown in Table 3 indicate a positive significant relationship between brand association and customer satisfaction among Generation Y (β=0.352, p=000). This result is consistent with the results obtained by Story and Hess (2006:225) who stated that brand association enables the customers to distinguish their needs that the brand fulfils, it differentiates the service provider from others and enhances the customer performance over the brand. Similarly, this outcome is in line with the results by Dick and Basu (1994:356) who found that the success of the brand could generate customers’ awareness regarding dignity of the brand, which helps to enhance their satisfaction from the purchase of brand and so optimise the profitability of the service provider due to their purchase of its products and services. According to Hsieh, Pan and Setiono (2004:252), a successful brand association enables consumers to identify the needs that the
brand satisfies and differentiate the brand from its competitors, which consequently increases satisfaction.

In Table 3, a positive significant relationship between customer satisfaction and brand loyalty among Generation Y consumers can be observed ($\beta=0.425$, $p=0.000$). Evidence from the reviewed literature further supports this positive relationship between the two variables. Kuusik (2007:9) affirms that there is a direct relationship between satisfaction and loyalty; satisfied customers become loyal to the business, whilst dissatisfied customers will turn to another provider. According to Dorai and Varshney (2012: 407) satisfied customers have a higher lifetime value to service providers, as these customers will spread positive word-of-mouth, will cooperate with and are likely to become partners in the relationship with their service providers. Vázquez-Casielles, Suárez-Álvarez and Belén Del Río-Lanza (2009: 2291) concur, asserting that customer satisfaction impacts attitudinal loyalty through a positive effect on repurchase intention, price tolerance and positive recommendations. Likewise, Cant and Erdis (2012: 938) contend that satisfaction is important, as it lays the foundation for long-term customer relationships, resulting in loyalty and retention.

5.4 Managerial implications and practical relevance of the study

Mobile cellular service providers should work harder to retain consumers and gain repeated business in this highly competitive market. Importantly, brand managers should place significant effort primarily on building CBBE. They should invest in marketing activities that generate and drive brand awareness, build good brand image and they should continuously improve service quality, as research findings show that these lead to increased overall brand equity. According to the resource-advantage theory and signalling theory, CBBE creates and achieve greater brand differentiation. As such, CBBE should be considered as a strategic asset and resource. Thus, service providers ought to invest in CBBE by considering innovation, pricing and product development as these create and attain favourable CBBE, which gives them a competitive edge over competitors. However, such new product developments or pricing changes need to be well communicated to consumers as findings in this current research study indicate that with increased brand awareness, there is a higher likelihood of customer satisfaction as well as higher levels of brand loyalty. The mobile network operators should also enhance the brand association for the brand through marketing, promotional programmes and advertising strategies to improve the functional and non-functional attributes of the brand to achieve customer satisfaction. By maintaining and strengthening
the brand images and values, it hopefully will position the brand positively in the minds of consumers.

In addition, consumers need to be well informed of the different choices and product options available to them. This calls for service providers to provide consumers with enough information about their mobile network service provider and its related product offerings. Having such knowledge will increase brand awareness amongst consumers whilst also improving their decision-making processes and satisfaction with the brand. Service providers ought to educate their consumers through different marketing channels such as direct marketing and digital marketing. For instance, service providers can embark on SMS marketing to educate consumers on the different product options available to them as well as any promotions, which might be taking place. According to the research findings in this study, service quality is the strongest predictor of customer satisfaction. Thus, improving consumer perceptions of service quality will positively influence their satisfaction levels hence they are more likely to become loyal. This can be done through service excellence in all consumer touch points. For instance, service providers in the South African mobile telecommunications industry may improve service quality perceptions by reducing waiting times when consumers call in call centres, by having effective complaints management systems and ensuring exceptional call and network connection quality.

Regarding satisfaction and loyalty, it is important for mobile cellular service providers to measure customers’ satisfaction constantly to analyse their brand performance and whether customers are satisfied. Finally, to create a successful brand, brand managers should be more dedicated to building brand image, customers’ satisfaction and brand loyalty as part of their branding strategy. By maintaining and strengthening the brand images and values, it should position the brand positively in the minds of consumers.

6. RESEARCH LIMITATIONS AND AVENUES OF FURTHER STUDY

The research study examined the influence of customer-based brand equity on customer satisfaction and brand loyalty in mobile cellular services in two provinces only (Gauteng and North West), therefore, there is a significant regional gap in the study and a need to research the behaviour of consumers in other provinces of South Africa. Consequently, generalisations of this study must be made with great care and caution. Moreover, the study employed a quantitative research, thus, future studies can undertake a qualitative study to gain more in-depth insights from respondents.
7. CONCLUSION

The primary objective of the study was to examine the influence of customer-based brand equity on customer satisfaction and brand loyalty in the mobile cellular services industry in South Africa. This was achieved through correlation and regression analyses as strong positive and statistically significant relationships were found between constructs in this study. Perceived service quality was found to be the strongest predictor of customer satisfaction followed by brand awareness and brand image respectively. The findings of this study imply that the management of mobile cellular service providers in South Africa should concentrate on customer satisfaction and its antecedents to improve customer loyalty and develop a cadre of loyal customers.

BIBLIOGRAPHY


