

## Empirical Evaluation of a Model That Measures the Brand Loyalty for Fast Moving Consumer Goods

Ahmed I. Moolla<sup>1,2</sup> and Christo A. Bisschoff<sup>2</sup>

<sup>1</sup>*Management College of Southern Africa, 26 Aliwal street, Durban, 4000 South Africa*

*Telephone: 27 31 300 7200; Email: AIM@mancosa.co.za*

<sup>2</sup>*Potchefstroom Business School, North-West University, Private bag X6001,*

*Potchefstroom, 2520 South Africa*

*Telephone: 27 18 299 1411; Fax: 27 18 299 1416; E-mail: christo.bisschoff@nwu.ac.za*

**KEYWORDS** Managerial Tool. Business Model. Competitiveness. Marketing. Brand Management. Brand Loyalty Influences. Brand Research

**ABSTRACT** The objective of this paper is to evaluate the model to measure brand loyalty. This is achieved by using the model to measure three fast moving consumer goods (toothpaste, bread and coffee) and apply the model to measure the brand loyalty influences and their measuring criteria. If the model remains valid when applied to different FMCG products, and measures brand loyalty of the three products successfully, it implies that the model is a generic rather than specific managerial tool in the FMCG industry. The results obtained from the research in this article shows that the model to measure brand loyalty were successful and remained valid in the case of all three the products. The results are promising, showing that the model to measure brand loyalty strives towards a generic tool that can be applied in the FMCG industry in different products. However, the model needs to be scrutinised further by exposing it to a wide range of FMCG products to ensure that it really is applicable to all FMCG products. Managers will find the model valuable because they can apply the model to determine which specific influences are the most important for their products or services, while also identifying where their brand loyalty fails. This research paper is an exploratory study of brand loyalty in the FMCG market which sets a scientific base for academia who wants to further research the concepts of brand loyalty and brand management. In addition, the model sets a scientific base for academia who wants to further research the concepts of brand loyalty and brand management.

### INTRODUCTION

Branding has surfaced as a primary tool used to distinguish a company's products from the competition's products. In this regard, branding is used to establish a competitive position by addressing one or more of the following branding purposes, namely: *product identification, repeat sales (loyalty) and enhancing new products* (Lamb et al. 2008: 214). Managers have recognised the importance of branding on these three levels and have discovered the benefits of retaining customers rather than seeking new ones, and firms have recognised the importance of brand loyalty as strategic competitive tool (Kotler and Keller 2006).

The concept of brand loyalty, as integral part of the brand management strategy evolved in the 1950s, while the attitude to measure brand loyalty as a construct was initiated by the composite model of Jacoby in 1971. This measuring model combined both the attitudinal and behavioural construct signalling the beginning of much interest in brand loyalty research (Rundle-Thiele

2005: 494). Using the composite model as a base, several models have emerged since offering new dimensions and influences in various industries. Most notable was the model offered by Dick and Basu (1994: 111) which identified the need to define the different manifestations of composite loyalty as separate dimensions. The concept brand loyalty became one of the most researched topics within the field of services marketing from the 1990s onwards, and the FMCG industry is also well researched to with regard to brand loyalty and brand management.

Brand equity plays an important role in brand loyalty as it refers to the marketing effects or outcomes that accrue to a product with its brand name compared to those that would accrue if the same product did not have the brand name. Brand equity is driven by consumer knowledge. Brand perception, according to Ries (2003: 11), consists of those activities by which an individual acquires and assigns meaning to stimuli. Perception begins with exposure and occurs when a stimulus comes within range of one of our primary sensory receptors. Ries (2003: 11)

maintains that people are exposed to only a small fraction of the available stimuli, and this is usually the result of "self-selection."

FMCG products refer to those retail goods that are generally replaced or fully used up over a short period of days, weeks, or months, and within one year (Smith 2010: 1). FMCG have a short shelf life, either as a result of high turnover or because the product perishability. FMCG are goods of daily use bought by retail consumers, like toothpaste, soaps and detergents, deodorants, and more.

### **Problem Statement**

The research by Moolla (2010) has shown that the model that measures brand loyalty is valid and reliable. However, the unresolved problem associated with the model to address is if it can be operationalised as managerial tool. Thus, is the model valid for a number of randomly selected FMCG products? If not, the model breaks down and becomes a measuring tool for a specific product (in which case it would have limited applications in management), or does this model hold for a number of products (in which case it could be used as managerial tool in the FMCG industry).

### **Research Propositions**

*P<sub>r</sub>:* The conceptual model to measure brand loyalty is *valid* for different FMCG products and *can be operationlised* to measure brand loyalty of different FMCG products.

*P<sub>A</sub>:* The conceptual model to measure brand loyalty is *not valid* for different FMCG products and *cannot be operationlised* to measure brand loyalty of different FMCG products.

### **Objectives**

The primary objective of this article is to evaluate the performance of the conceptual model using three randomly selected FMCG products. To address this primary objective the following secondary objectives were formulated, namely to:

- ♦ Select three FMCG products by means of scientific acceptable criteria; Validate the items that measure each of the brand loyal-

ty influences for each of three selected products;

- ♦ Test the applicability of the data for multivariate statistical analysis for each of three selected products (such as an exploratory factor analysis);
- ♦ Determine the importance of each of the brand loyalty influences for each of three selected products;
- ♦ Test the reliability of each of the brand loyalty influences in the model for each of three selected products; and
- ♦ Determine the correlation coefficients between the brand loyalty influences of the three selected products.

### **Literature Review**

Research studies by Jacoby and Chestnut (1978), Traylor (1981), Dick and Basu (1994), Park (1996), Chaudhuri and Holbrook (2002), Giddens (2001), Jensen and Hansen (2002), Schijins (2003), Musa (2005), Rundle-Thiele (2005), Punniyamoorthy and Raj (2007), Kim et al. (2008) and Maritz (2007) focus on identifying the key influences of brand loyalty. From these studies, and others, Moolla (2010) identified twelve brand loyalty influences and their relative importance to brand loyalty. These influences are: Customer Satisfaction, Switching Costs, Brand Trust, Relationship Proneness, Involvement, Perceived Value, Commitment, Repeat Purchase, Brand Affect, Brand Relevance, Brand Performance, and Culture are shown in Figure 1.

The influences identified by Moolla (2010), as displayed in Figure 1, are clarified below:

#### ***Customer Satisfaction***

Customer satisfaction is believed to mediate consumer learning from prior experience and to explain key post-purchase behaviours such as complaining, word of mouth, repurchase intention and product usage (Westbrook and Oliver 1991: 86), while Lin (2009: 145) suggests that customer satisfaction has a significant influence on repurchase intention and that a higher level of customer satisfaction directly leads to a higher level of brand loyalty. However, according to (Back and Parks, 2003: 419) satisfaction is an insufficient solo condition for loyalty. Customers can achieve high levels of satisfaction yet not inspire any real loyalty. Therefore, satisfac-



**Fig. 1. Brand loyalty influences**

tion acts merely as a proxy for loyalty to a brand in the market at any given time (Engels, 2005: 4).

#### **Switching Costs**

Klemperer (1987: 376) states that consumers face non-negligible costs such as the transactional and learning costs of switching between different brands of products or services. These costs are classified as:

- ♦ *Transaction costs* are costs that occurred to start a new relationship with a provider and sometimes also include the costs necessary to terminate an existing relationship.
- ♦ *Learning costs* represents the effort required by the customer to reach the same level of comfort or facility with a new product as they had for an old product.
- ♦ *Artificial switching costs* are costs created by deliberate actions of firms and are very common in the marketplace: frequent flyer programs, repeat-purchase discounts, and “clickthrough” rewards are all examples (Aydin et al. 2005: 27).

Although switching costs have positive effects over prices, profits, and entry deterrence (Beggs and Klemperer 1992: 652; Klemperer 1987:375; Klemperer 1995: 518), switching costs can be a significant mobility barrier when considering alternative products (Morgan and Hunt, 1994: 26).

#### **Brand Trust**

Research by Garbarino and Johnson (1999: 76) found a strong relationship between loyalty and brand trust. Their research suggested that there is a distinct need for trust in developing positive attitudes towards brands. According to Hess (1995:21), brand trust is the central construct for any long-term relationship and is an important contributor in attaching an emotional commitment which leads to long-term loyalty.

#### **Relationship Proneness**

Relationship proneness is an individual characteristic of the buyer. It is defined as “a buyer’s

relatively stable and conscious tendency to engage in relationships with sellers of a particular product category" (Odekerken-Schröder 1999: 44; Storbacka et al. 1994: 266). Similarly, Bloemer and Odekerken-Schröder (2002: 69) describes plural proneness as the stable tendency of a consumer to engage in relationships with retailers and can therefore be considered as a part of a consumer's personality. It can be assumed that consumers, who are intrinsically inclined to engage in relationships with retailers in general, will also reveal *store loyalty* to a particular retailer (Odekerken-Schröder 1999: 45). Similarly, loyalty aimed towards a specific product or a specific brand indicate that a relationship was formed between the brand or product and the customer.

### **Brand Involvement**

Gordon et al. (1998: 44) claim that product involvement involves an ongoing commitment on the part of the consumer with regard to thoughts, feelings and behavioural response to a product category. Miller and Marks (1996: 123) state that involvement is an unobservable state of motivation, arousal or interest toward a product. Park (1996: 244) confirms that his research provided additional evidence that involvement is closely related to intentions and behaviours, corroborating evidence from numerous studies. Studies by Jacoby and Chestnut (1978), Park (1996) and Traylor (1981) that examined the relationship between product involvement and loyalty indicate a definite correlation.

### **Perceived Value**

Punniyamoorthy and Raj (2007: 233) describe perceived value as the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given. Voss et al. (2005: 32) are of the opinion that perceived value is made up of several of the following components:

- ♦ *Functional Value*: The functional value of a brand along with the emotional value and social value is collectively referred by many authors as customer value or perceived value (Affif 2008: 1).
- ♦ *Emotional Value*: According to Diep and Sweeny (2008: 400), emotional value is the utility derived from the feelings or affective

states that a product generates. Emotions play a part in every purchase decision.

- ♦ *Price-worthiness Factor*: This factor denotes the utility derived from the product due to the reduction of its perceived costs (Jensen and Drozdenko 2008: 115). Higher levels of price worthiness lead to higher levels of brand loyalty (Punniyamoorthy and Raj 2007: 233).
- ♦ *Social Value*: The utility derived from the product's ability to enhance social self-concept. A higher level of social value will lead to a higher level of brand loyalty (Punniyamoorthy and Raj 2007: 233).

### **Commitment**

According to Kim et al. (2007: 112), brand commitment occurs when consumers pledge or bind themselves to purchase the brand. Customer commitment is a central construct in the development and maintenance of marketing relationships because it is a key psychological force that links the consumer to the selling organisation (Bansal et al. 2004: 238). There is overwhelming evidence to suggest that the higher the level of commitment, the higher the level of brand loyalty (Fullerton 2005: 105). Regarding commitment and relationship marketing, it is noteworthy that commitment occurs when consumers pledge loyalty while this may not be the case in relationship marketing. There may be a relationship but not a commitment.

### **Repeated Purchase Behaviour**

The consistent repeat purchase is one kind of "Loyalty-Prone" behaviour (Cunningham 1956: 119) which forms the base for brand loyalty. Repeated purchase behaviour is an axiomatic term that simply refers to the extent to which consumers re-purchase the same brand in any equal-length period of time (Ehrenberg 1988: 176). The strength of behavioural brand loyalty is, therefore, directly a function of the repetitive occurrence of purchase or consumption behaviour. Saaty (1994: 20) asserts that the consumer establishes a systematic biased response or habit simply due to the frequency of encounters.

### **Brand Affect**

Brand affect is defined as the potential in a brand to elicit a positive emotional response in

the average consumer as a result of its usage (Chaudhuri and Holbrook 2001: 145). Brand affect can also be defined as a brand's potential to elicit a positive emotional response in the average consumer as a result of its usage (Moorman et al. 1992:34). Regarding brand effect, Ladhari (2007: 1088) found that in a retail context, a positive relationship exists between positive affect and willingness to buy, and that the positive effects of store image increases loyalty.

### ***Brand Relevance***

A brand, according to Tucker (2005: 1), needs to stand for something that actually matters in a world of too many brands for human cognition. Therefore, brands relevance is a key component in ensuring brand loyalty (Kea 2008: 2).

### ***Brand Performance***

Perceived performance is the customer's evaluation of product or service performance following the consumption experience. Brand performance as stated by Musa (2005: 47) is the subjective evaluation of the core product (that is, attributes of the focal product), comprising both intrinsic (effectiveness) and extrinsic (packaging) characteristics. Brand performance, as indicated by various studies, is a FMCG loyalty factor that must be considered when measuring brand loyalty (Jacoby and Chestnut 1978; Dick and Basu 1994; Chaudhuri and Holbrook 2002; Musa 2005).

### ***Culture***

Kotler and Keller (2006: 177) regard reference groups as the most important consumer buying organisation in society. Sahay and Sharma (2010: 16) confirm that young individuals remain loyal to family brands until other factors take over. Lamb et al. (2008: 267) maintains that family and culture play an integral role in purchasing behaviour and brand loyalty. Bravo et al. (2007: 58) add that the family introduces a psychological dimension to brand loyalty in that it indirectly promises security and trust through generations of use.

## **RESEARCH METHODOLOGY**

### **Sampling Procedure**

This phase of the study comprised a survey held amongst FMCG consumers. A stratified

sample of 550 post graduate management students in full time employment was selected for the study. The sample size exceeded the suggested 504 as per recommendation by Hair et al. (1998: 124) (using the ration ratio of 14 observations to each of the 36 variables which exceeds the required 5 observations per variable comfortably). The sample was drawn from four South African business schools namely: Management College of Southern Africa, Regent Business School, and the business schools at the University of KwaZulu-Natal and the North-West University. This also meant that the survey was conducted in major South African cities that primarily make up the South African business segment. The cities in which the survey was conducted were Durban, Johannesburg, Cape Town, Port Elizabeth, East London, Bloemfontein, Polokwane, Vanderbijlpark and Potchefstroom. The sample consisted of middle and top managers with a minimum of three years' work experience, who is currently studying towards a Post Graduate Diploma in Management or a Masters of Business Administration Degree. The rationale for selecting a sample with such characteristics is that the sample:

- ♦ sets a minimum educational level for entry into the research;
- ♦ represents a segment that is more informed about contemporary business practices;
- ♦ represents a community that is more likely to analyse their own purchasing behaviour;
- ♦ represents middle to higher income earners that have a wider choice of brands to consider in their purchasing decision;
- ♦ represents a segment of middle to higher income earners whose brand choices are shielded the economic downturn;
- ♦ represents a segment that falls between LSM 6 to LSM 10 category which according to Martins (2007: 168) is responsible for 64.1% of the food expenditure in South Africa; and
- ♦ would be able to understand the terminology and nomenclature specified in the questionnaire.

### **Data Collection**

The questionnaire developed by Moolla (2010) was used to capture the data. The responses on the questions that measure the 12 brand loyalty influences were recorded on a 7-point Likert scale. The data were collected from the respondents when they attended lectures and/

or study schools. The respondents in the sample were encouraged to complete the questionnaires, and 541 of the 550 participated (signifying a favourable response rate of 98%).

### Data Analysis

The *Statistical Package for the Social Sciences* Incorporated (SPSS Inc) version 17 was used to statistically analyse the data collected in the survey. The following statistical applications and choice criteria are applied in the validation of the model:

- ♦ Exploratory factor analysis. Only factor loadings of 0.4 and higher (Field 2007:668) are considered to validate the items that measure each of the brand loyalty influences (Objective 1).
- ♦ The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is utilized to ensure that the samples used are adequate. The KMO provides an index (between 0 and 1) of the proportion of variance among the variables that might be common variance (Darlington 2005: 58). A value close to 1 indicates that patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. Values between 0.5 and 0.7 are mediocre and values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb (Field 2007:735) (Objective 2).
- ♦ Bartlett's test of sphericity is used to examine the hypothesis that the variables are uncorrelated in the population. In other words, the population correlation matrix is an identity matrix; each variable correlates perfectly with itself ( $r = 1$ ) but has no correlation with the other variables ( $r = 0$ ). A value below 0.005 signifies that the data are suitable for multivariate statistical analysis such as exploratory factor analysis (Field 2007: 724) (Objective 3).
- ♦ The variance explained by the factor analysis serves as indicator to determine the relative importance of each of the brand loyalty influences (Objective 4).
- ♦ Cronbach Alpha is used to test the reliability of each of the brand loyalty influences in the model. The reliability is regarded to be satisfactory when the Alpha coefficient is equal to or exceeds 0.70 (Field 2007: 668). However, a lower Cronbach alpha coeffi-

cient was set at 0.58 by Cortina (1993) (in Field 2007: 669) when interval scales are used (such as the Likert scale in this model) to measure human behaviour.

- ♦ Pearson correlation coefficients are calculated to determine the relationships between the brand loyalty influences of the three products. Although correlations of 0.30 are regarded to mention worthy (Naidoo 2011:23; Zikmund 2008:124), this article sets a high correlation of 0.75 or higher as limit. This is done because high correlation coefficients document a higher level of association between the influences, and this article aims towards similar brand loyalty behaviour between the different products (Du Plessis 2010) (Objective 6).

## RESULTS

### Choice of Products

The three FMCG products selected are coffee, bread and toothpaste (Objective 1). As suggested by Baskerville (2010: 2), the three products were chosen on the basis that they experience the highest consumption in their FMCG product category of personal care, food and beverages respectively. Although these products were selected according to Baskerville's criteria, care was taken to ensure that the products do differ with regard to how it is used and the frequency of purchase.

### Similarities Between Influences

Each of the 12 influences was validated by means of exploratory factor analyses to determine if the three different consumer products (toothpaste, coffee and bread) do yield a similar factor or factor structure. This comparison was conducted to determine whether all three products behave similar with regard to brand loyalty influences. Comparisons per response are represented in Tables 1 to 12. A five-point test was conducted to determine the similarities between influences. This test consists of examining for similarities in the statistics loaded on the component matrix (KMO, Bartlett and if the items that loaded onto each influence by each product are the same), the variance explained by each factor and the correlation coefficients between these factors.

**Table 1: Factor analysis and correlational analysis for customer satisfaction**

Question	Customer Satisfaction (CUS)		
	Component matrix	Coffee	Bread
CUS01	.748	.753	.649
CUS02	.769	.818	.821
CUS03	.598	.751	.699
CUS04	.406	.454	.417
CUS05	.761	.754	.688
Variance explained	45%	51%	45%
Pearson Correlation Coefficients	0.916	0.966	
Adequacy: Kaiser-Meyer-Olkin	.692	.769	.627
Sphericity: Bartlett's Test	.000	.000	.000
Reliability: Cronbach Alpha	.681	.751	.675

Each table provides a component matrix representing values for each product in each question and explains the percentage of variance for each product factor per product category. Each product is then compared with the other by means of Pearson correlation coefficient to determine the similarity between them.

### **Customer Satisfaction**

Table 1 shows the comparative analysis pertaining to Customer Satisfaction. The Kaiser-Meyer-Olkin (KMO) measure yielded factors from .62 to .77 which falls in the mediocre to good range signifying that the sample is adequate to perform factor analysis while the Bartlett test of sphericity indicates that factor analysis can be performed because the inter-relationships between the variables are below the required 0.005. The Cronbach alpha coefficient

for all three data sets exceeds .670 which is well above the 0.58 reliability margin set by Cortina (1993) and Kline (in Field 2007:668-669) when interval data is used. One factor was extracted in each consumer product. Values on the component matrix per question related to each product yielded similar results. The analyses of the Pearson correlation coefficients show that a very high correlation exists (>0.91) between all three of the influences identified. All three factors declared almost the same percentage of variance and this suggests that there is no difference between toothpaste, coffee and bread as consumer products with regard to customer satisfaction in brand loyalty.

### **Switching Costs**

Table 2 shows that Switching Cost exists of two sub-factors that could be extracted in each

**Table 2: Factor analysis and correlational analysis for switching costs**

Question	Switching Costs (SCR)					
	Component matrix			Coffee	Bread	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
SCR01						
SCR02						
SCR03		.384		.443		.289
SCR04	-.156		-.198		-.122	
SCR05	-.377		.364		.499	
Variance explained	44%	25%	43%	24%	45%	23%
Pearson Correlation Coefficients	0.999 and 0.999		0.999 and 0.984		0.993 and 0.987	
Adequacy: Kaiser-Meyer-Olkin	.662		.656		.671	
Sphericity: Bartlett's Test	.000		.000		.000	
Reliability: Cronbach Alpha	.675		.651		.630	

of the consumer products. This signifies that switching costs consists of two sub factors rather than one factor. It is a good fit since the same statements (SCR01, SCR02 and SCR03) load onto factor 1 in the case of toothpaste, coffee and bread while the remaining 2 statements loaded to factor 2 in each product. The Pearson correlation coefficients show that a very high correlation exist ( $>0.990$ ) between all three the influences identified. The Bartlett test of sphericity indicates that each set has no correlation with the other variables ( $r = 0$ ). The Cronbach alpha coefficient for all three data sets exceeds .620. It is concluded that the model measures toothpaste, coffee and bread similarly.

### **Brand Trust**

The analysis of Brand Trust is shown in Table 3. The KMO measure yielded factors above .70 falling in the good range signifying that factor analysis should yield distinct and reliable factors. The Bartlett test of sphericity indicates that each set no correlation with the other vari-

ables ( $r = 0$ ). The Cronbach alpha coefficients for all three data sets are higher than .740 which exceeds the higher coefficient set at 0.70. One factor was extracted in each consumer product. Values on the component matrix per question related to each product yielded similar results. The Pearson correlation coefficients show that a very high correlation exists ( $>0.990$ ) between all three the influences identified. All three factors declared a similar % variance and this suggests that there is no difference between toothpaste, coffee and bread as consumer products with regard to brand trust in brand loyalty. It is concluded that the model measures toothpaste, coffee and bread similarly.

### **Relationship Proneness**

Table 4 shows that one factor could extract for each consumer product. The KMO measure yielded factors above .700 falling in the good range signifying that factor analysis should yield distinct and reliable factors. The Bartlett test of sphericity indicates that each set has no corre-

**Table 3: Factor analysis and correlational analysis for brand trust**

<i>Brand Trust (BTS)</i>			
<i>Question</i>	<i>Component matrix</i>		
	<i>Toothpaste</i>	<i>Coffee</i>	<i>Bread</i>
BTS01	.845	.862	.850
BTS02	.855	.891	.877
BTS03	.752	.808	.783
BTS04	.582	.590	.625
Variance explained	59%	63%	62%
Pearson Correlation Coefficients	0.990	0.998	0.995
Adequacy: Kaiser-Meyer-Olkin	.709	.734	.706
Sphericity: Bartlett's Test	.000	.000	.000
Reliability: Cronbach Alpha	.742	.785	.783

**Table 4: Factor analysis and correlational analysis for relationship proneness**

<i>Relationship Proneness (RPR)</i>			
<i>Question</i>	<i>Component matrix</i>		
	<i>Toothpaste</i>	<i>Coffee</i>	<i>Bread</i>
RPR01	.728	.739	.732
RPR02	.846	.837	.845
RPR03	.741	.764	.773
RPR04	.795	.768	.800
Variance explained	61%	61%	62%
Pearson Correlation Coefficients	0.925	0.942	0.966
Adequacy: Kaiser-Meyer-Olkin	.769	.772	.776
Sphericity: Bartlett's Test	.000	.000	.000
Reliability: Cronbach Alpha	.782	.780	.796

lation with the other variables ( $r = 0$ ). The Cronbach alpha coefficient for all three data sets equals and exceeds .780 (exceeding the higher coefficient of 0.70 with ease). Values on the component matrix per question related to each product yielded similar results. The Pearson correlation coefficients show that a very high correlation exists ( $>0.920$ ) between all three the influences identified. The coefficients are almost identical for toothpaste, coffee and bread as consumer products with regards to relationship proneness. It is concluded that the model measures toothpaste, coffee and bread similarly.

### **Involvement**

Table 5 shows the results of the analysis pertaining to Involvement. One factor was extracted in each consumer product. The KMO measure yielded factors above .66 falling in the good range signifying that the sample would enable a procedure such as factor analysis to yield distinct and reliable factors. The Bartlett

test of sphericity indicates that each set has no correlation with the other variables ( $r = 0$ ). The Cronbach alpha coefficient for all three data sets equals and exceeds .690 (exceeding the lower reliability limit set at 0.58). Values on the component matrix per question related to each product yielded similar results. The Pearson correlation coefficients show that a very high correlation exists ( $>0.990$ ) between all three the influences identified. The coefficients for toothpaste, coffee and bread as consumer products are identical with regard to involvement. It is concluded that the model measures toothpaste, coffee and bread similarly.

### **Perceived Value**

From Table 6 it is clear that two factors could be extracted for each of the consumer products. The KMO measure yielded factors above .510 falling in the mediocre range signifying that factor analysis should yield distinct and reliable

**Table 5: Factor analysis and correlational analysis for involvement**

Question	Involvement (INV)		
	Component matrix		
	Toothpaste	Coffee	Bread
INV01	.830	.818	.822
INV02	.851	.840	.852
INV03	.703	.695	.698
INV04	.498	.540	.533
Variance explained	54%	54%	54%
Pearson Correlation Coefficients	0.998	0.990	0.998
Adequacy: Kaiser-Meyer-Olkin	.670	.675	.667
Sphericity: Bartlett's Test	.000	.000	.000
Reliability: Cronbach Alpha	.696	.700	.706

**Table 6: Factor analysis and correlational analysis for perceived value**

Question	Perceived Value (PVL)					
	Component matrix					
	Toothpaste		Coffee		Bread	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
PVL01		.772		.759		.831
PVL02	.873		.877		.875	
PVL03		.717		.741		.667
PVL04	.882		.869	.106	.886	
Variance explained	40%	27%	41%	26%	43%	26%
Pearson Correlation Coefficients		0.999 and 0.999			0.993 and 0.990	
			0.987 and 0.985			
Adequacy: Kaiser-Meyer-Olkin	.510		.524		.546	
Sphericity: Bartlett's Test	.000		.000		.000	
Reliability: Cronbach Alpha	.451	.	.492		.543	

factors. The Bartlett's test of sphericity indicates that each set has no correlation with the other variables ( $r = 0$ ). The Cronbach alpha coefficient for all three data sets is below the recommended 0.7, and even falls below the lower limit of 0.58. This means that similar results are less likely to occur in repetitive studies. However, future research should attempt to improve the low alpha coefficients to improve the likelihood of consistency in the FMCG model. The Pearson correlation coefficients show that a very high correlation exists ( $>0.980$ ) between all three the influences identified. There is a good fit to the data since PLV01 and PVL03 load onto factor 2 and PVL02 and PVL04 loads onto factor 1 in toothpaste, coffee and bread. It is concluded that the model measures toothpaste, coffee and bread similarly.

### **Commitment**

One factor, as shown in Table 7, was extracted in for each consumer product. The KMO

measure yielded factors above .80 falling in the great range signifying that factor analysis should yield distinct and reliable factors. The Bartlett test of sphericity indicates that each set has no correlation with the other variables ( $r = 0$ ). The Cronbach alpha coefficient for all three data sets equals and exceeds .810. Values on the component matrix per question related to each product yielded similar results. The Pearson correlation coefficients show that a very high correlation exists ( $>0.950$ ) between all three the influences identified. The variance explained is 59%, 58% and 60% for toothpaste, coffee and bread and this signifies strong similarities between the consumer products with regard to commitment. It is concluded that the model measures toothpaste, coffee and bread similarly.

### **Repeat Purchase**

Table 8 shows that two factors could be extracted for each consumer product. The KMO

**Table 7: Factor analysis and correlational analysis for commitment**

<i>Question</i>	<i>Commitment (COM)</i>		
	<i>Toothpaste</i>	<i>Coffee</i>	<i>Bread</i>
COM01	.813	.815	.828
COM02	.672	.643	.683
COM03	.807	.801	.804
COM04	.786	.794	.808
COM05	.743	.747	.728
Variance explained	59%	58%	60%
Pearson Correlation Coefficients	0.990	0.958	0.978
Adequacy: Kaiser-Meyer-Olkin	.808	.808	.822
Sphericity: Bartlett's Test	.000	.000	.000
Reliability: Cronbach Alpha	.819	.815	.826

**Table 8: Factor analysis and correlational analysis for repeat purchase**

<i>Question</i>	<i>Repeat Purchase (RPS)</i>		
	<i>Toothpaste</i>	<i>Coffee</i>	<i>Bread</i>
RPS01	.689	.725	.752
RPS02	.817	.827	.831
RPS03	.791	.805	.787
RPS04	.737	.753	.735
RPS05	.545	.538	.599
Variance explained	36%	24% and 0.999	24% and 0.999
Pearson Correlation Coefficients		0.999 and 0.999	24%
Adequacy: Kaiser-Meyer-Olkin	.606	.617	.625
Sphericity: Bartlett's Test	.000	.000	.000
Reliability: Cronbach Alpha	.532	.555	.562

**Table 9: Factor analysis and correlational analysis for brand affect**

Question	Brand Affect (BAF)		
	Component matrix	Coffee	Bread
BAF01	.834	.826	.828
BAF02	.883	.878	.882
BAF03	.835	.827	.841
Variance explained	72%	71%	72%
Pearson Correlation Coefficients	0.999	0.977	0.979
Adequacy: Kaiser-Meyer-Olkin	.700	.695	.699
Sphericity: Bartlett's Test	.000	.000	.000
Reliability: Cronbach Alpha	.808	.796	.808

**Table 10: Factor analysis and correlational analysis for brand relevance**

Question	Brand Relevance (BRV)		
	Component matrix	Coffee	Bread
BRV01	.790	.767	.777
BRV02	.829	.821	.840
BRV03	.843	.845	.837
BRV04	.663	.684	.717
Variance explained	62%	61%	63%
Pearson Correlation Coefficients	0.981	0.991	0.967
Adequacy: Kaiser-Meyer-Olkin	.775	.773	.790
Sphericity: Bartlett's Test	.000	.000	.000
Reliability: Cronbach Alpha	.788	.785	.802

measure yielded factors above .600 falling in the mediocre range signifying that factor analysis should yield distinct and reliable factors. The Bartlett's test of sphericity indicates that each set correlates perfectly with itself ( $r = 1$ ) but has no correlation with the other variables ( $r = 0$ ). The Cronbach alpha coefficients for all three data sets are below the lower reliability limit of 0.58. Although lower reliability coefficients are recorded, it is important to note that all three products behave similarly. This means that similar results are less likely to occur in repetitive studies. However, future research should attempt to improve the low alpha coefficients to improve the likelihood of consistency in the FMCG model.

Positive to the influence is the fact that there is a good fit to the data because RPS01 and RPS03 loads onto factor 1 and RPS02 and RPS04 loads onto factor 1 in toothpaste, coffee and bread. RPS05 strongly dually loads onto both factors. In the case of toothpaste, it loads onto factor 2 while with coffee and bread it loads onto factor 1. The Pearson correlation coefficients show that a very high correlation exists (>0.990)

between all three the influences identified. It is concluded that the model measures toothpaste, coffee and bread similarly.

### **Brand Affect**

As shown in Table 9, one factor was extracted in each consumer product. The KMO measure yielded factors above 0.790 falling in the good range signifying that factor analysis should yield distinct and reliable factors. The Bartlett test of sphericity indicates that each set has no correlation with the other variables ( $r = 0$ ). The Cronbach alpha coefficient for all three data sets equals and exceeds 0.790 and is thus sufficient for subsequent analytical scrutiny. Values on the component matrix per question related to each product yielded similar results. The Pearson correlation coefficients show that a very high correlation exists (>0.970) between all three the influences identified. The variance explained for all three products are almost identical. It is concluded that the model measures toothpaste, coffee and bread similarly.

**Table 11: Factor analysis and correlational analysis for brand performance**

Question	Brand Performance (BPF)		
	Component matrix	Coffee	Bread
BPF01	.728	.740	.740
BPF02	.703	.716	.734
BPF03	.798	.791	.792
Variance explained	55%	56%	57%
Pearson Correlation Coefficients		0.998 0.988	0.975
Adequacy: Kaiser-Meyer-Olkin	.618	.631	.639
Sphericity: Bartlett's Test	.000	.000	.000
Reliability: Cronbach Alpha	.595	.608	.623

**Table 12: Factor analysis and correlational analysis for culture**

Question	Culture (CUL)		
	Component matrix	Coffee	Bread
CUL01	.746	.748	.766
CUL02	.814	.805	.807
CUL03	.710	.709	.724
CUL04	.722	.712	.709
Variance explained	56%	55%	57%
Pearson Correlation Coefficients		0.993 0.982	0.967
Adequacy: Kaiser-Meyer-Olkin	.696	.699	.703
Sphericity: Bartlett's Test	.000	.000	.000
Reliability: Cronbach Alpha	.733	.727	.740

### **Brand Relevance**

As shown in Table 10, one factor was extracted in each consumer product. The KMO measure yielded factors above .770 falling in the good range signifying that factor analysis should yield distinct and reliable factors. The Bartlett test of sphericity indicates that each set has no correlation with the other variables ( $r = 0$ ). The Cronbach alpha coefficient for all three data sets equals and exceeds .780 and is thus good for subsequent analytical scrutiny. Values on the component matrix per question related to each product yielded similar results. The Pearson correlation coefficients show that a very high correlation exists ( $>0.960$ ) between all three the influences identified. The variance explained for all three products amount to 62%, 61% and 63% respectively. It is concluded that the model measures toothpaste, coffee and bread similarly.

### **Brand Performance**

Table 11 shows the analyses pertaining to Brand Preference. One factor was extracted in

each consumer product. The KMO measure yielded factors above .610 falling in the mediocre range signifying that factor analysis should yield distinct and reliable factors. The Bartlett test of sphericity indicates that each set correlates has no correlation with the other variables ( $r = 0$ ). Values on the component matrix per question related to each product yielded similar results. The Pearson correlation coefficients show that a very high correlation exists ( $>0.970$ ) between all three the influences identified. The Cronbach alpha coefficient for all three data sets exceeds .595 which is above the lower reliability limit set for this research (0.58). The variance explained for all three products amount to 55%, 56% and 57% respectively. It is concluded that the model measures toothpaste, coffee and bread similarly.

### **Culture**

The analysis of Culture is shown in Table 12. One factor was extracted in each consumer product. The KMO measure yielded factors above

**Table 13: Summary of correlations and variance explained between fmcg products**

Influence	Correlation			Variance explained		
	Tooth-paste and coffee	Coffee and bread	Tooth-paste and bread	Tooth-paste	Coffee	Bread
Customer satisfaction	0.92	0.97	0.93	45%	51%	45%
Switching cost	0.99	0.99	0.99	44%	25%	45% 23%
Brand trust	0.99	0.99	0.99	59%	63%	62%
Relationship proneness	0.93	0.97	0.94	61%	61%	62%
Involvement	0.99	0.99	0.99	54%	54%	54%
Perceived value	0.99	0.99	0.99	40%	27%	41% 26% 43% 26%
Commitment	0.99	0.98	0.96	59%	58%	60%
Repeat purchase	0.99	0.99	0.99	36%	24%	37% 24% 37% 24%
Brand affect	0.99	0.98	0.98	72%	71%	72%
Brand relevance	0.98	0.99	0.97	62%	61%	63%
Brand performance	0.99	0.98	0.99	55%	56%	57%
Culture	0.99	0.97	0.98	56%	55%	57%
Mean coefficient	0.98	0.98	0.98			

.690 falling in the mediocre range signifying that factor analysis should yield distinct and reliable factors. The Bartlett test of sphericity indicates that each set correlates has no correlation with the other variables ( $r = 0$ ). The Cronbach alpha coefficient for all three data sets equals and exceeds .725. Values on the component matrix per question related to each product yielded similar results. The Pearson correlation coefficients show that a very high correlation exists ( $>0.960$ ) between all three the influences identified. The variance explained for all three products amount to 56%, 55% and 57% respectively. It is concluded that the model measures toothpaste, coffee and bread similarly.

#### Summary of Similarities Between Toothpaste, Coffee and Bread

The five-point test used to determine the similarity between the consumer products with regard to each influence revealed strong similarities in each category. In 9 out of the 12 cases the influences that loaded onto the component matrix, extracted one factor. In the three cases that two factors were extracted there was still a good fit between the factor loadings of factor one and factor two. The values loaded for all products in all categories were primarily consistent and similar.

There was also a strong correlation between all three products in all categories items as confirmed in Table 13. The correlation coefficients also yielded similar values and is also shown in

Table 13 All three results of the three-point test suggested strong resemblance between consumer products related to influences selected. This means that the model to measure brand loyalty has passed the test for the three FMCG products, and that the model measures toothpaste, coffee and bread similarly.

#### ACCEPTANCE OF RESEARCH PROPOSITIONS

From the statistical analysis it is evident that the conceptual model is suitable to measure brand loyalty for FMCG's because it proved to be valid for all three products, coffee, toothpaste and bread. As such, the research proposition  $P_r$ : *The conceptual model to measure brand loyalty is valid for different FMCG products and can be operationlised to measure brand loyalty of different FMCG products* is accepted and the alternative research proposition  $P_A$ : *The conceptual model to measure brand loyalty is not valid for different FMCG products and cannot be operationlised to measure brand loyalty of different FMCG products*, is rejected

#### CONCLUSION

From the results of the research, it is concluded that the conceptual model to measure brand loyalty in the FMCG products:

- ♦ Remained valid when tested on three different FMCG products;
- ♦ Measured three selected FMCG products similarly on the five-point test; and

- ♦ Could be operationalised and introduced to the FMCG industry (with care).

Finally, although the model has performed satisfactorily on the five-point similarity test, it should be subjected to further evaluation to ensure that the model does measure loyalty in a wide range of FMCG products similarly. In addition to the limitation to generalise the model to all FMCG products, the model is also limited to the specific population used in this study, namely the next generation manager. The model also requires further research into other application settings, such as products that fall outside the FMCG classification as well as in the services industry. Finally, although the model is currently limited to a specific application setting, the value of this article is two-fold:

- ♦ Firstly, a validated model was developed that can now be applied to other application settings; and
- ♦ Secondly, the validation methodology was developed and is provided in this article as to empirically validate the model when it is applied to other application settings.

## REFERENCES

- Affif AZ 2008. Deciding on Customer Value. The Jakarta Post. From: <<http://www.thejakartapost.com/news/2008/09/24>> (Retrieved on November 11, 2008).
- Aydin S, Ozer G, Arasil O 2005. Customer loyalty and the effect of switching cost as a moderator variable: A case in the Turkish mobile phone market. *Marketing Intelligence and Planning*, 23(1): 20-29.
- Back KJ, Parks SC 2003. A brand loyalty model involving cognitive, affective, and cognitive brand loyalty and customer satisfaction. *Journal of Hospitality and Tourism Research*, 27(4): 419-435.
- Bansal HS, Irving G, Taylor SF 2004. A three-component model of customer commitment to service providers. *Journal of the Academy of Marketing Science*, 32(3): 234-250.
- Beggs AW, Klemperer P 1992. Multi-period competition with switching costs. *Econometrica*, 60(3): 651-666.
- Bloemer JM, Odekerken-Schroder G 2002. Store satisfaction and store loyalty explained by customer- and store related factors. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behaviour*, 15(1): 68-80.
- Bravo R, Fraj E, Martínez Z 2007. Intergenerational influences on the dimensions of young customer-based brand equity. *Young Consumers: Insight and Ideas for Responsible Marketers*, 8(1): 58-64.
- Chaudhuri A, Hoibrook MB 2002. The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, 65(2): 141-149.
- Cunningham RM 1956. Brand loyalty - what, where, how much? *Harvard Business Review*, 34(1): 116-128.
- Darlington R 2004. Factor Analysis. From <<http://www.psych.cornell.edu/darlington/factor.htm>> (Retrieved on May 4, 2009).
- Dick AS, Basu K 1994. Customer loyalty: Toward an integrated model. *Journal of the Academy of Marketing Science*, 22(2): 99-113.
- Diep VCS, Sweeney JC 2008. Shopping trip value: Do stores and products matter? *Journal of Retailing and Consumer Services*, 15(5): 399-409.
- Du Plessis JL 2010. *Personal Interview*. Statistical Consulting Services. Potchefstroom: North-West University.
- Ehrenberg ASC 1988. Repeat-buying: Facts, theory and applications. *Journal of Empirical Generalisations*, 5: 392-770.
- Engels J 2005. How Can You Measure Loyalty? From <<http://mktg.uni-svishtov.bg/ivm/resources/How%20Can%20You%20Measure%20Loyalty.pdf>> (Retrieved on May 11, 2009).
- Field A 2007. *Discovering Statistics Using SPSS*. 2<sup>nd</sup> Edition. London: Sage.
- Foxall G 2002. *Consumers in Context: The BPM Research Program*. London: Routledge.
- Fullerton G 2005. The impact of brand commitment on loyalty to retail service brands. *Canadian Journal of Administrative Sciences*, 28(2): 97-110.
- Garbarino E, Johnson MS 1999. The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*, 63(2): 70-87.
- Giddens N 2001. Brand Loyalty. Ag Decision Maker, C5-54. From <[www.fisherhouse.com/courses/2009\\_09\\_01\\_archive.html](http://www.fisherhouse.com/courses/2009_09_01_archive.html)> (Retrieved on May 20, 2010).
- Gordon ME, McKeage K, Fox MA 1998. Relationship marketing effectiveness: The role of involvement. *Psychology and Marketing*, 15(5): 39-45.
- Hair JF, Anderson RE, Tatham RL, Black WC 1998. *Multivariate Data Analysis*. Upper Saddle River, NJ: Prentice-Hall.
- Hess J 1995. Construction and assessment of a scale to measure consumer trust. *AMA Educators' Conference, Enhancing Knowledge Development in Marketing*, 6(1): 20-25.
- Jacoby J 1971. A model of multi-brand loyalty. *Journal of Advertising Research*, 11(3): 25-31.
- Jacoby J, Chestnut R 1978. *Brand Loyalty: Measurement and Management*. New York, NY: John Wiley.
- Jensen JM, Hansen T 2006. An empirical examination of brand loyalty. *Journal of Product and Brand Management*, 15(7): 442-449.
- Jensen M, Drozdenko R 2008. The changing price of brand loyalty under perceived time pressure. *Journal of Product and Brand Management*, 17(2): 115-120.
- Kea B 2008. *The Utilisation of Typography and its Role in Brand Identity*. Honours Degree Dissertation, Unpublished. Waikato: University of Waikato.
- Kim J, Morris JD, Swait J 2008. Antecedents of true brand loyalty. *Journal of Advertising*, 37(2): 99-117.
- Klemperer PD 1987. Markets with consumer switching costs. *Quarterly Journal of Economics*, 102: 375-394.

- Klemperer PD 1995. Competition when consumers have switching costs. *Review of Economic Studies*, 62(1): 515-539.
- Kotler P, Keller KL 2006. *Marketing Management*, 12<sup>th</sup> Edition. London: Prentice Hall.
- Ladhari R 2007. The effect of consumption emotions on satisfaction and word-of-mouth communications. *Psychology and Marketing*, 24(12): 1085-1108.
- Lamb CW, Hair JF, McDaniel C, Boshoff C, Terblanche NS 2008. *Marketing*. Cape Town: Oxford.
- Lin W 2009. A study of relations among service quality differences, post-purchase behaviour intentions with personality traits, and service recovery strategy as intervening variables. *International Journal of Commerce and Management*, 19(2): 137-157.
- Maritz L 2007. Multidimensional Loyalty Model. From <<http://www.maritz.com/About-Maritz/Our-Businesses/Research/Multidimensional-Loyalty-Model.aspx>> (Retrieved on April 18, 2008).
- Martins J 2007. The South African consumer market. *Global Journal of Business Research*, 1(1): 168-183.
- Miller DW, Marks LJ 1996. The moderating effects of enduring involvement on imagery-evoking advertisements. *American Marketing Association*, 121-128.
- Moolla AI 2010. *A Conceptual Framework to Measure Brand Loyalty*. Ph. D. Thesis, Unpublished. Potchefstroom: North-West University.
- Moorman C, Zaltman T, Deshpande R 1992. Relationships between providers and users of market research: The dynamics of trust within and between organizations. *Journal of Marketing Research*, 29(3): 314-328.
- Morgan RM, Hunt SD 1994. The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3): 20-38.
- Musa R 2005. A Proposed Model of Satisfaction-Attitudinal Loyalty-Behavioral Loyalty Chain: Exploring the Moderating Effect of Trust. ANZMAC 2005 Conference. From <<http://smib.vuw.ac.nz:8081/WWW/ANZMAC2005/cd-site/pdfs/6-Relationship-Mktg/6-Musa.pdf>> (Retrieved on June 2, 2009).
- Naidoo K 2011. *Stress Management and its Impact on Work Performance of Educators in Public Schools in KwaZulu-Natal*. Ph. D. Thesis, Unpublished. Potchefstroom: North-West University.
- Odekerken-Schröder G 1999. *The Role of the Buyer in Affecting Buyer-seller Relationships: Empirical Studies in a Retail Context*. Ph.D Thesis, Unpublished. Maastricht: Maastricht University.
- Park SH 1996. Relationships between involvement and attitudinal loyalty constructs in adult fitness programs. *Journal of Leisure Research*, 28(4): 233-250.
- Punniyamoorthy M, Raj PM 2007. An empirical model for brand loyalty measurement. *Journal of Targeting, Measurement and Analysis for Marketing*, 15(4): 222-233.
- Ries G 2003. Branding boo-boo. From <[http://www.fusionbrand.blogs.com/fusionbrand/2004/08/al\\_ries\\_branding.html](http://www.fusionbrand.blogs.com/fusionbrand/2004/08/al_ries_branding.html)> (Retrieved on 25 May 25, 2009).
- Rundle-Thiele SR 2005. Exploring loyal qualities: Assessing survey based loyalty measures. *Journal of Services Marketing*, 19(7): 494-496.
- Saaty TL 1994. How to make a decision: The analytic hierarchy process. *Interfaces*, 24(6): 19-43.
- Sahay A, Sharma J 2010. Brand relationships and switching behaviour for highly used products in young consumers. *Vikalpa*, 35(1): 1-30.
- Schijins JMC 2003. Loyalty and satisfaction in physical and remote service encounters. *Bedrijfskunde*, 74(1): 57-65.
- Sharp B, Wright M, Goodhardt G 2003. Purchase loyalty is polarised into either repertoire or subscription patterns. *Australasian Marketing Journal*, 10(3): 7-20.
- Smith JE 2010. What is FMCG All About? From <<http://enzynearticles.com>> (Retrieved on February 5, 2011).
- Storbacka K, Strandvik T, Grönroos C 1994. Managing customer relationships for profit: The dynamics of relationship quality. *International Journal of Service Industry Management*, 5(5): 21-38.
- Traylor MB 1981. Product-involvement and brand commitment. *Journal of Advertising Research*, 21(1): 51-56.
- Tucker N 2005. Brand Relevance. KLM Inc Management Consultation. From <<http://www.klminc.com/branding/brand-relevance.html>> (Retrieved on June 10, 2009).
- Voss GB, Seiders K, Grewal D, Godfrey AL 2005. Do satisfied customers buy more? Examining moderating influences in a retailing context. *Journal of Marketing*, 69(1): 26-43.
- Westbrook RA, Oliver RL 1991. The dimensionality of consumption emotion patterns and customer satisfaction. *Journal of Consumer Research*, 18(1): 84-91.
- Zikmund WG 2000. *Exploring Market Research*. 7<sup>th</sup> Edition. Orlando, FL: Dryden.