

Validating a Model to Measure the Brand Loyalty of Fast Moving Consumer Goods

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ABSTRACT The objective of this paper is to validate a conceptual model to measure brand loyalty. The empirical process of validation is based on literature research. The model was tested amongst a sample of 550 managers and 541 completed the questionnaires (response rate of 98%). The validation process aimed to validate the items that measure each of the brand loyalty influences; assess the sampling adequacy; test the applicability of the data for multivariate statistical analysis; determine the importance of each of the brand loyalty influences; and test the reliability of each of the brand loyalty influences in the model. All these objectives were met. This culminated in the final result, namely that the model to measure brand loyalty was proven statistically to be a valid and reliable model that can be used to measure brand loyalty. The research is of value to managers, academia and researchers.

INTRODUCTION

Over the years, the marketing environment has continuously evolved. These significant changes have resulted in a renewed effort by marketing academicians and practitioners to understand and serve the needs and wants of consumers. Renewed efforts have resulted in the development of several orientations to marketing, such as the production, product, selling, marketing and societal marketing orientations (Kotler 2006: 17). However, to succeed in today's challenging environment, successful marketing requires – now more than ever – a balance between creativity and knowledge (Lamb et al. 2008: 211). Branding has emerged as a more recent orientation that provides marketers with a balance of creativity and knowledge. Branding has surfaced as a primary tool used to distinguish a company's products from the competition's products, and, according to Lamb et al. (2008: 214), has three main purposes: product identification, repeat sales (loyalty) and enhancing new products. Firms in the last decade have recognised the importance of branding on these three levels and have discovered the benefits of retaining customers rather than seeking new ones. Firms have recognised the importance of brand loyalty while

researchers focussed their studies on models to conceptualise brand loyalty. One way of increasing sales and strengthening the customer base is to fully conceptualise and manage brand loyalty, and a secure point of departure is to measure the brand loyalty accurately (Moolla and Bisschoff 2010), and to ensure that such a measurement is an accurate one (Salim 2011).

This article focuses specifically on the measurement of brand loyalty in the Fast Moving Consumer Goods (FMCG) industry. FMCGs are defined as those retail goods that are generally replaced or fully consumed over a short period of days, weeks, or months, and within one year (Smith 2010: 1). FMCGs have a short shelf life, either as a result of high consumer demand or because the product deteriorates rapidly. FMCGs are goods of daily use bought by retail consumers, and consist typically of products like toothpaste, coffee, soaps and detergents, deodorants and sugar.

Problem Statement

The emergence of brand loyalty has led to a growing interest in the way in which branding is managed. This has led to several studies investigating the influences of brand loyalty in various segments (Chaudhuri and Hoibrook 2001;

Giddens 2001; Uncles et al. 2003; Schijns 2003; Musa 2005; Punniyamoorthy and Raj 2007; Maritz 2007). There is, however, limited research in identifying and ranking brand loyalty influences in the FMCG sector. In this regard, Knox and Walker (2001: 113) state that brand loyalty can only be managed once the influences have been comprehensively researched and identified. Herewith lies the problem investigated in this article. Effective brand loyalty management requires a scientific base as point of departure; a base only to be ascertained by scientific measurement of brand loyalty. This study, therefore, aims to validate the conceptual model that measures brand loyalty, and as such, provide industry with a managerial tool that can be applied in brand loyalty.

Objectives

The primary objective of this research was to validate a conceptual model that measures brand loyalty in the FMCG industry. To address this primary objective the following secondary objectives were formulated, namely to:

1. Validate the items that measure each of the brand loyalty influences;
2. Assess the sampling adequacy of each of the influences;
3. Test the applicability of the data for multivariate statistical analysis (such as an exploratory factor analysis);
4. Determine the importance of each of the brand loyalty influences; and
5. Test the reliability of each of the brand loyalty influences in the model.

Literature Review

Brand Loyalty

The concept of brand loyalty first appeared as a uni-dimensional construct. Two separate loyalty concepts then evolved, one to measure attitude and one to measure behaviour in the 1950s. The bi-dimensional construct or composite model presented by Jacoby and Chestnut in 1971 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. With the increased interest in a more relational approach to marketing, the focus was now on building long-term relationships with customers. This approach was in contrast with the traditional view of transactional marketing, where the emphasis was on single transactions (Rao and Perry 2002: 602). This new approach to marketing was met with enthusiasm, and represented, according to Scott (2006: 39), “a *fundamental reshaping of the field*”. It became apparent rather quickly that retaining a customer was far cheaper and more convenient than creating a new one.

Brand loyalty is built over time through a collection of positive experiences that requires consistent effort and attention to detail. Loyal customers are repeat customers who choose a brand or company without even considering other options. They buy more, and they buy more regularly, and they frequently recommend the brand to others (Manternach 2010: 28).

Aaker (1991: 43) has formerly noted that different methods of measuring brand loyalty exist that are based upon the actual purchasing behaviour of the consumer, or upon the loyalty constructs or influences of switching costs, satisfaction and commitment. If brand loyalty is properly managed, it represents a strategic asset for the company and can be used in several ways to provide a certain value for the company (Aaker 1991: 43). The challenge, however, lies in ascertaining the actual brand loyalty value of a product or service, and how it is positioned in the mind of the consumer by means of the marketing mixture (Aaker 1996: 136).

Based on Aaker's theory, measuring brand loyalty cannot be accomplished without considering the constructs or influences that have a direct bearing on it. Influences affect brand loyalty in several ways. Some influences work together to achieve loyalty while others could work independently. The nature of this relationship of the influences, according to Radford (2008: 38), is unclear which explains why there is widespread activity in brand loyalty research amongst marketers.

Similarly, Lagace (2008: 1) states that marketing managers must identify the influences of connection that are most relevant or could be made more relevant to consumers. For example, managers need to consider whether a product offers connection to, or disconnection from, others or oneself. And they must decide whether a connection is physical, social, or mental. Once these levels of connection are understood, marketing managers can better show how a product or service attends to the consumer's basic human needs.

Validity

Field (2007: 795) defines validity as evidence that a study allows inferences about the question it was aimed to answer, or that a test measures what it set out to measure conceptually. The term validity also refers to whether a study is able to scientifically answer the questions it is intended to answer, and as such, it is vital for a test to be valid in order for the results to be accurately applied and interpreted (Iacobucci and Churchill 2010: 255). At the crux of validity, is the level of compatibility between a construct and the indicators of it: the better the fit, the greater the measurement validity (Llusa and Zornoza 2000: 915).

However, it is important to note that the concept of validity has expanded substantially and validity is no longer limited or influenced solely by reliability. The classical relationship between reliability and validity is also much better and more clearly defined in the modern research methodology (Zikmund 2000: 282). Although various types of validity exist, the important validity concept for this study is construct validity.

The validity of a questionnaire is to be assessed to evaluate whether the questionnaire in fact measures what it is supposed to measure. Three different categories of validities could be assessed: content (face) validity, criterion validity and construct validity (Zikmund 2000: 282-284):

- ♦ *Content or face validity* refers to a subjective but systematic evaluation of how well the content of a scale represents the measurement task at hand (Malhotra 2004: 269). By assessing content validity it is, therefore, considered whether the questionnaire covers the entire domain of the construct that is being measured (Iacobucci and Churchill 2010: 257). However, content validity is often regarded

as a more informal and even weak assessment of validity.

- ♦ *Criterion validity* is to determine whether the data correlate with other data measuring the same construct. Two different types of criterion validity exist, namely *concurrent* and *predictive validity*. Zikmund (2000: 283) argues that the two measures differ only on the basis of a time dimension. According to Tull and Hawkins (1993: 318), *concurrent validity* is the extent to which one measure of a variable may be used to estimate an individual's current score on a different measure of the same, or a closely related, variable.
- ♦ *Predictive validity* is assessed by investigating the possibility that the questionnaire predicts or correlates with a criterion measure which is administered at a later stage (Theron 2008: 186).

The questionnaire used in the present study was based on the literature review that indicates relationships or associations between the constructs. The focus in this article is on the assessment of *construct validity*.

Construct validity refers to the operationalisation of a construct in a practical application setting. Construct validity is an important concept for this study, because the validation of the research questionnaire put forward in this study, requires a high level of construct validity (Iacobucci and Churchill 2010: 256).

When construct validity is evaluated, both theory and the data are evaluated. According to Malhotra (2004: 269), construct validity requires a sound theoretical knowledge of the nature of the construct being measured and the way it relates to other constructs. Here, Tull and Hawkins (1993: 318) argue that construct validity involves more than just knowing how well a given measure works, as it also indicates *why* the measure works.

Iacobucci and Churchill (2010: 255) state that three different types of construct validity are often assessed:

- ♦ *convergent validity* (the measure correlates positively with other measures);
- ♦ *discriminant validity* (the measure does not correlate with other constructs from which it is supposed to differ); and
- ♦ *nomological validity* (the degree to which the measure correlates in theoretically predicted ways with measures of different but related constructs).

By focusing on discriminant validity in the present study, the purpose was, therefore, to use questionnaire items that would discriminate sufficiently between the different constructs measured in this study.

The assessment of the questionnaire's discriminant validity was done by way of exploratory factor analysis. To achieve or prove construct validity, empirical evidence is required to support the theoretical basis of the research. This article aims to provide the empirical evidence that supports the selection of previously used and tested brand loyalty models as theoretical basis for the developed research questionnaire. As Spooner (2009: 1) further points out, such evidence includes statistical analyses of the internal structure of the test including the relationships between responses to different test items. Construct validity also assumes relationships between the test and measures of other constructs. Experiments are required to test for construct validity due to its operational nature. As such, experiments designed to reveal aspects of the causal role of the construct also contribute to construct validity evidence (Spooner 2009: 1).

Burns and Grove (1999: 232-234), however, have previously warned that construct validity is deteriorated by any one of the following threats:

- ♦ inadequate pre-operational explication of constructs;
- ♦ mono-operation or mono-method bias;
- ♦ hypotheses guessing with experimental conditions;
- ♦ evaluation apprehension; and
- ♦ interaction between treatment and testing.

Reliability

Since factor analysis is used to validate the data generated by the questionnaire, reliability of the scale is required to ensure that the questionnaire reflects the construct it is measuring. It is for this reason that Cronbach alpha is used. The justification for using Cronbach coefficients was based on the general acceptability in the marketing literature for the use of this type of analysis (Hair et al. 1998: 118; Field 2007: 668). Cronbach's alpha, according to Sprinthal (2007: 314), is a measure of internal consistency, that is, how closely related a set of items are as a group. A "high" value of alpha is often used (along with substantive arguments and possibly other statistical measures) as evidence that the items

measure an underlying (or latent) construct. According to Santos (1999: 2), one of the most popular reliability statistics is Cronbach's alpha as published by the mathematician Cronbach in 1951. Cronbach's alpha determines the internal consistency or average correlation of items in a survey instrument to gauge its reliability (Wuensch 2009: 9). For this study, the minimum reliability coefficient is set at $\alpha \geq 0.70$. However, Cortina (1993) (in Field 2007: 669) found in his research that lower reliability coefficients of 0.58 may be sufficient for analytical scrutiny. This lower reliability coefficient is especially applicable when ratio scales are used (such as the Likert scale in this article) (Field 2007: 668). However, Luo (2010: 1) supports Field and states that 0.7 is an acceptable minimum coefficient. Resultantly this article aims for alpha coefficients of 0.70 and higher, but will accept coefficients that are higher than 0.58 because attitudinal and behavioural constructs on ratio scales are measured (Barber 2007: 1).

METHODOLOGY

Sampling Procedure

The empirical research comprised a survey held amongst FMCG consumers. A sample of 550 post-graduate management students in full time employment was randomly selected for the study. The sample size conforms and exceeds the recommendation by Hair et al. (1998: 124) in that the number of respondents should be a ratio of 14 observations to each variable in order to perform factor analysis. When the 36 variables identified in 12 categories are multiplied by the suggested 14 observations, a minimum sample size of 504 is recommended. This sample was drawn from four South African business schools namely: Management College of Southern Africa, Regent Business School, University of KwaZulu-Natal and North-West University. This also meant that the survey was conducted in major South African cities that primarily constitute the South African business segment. The cities in which the survey was conducted were Durban, Johannesburg, Cape Town, Port Elizabeth, East London, Bloemfontein, Polokwane and Potchefstroom.

The sample consisted of middle and top managers with a minimum of three years' work experience. From the population a sample was drawn to include managers currently studying

towards either 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 by the economic downturn;
- ♦ represents a segment that falls between an 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
- ♦ the sample would be able to understand the terminology and nomenclature specified in the questionnaire.

Questionnaire Development

A questionnaire was developed from the literature study (Moolla 2010) and selected customers had to indicate the importance of the 12 influences by answering 36 questions in maintaining brand loyalty. For the present study, the technique comprised a process where respondents had to evaluate the importance of each of the influences relative to the remainder of the influences using a 7-point Likert scale. According to Syque (2010:1), Likert scales are a research instrument that offers several benefits. Firstly, the questions used are usually easy to understand and lead to consistent answers. Secondly, questions or statements act together to provide a useful coherent picture. Finally, the responses can easily be captured, analysed and evaluated (Stone 2009:2).

Data Collection

A direct approach was used to distribute the questionnaires to respondents. This method was regarded as appropriate since respondents that satisfied the demographic profile of the study were available at lectures at the several venues in South Africa. This questionnaire was personally

distributed by the lecturers who explained, in addition to the covering letter, what the reasons for the study were. Respondents were encouraged to participate in the study. Volunteering respondents were given 30 minutes to complete the questionnaire. It was possible to distribute and collect the questionnaires within 30 minutes as groups of respondents were at the same place at the same time. It was also possible to achieve a highly favourable questionnaire return rate of 98% (541 out of 550) using the direct approach.

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) were considered to validate the items that measure each of the brand loyalty influences (Objective 1).
- ♦ The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was utilized to ensure that the samples used were 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 was 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 is suitable for multivariate statistical analysis such as exploratory factor analysis (Field 2008: 724) (Objective 3).
- ♦ The variance explained by the factor analysis serves as indicator to determine the

importance of each of the brand loyalty influences (Objective 4).

- Cronbach alpha was 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 coefficient was set at 0.58 by when ratio scales are used (such as the Likert scale in this questionnaire) (Objective 5).

RESULTS

The model to measure brand loyalty is shown in Figure 1.

Figure 1 shows that 12 influences are used in the measurement of brand loyalty in the FMCG environment. The figure also shows the items used to measure each influence. These items were identified in the literature research from previous brand loyalty studies. These items have been expanded into a measuring instrument. To expand the items required relevant questions to be identified or formulated from the literature review of brand loyalty studies. These questions, as well as their theoretical origin, are shown in Table 1.

Table 2 shows the KMO measure of sampling adequacy, Bartlett's test of sphericity, the Cronbach alpha reliability coefficients and the variance explained by the factors, while Table 3 shows the results of the factor analysis.

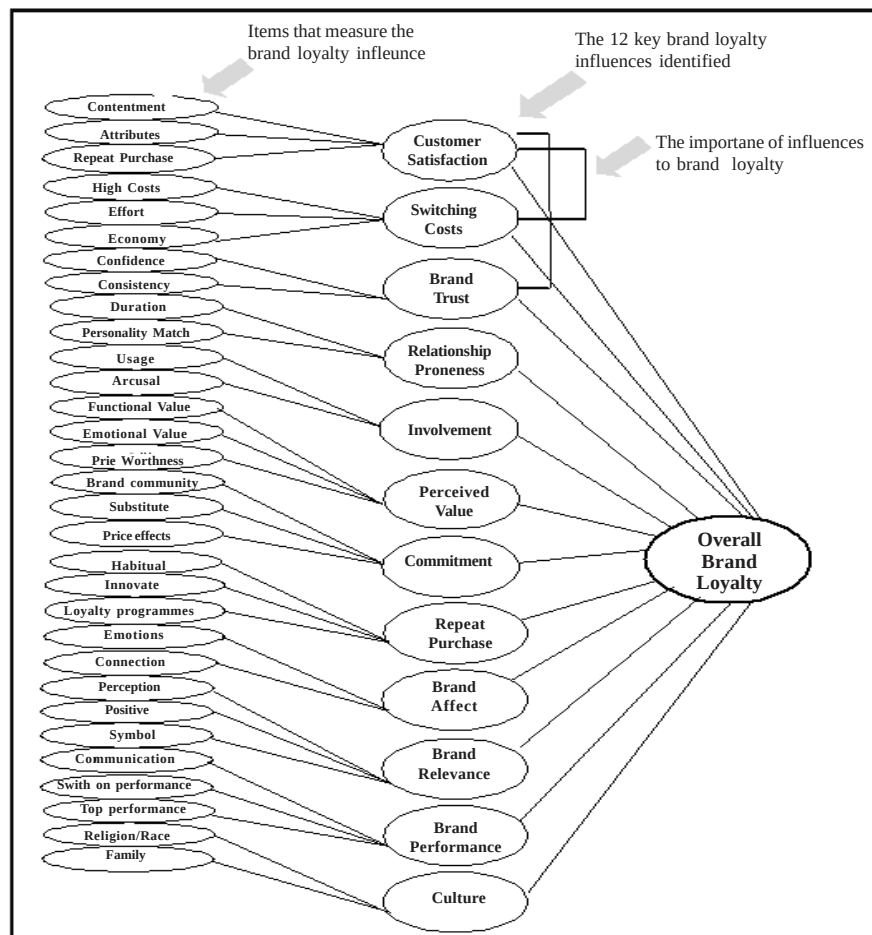


Fig. 1. Key brand loyalty influences and sub-influences
Source: Moola 2010

Table 1: Origins of questionnaire items

<i>Dimension</i>	<i>Code</i>	<i>Item</i>	<i>Source</i>
<i>Customer Satisfaction</i>	CUS01	I am very satisfied with the FMCG brands I purchase	Delgado and Munuera-Aleman (2003: 53)
	CUS02	Distinctive product attributes in FMCG keep me brand loyal	Saaty (1994: 21).
	CUS03	My loyalty towards a particular FMCG brand increases when I am satisfied about that brand	Anderson and Sullivan (1993: 125)
	CUS04	I do not repeat a purchase if I am dissatisfied about a particular FMCG brand	Chen and Lue(2004: 26)
	CUS05	I attain pleasure from the FMCG brands I am loyal towards	Leuthesser and Kohli (1995: 17)
<i>Switching Cost Risk Aversion</i>	SCR01	I do not switch FMCG brands because of the high cost implications	Klemperer (1987: 388)
	SCR02	I do not switch FMCG brands because of the effort required to reach a level of comfort	Beggs and Klemperer (1992: 56)
	SCR03	I avoid switching FMCG brands due to the risks involved	Self generated item
	SCR04	I switch FMCG brands according to the prevailing economic conditions	Kim et al. (2003: 27)
	SCR05	I prefer not to switch FMCG brands as I stand to lose out on the benefits from loyalty programmes	Klemperer (1995: 520)
<i>Brand Trust</i>	BTS01	I trust the FMCG brands I am loyal towards	Halim (2006: 1)
	BTS02	I have confidence in the FMCG that I am loyal to	Morgan and Hunt (1994: 23)
	BTS03	The FMCG brands I purchase has consistently high quality	Reast (2005: 11)
	BTS04	The reputation of a FMCG brand is a key factor in me maintaining brand loyalty	Raimondo (2000: 33)
<i>Relationship Proneness</i>	RPR01	I prefer to maintain a long-term relationship with a FMCG brand	Dwyer (1987: 18)
	RPR02	I maintain a relationship with a FMCG brand in keeping with my personality	Bloemer, De Ruyter and Wetzels (1999: 106)
	RPR03	I maintain a relationship with an FMCG brand that focuses and communicates with me	Davis and Halligan (2002: 10)
	RPR04	I have a passionate and emotional relationship with the FMCG brands I am loyal to	Reast (2005: 10)
<i>Involvement</i>	INV01	Loyalty towards a FMCG brand increases the more I am involved with it	Quester and Lim (2003: 29)
	INV02	Involvement with a FMCG brand intensifies my arousal and interest towards that brand	Knox and Walker (2001: 121)
	INV03	I consider other FMCG brands when my involvement with my FMCG brand diminishes	Self generated item
	INV04	My choice of a FMCG brand is influenced by the involvement others have with their FMCG brand	Quester and Lim (2003: 25)
<i>Perceived Value</i>	PVL1	My FMCG brand loyalty is based on product quality and expected performance	Olson (2008: 246)
	PVL02	I have an emotional attachment with the FMCG brands I am loyal towards	Petromilli et al. (2002:22)
	PVL03	Price worthiness is a key influence in my loyalty towards FMCG brands	Punniyamoorthy and Raj (2007: 233)
	PVL04	The FMCG brands that I am loyal to enhances my social self concept	Punniyamoorthy and Raj (2007: 233)
<i>Commitment</i>	COM01	I have pledged my loyalty to particular FMCG brands	Kim et al. (2008: 111)
	COM02	I do not purchase/sample other FMCG brands if my FMCG brand is unavailable	Self generated item
	COM03	I identify with the FMCG brands that I consume and feel as part of the brand community	McAlexander et al. (2002: 18).
	COM04	The more I become committed to a FMCG brand, the more loyal I become	Fullerton (2005: 100)
	COM05	I remain committed to FMCG brands even through price increases and declining popularity	Foxall (2002: 18)

Table 1: Contd...

<i>Dimension</i>	<i>Code</i>	<i>Item</i>	<i>Source</i>
<i>Repeat Purchase</i>	RPS01	My loyalty towards FMCG brands is purely habitual	Gordon (2003: 333)
	RPS02	I do not necessarily purchase the same FMCG brands all the time	Self generated item
	RPS03	I always sample new FMCG brands as soon as they are available	East and Hammond (1996: 165)
	RPS04	I establish a FMCG brand purchasing pattern and seldom deviate from it	Heskett (2002: 356)
	RPS05	Loyalty programmes are reason I repeat FMCG brand purchases	Sharp et al.(2003: 20)
<i>Brand Affect</i>	BAF01	I attain a positive emotional response through the usage of a FMCG brand	Chaudhuri and Hoibrook (2001: 146)
	BAF02	The FMCG brands that I am loyal towards makes a difference in my life	Moorman et al. (1992: 45)
	BAF03	I am distressed when I am unable to use/purchase a particular FMCG brand	Matzler (2006: 430)
<i>Brand Relevance</i>	BRV01	The FMCG brands that I am loyal towards stands for issues that actually matters	Mininni (2005: 24)
	BRV02	The FMCG brands that I am loyal towards has freshness about them and portray positive significance	Henkel et al. (2007:311)
	BRV03	I know that an FMCG brand is relevant through the brand messages communicated.	Moore et al. (2008: 922)
	BRV04	The FMCG brands that I am loyal towards are constantly updating and improving so as to stay relevant	Self generated item
<i>Brand Performance</i>	BPF01	I evaluate a FMCG brand based on perceived performance	Musa (2005: 47)
	BPF02	I will switch FMCG brand loyalty should a better performing FMCG brand be available	Baldauf et al. (2003: 222)
	BPF03	I am loyal only towards the top performing FMCG brand	Wong and Merrilees (2008: 377)
<i>Culture</i>	CUL01	My choice of FMCG brands is in keeping with the choice made by other members in my race group	Self generated item
	CUL02	My loyalty towards an FMCG brand is based on the choice of FMCG brand used by my family	Kotler (2003: 177)
	CUL03	Religion plays a role in my choice and loyalty of FMCG brands	Self generated item
	CUL04	Family used FMCG brands indirectly assure brand security and trust.	McDougall and Chantrey (2004: 9)

Table 2: KMO, Bartlett's test, reliability and variance explained

<i>Influence</i>	<i>Sub-influence</i>	<i>Kmo</i>	<i>Bartlett</i>	<i>Cronbach Alpha</i>	<i>Var. expl.</i>
Customer satisfaction	***	.751	0.000	.702	47.02
Switching costs	Initial analysis	.675	0.000	.724	44.56
	Purified analysis		0.000	.724	55.15
Brand trust	***	.785	0.000	.763	61.38
Relationship proneness	***	.782	0.000	.786	61.20
Involvement	***	.700	0.000	.706	54.57
Perceived value	Price and value	.510	0.000	.490	40.99
	Emotional and social		0.000		26.62
Commitment	***	.819	0.000	.822	58.90
Repeat purchase	Purchase patterns	.606	0.000	.576	37.84
	Purchase frequency	.606	0.000	.576	23.24
Brand affect	***	.790	0.000	.813	72.99
Brand relevance	***	.770	0.000	.794	62.26
Brand performance	***	.613	0.000	.615	56.65
Culture	***	.733	0.000	.744	57.15

*** No sub-factors identified

Table 3: Factor analysis

<i>Customer satisfaction</i>	<i>Factor loadings</i>	<i>Brand trust</i>	<i>Factor loadings</i>	<i>Involvement</i>	<i>Factor loadings</i>
CUS_02	.797	BTS_02	.877	INV_02	.851
CUS_05	.754	BTS_01	.856	INV_01	.826
CUS_01	.716	BTS_03	.784	INV_03	.707
CUS_03	.674	BTS_04	.582	INV_04	.526
CUS_04	.426				
<i>Switching costs value</i>	<i>Factor loadings</i>	<i>Relationship proneness</i>	<i>Factor loadings</i>	<i>Perceived</i>	<i>Factor loadings</i>
SCR_02	.792	RPR_02	.842		F1 F2
SCR_01	.772	RPR_04	.788	PLV_04	.856 -.227
SCR_03	.744	RPR_03	.773	PLV_02	.851 -.208
SCR_05	.641	RPR_01	.722	PLV_01	.186 .794
SCR_04	.204			PLV_03	.385 .582
<i>Commitment Commitment</i>	<i>Factor loadings</i>	<i>Repeat purchase</i>	<i>Factor loadings</i>	<i>Brand relevance</i>	<i>Factor loadings</i>
COM_01	.825		F1	F2	BRV_03 .846
COM_03	.801	RPS_03	.763	-.321	BRV_02 .836
COM_04	.793	RPS_05	.735	.102	BRV_01 .772
COM_05	.736	RPS_01	.540	.488	BRV_04 .692
COM_02	.673	RPS_04	.399	.649	
		RPS_02	.565	-.624	
<i>Brand performance</i>	<i>Factor loadings</i>	<i>Culture</i>	<i>Factor loadings</i>		
BPP_03	.792	BPP_03	.792		
BPP_02	.737	BPP_02	.737		
BPP_01	.727	BPP_01	.727		

The discussion of the results shown in Tables 2 and 3 are categorised within the brand loyalty influences.

Customer Satisfaction

The five statements all load onto one factor. This confirms that customer satisfaction is indeed a construct of brand loyalty. The factor explains a variance of 47% and returns a good reliability coefficient of .702.

Switching Costs

Four of the five statements load onto factor 1. SCR_04 returns a low factor loading of .204. The variance explained amounts to 44.6%. As a result SCR_04 is removed and the factor is re-confirmed. After the removal of SCR_04, there is a substantial improvement in the variance explained from 44.56 to 55.15. There is also no decrease in reliability after removal of the statement as the Cronbach alpha remained at 0.724. This justifies the removal

of this statement. As such the statement is also removed from the questionnaire as well as the brand loyalty model. The factor returns a good reliability coefficient of .724.

Brand Trust

The four statements all load onto one factor. This confirms that brand trust is indeed a construct of brand loyalty. The factor explains a variance of 61% and returns a good reliability coefficient of .763.

Relationship Proneness

The four statements all load onto one factor. This confirms that relationship proneness is indeed a construct of brand loyalty. The factor explains a variance of 61% and returns a good reliability coefficient of .786.

Involvement

The four statements all load onto one factor. This confirms that involvement is indeed a construct of

brand loyalty. The factor explains a variance of 55% and returns a good reliability coefficient of .763.

Perceived Value

Two statements were loaded for the perceived value influence. PLV_04 and PLV_02 loaded onto factor 1 while PLV_01 and PLV_03 loaded onto factor 2. Varimax rotation was used in this case. Varimax rotation, according to Abdi (2006: 8) is a change of coordinates used in principal component analysis and factor analysis that maximizes the sum of the variances of the squared loadings. This technique was therefore used as a basis that most economically represents each individual – so that each individual can be well described by a linear combination of only a few basic functions. PLV_01 relates to functional value and PLV_03 is related to price worthiness. As such, factor 1 is grouped as price worthiness and functional value. PLV_02 relates to emotional associations and PLV_04 is related to social associations and as such are labelled as such in later references. The two factors explain a cumulative variance of 67.61%.

Commitment

The four statements all load onto one factor. This confirms that commitment is indeed a construct of brand loyalty. The factor explains a variance of 59% and returns an excellent reliability coefficient of .822.

Repeat Purchase

Two factors were loaded for the repeat purchase influence. Varimax rotation (discussed earlier) was also used in this case. RPS_01, RPS_03 and RPS_05 all loaded onto factor 1 while RPS_02 and RPS_04 loaded onto factor 2. This indicated that sub factors needed to be established to classify statements into relevant categories. RPS_01, RPS_03 and RPS_05 all relate to purchase pattern and was therefore categorized as such while RPS_02 and RPS_04 relate to purchase frequency and were classified as such. These are labeled as such in future references. The two factors explain a cumulative variance of 61.08%

Brand Affect

All three influences all loaded onto one factor. This confirms that brand affect is indeed a

construct of brand loyalty. The factor explains a variance of 72% and returns an excellent reliability coefficient of .813.

Brand Relevance

All four influences all loaded onto one factor. This confirms that brand relevance is indeed a construct of brand loyalty. The factor explains a variance of 62% and returns a good reliability coefficient of .794.

Brand Performance

All three influences all loaded onto one factor. This confirms that brand affect is indeed a construct of brand loyalty. The factor explains a variance of 57% and returns a medium reliability coefficient of .615.

Culture

All three influences all loaded onto one factor. This confirms that culture is indeed an influence of brand loyalty. The factor explains a variance of 57% and returns a good reliability coefficient of .744.

Exploratory factor analysis to test how well the measured variables represent the number of influences. This was done to verify the measurement criteria developed from the theory. While the exploratory factor analysis explored the 12 brand loyalty influences, it was also used to confirm influences identified and the statements required in the data which measured variable is related to which latent variable. A total of 10 of the 12 factors loaded purely, meaning that these influences are a single construct that measures brand loyalty. These influences and their relative influences on the measurement of brand loyalty are: *Commitment* (.809); *Brand affect* (.793); *Brand relevance* (.770); *Relationship proneness* (.761); *Involvement* (.675); *Switching cost* (.597); *Culture* (.793); *Brand trust* (.461); and *Customer satisfaction* (.337). Clearly *Commitment*, *Brand effect*, *Brand relevance*, *Perceived value* and *Relationship proneness* have the greatest effect on brand loyalty (all have coefficients of .76 and higher). *Customer satisfaction*, *Brand performance* and *Brand trust* have the least effect on brand loyalty (with coefficients below .47).

Two of the brand loyalty influences dual-loaded. This means that they actually consist of

two separate sub-influences. These influences are Perceived value (.769) and Repeat purchase (.683). *Perceived value* consists of *Price and quality* and *Social and emotional* sub-influences. These sub-influences explain a variance of .409 and .226 respectively with regard to *Perceived value*. Repeat purchases consist of the sub-influences *Purchase pattern* and *Purchase frequency*, explain variances of .378 and .232 respectively.

Two factors were loaded in the three instances and the following were the outcomes:

- ♦ In switching costs SCR_04 returned a low factor loading of .204 as compared to the other factors. SCR_04 was removed resulting in an improvement in variance without affecting reliability. Switching costs was thus re-confirmed without SCR_04. This ensured that

switching costs was reliable enough to be considered as an influence of brand loyalty.

In perceived value, two statements were loaded. PLV_02 and PLV_04 loaded onto factor 1 and PLV_01 and PLV_03 loaded onto factor 2. Using a Varimax rotation, perceived value was split into two sub influences. PLV_01 and PLV_03 were reclassified as Price and Quality and PLV_02 and PLV_04 were reclassified as Social and Emotional. From this point forward, perceived value was analysed based on the sub influences.

Two factors were also loaded for repeat purchase. Varimax rotation was also used to reclassify RPS_01, RPS_03 and RPS_05 into purchase pattern and RPS_02 and RPS_04 into purchase frequency. From this point forward, repeat purchase was analysed based on the sub influences.

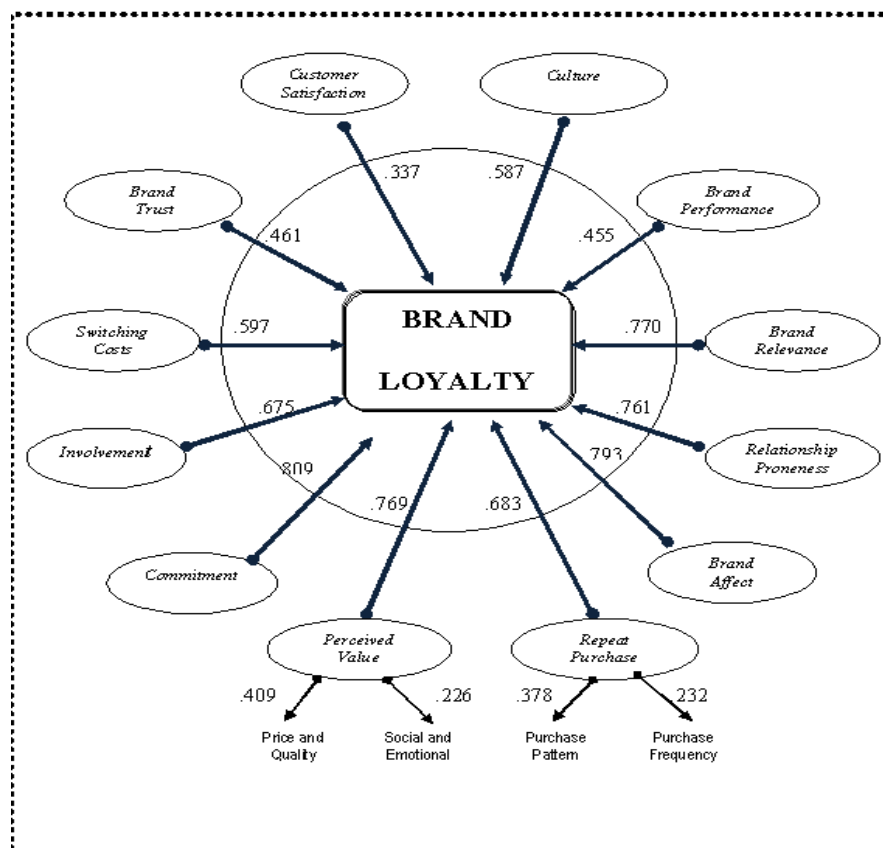


Fig. 2. The validated model to measure brand loyalty

Source: Moola 2010

The remainder of the influences all loaded single factors with acceptable variance and reliability that ranged from mediocre to excellent. The results reveal that the measured variables do represent the number of influences tested. The exploratory factor analysis conducted therefore did confirm all 12 identified influences as true influences of brand loyalty. It also confirmed the statements selected for each influence were indeed valid. Exploratory factor analysis (EFA) did confirm the measurement theory. Bartlett's test of sphericity also confirmed the suitability of the data in each influence while KMO validated the appropriateness of factor analysis in this study.

The validated model where the importance of the brand loyalty influences are indicated, are shown in Figure 2.

DISCUSSION

In their research, Chattopadhyay et al. (2008) defined brand loyalty from a number of perspectives, namely from a product and product performance perspective, a consumer satisfaction perspective, a value perspective, and others. Human et al. (2011:33) add that there are also two components at stake in brand loyalty measurement perspectives, namely the behavioural and the attitudinal components. These different perspectives necessitate the specific approach to be followed when measuring and designing a brand loyalty measurement model and various studies identified product performance and customer satisfaction as integral components of brand loyalty (Terblanche 2006; Shifferstein and Zwartkruis-Pelgrim 2008; Li and Petrick 2010; Nguyen et al. 2011). (In the research this article reports on, these two brand loyalty influences were also identified.) Terblanche (2006:31) found a positive relationship (0.606) between loyalty and satisfaction of customers in the motor vehicle industry, which leads to repurchase intentions (0.999). Interestingly, Terblanche (2006:33) also found that as single loyalty factor for vehicles, satisfaction accounts for 39.8% and 33.3% in the case of Toyota and Volkswagen, respectively. These results correlate closely to the FMCG environment (as discussed in this article), where the brand loyalty influence *Satisfaction* accounts for 33.7% of brand loyalty in FMCG products (see Fig. 1). In addition, the concept of product performance is described by Shifferstein and Zwartkruis-Pelgrim (2008:8) as the enjoyment

derived from the product and its use. In this regard, FMCG's have a short but intense time of usage, and vehicles on the other end of the scale have a long time of usage during which the performance of the product could be evaluated.

However, it is interesting to note that in the case of brand loyalty to sports teams, Heere and Dickson (2008:227-22) found that although marketers have very limited control over product performance of the sports teams (namely to win or lose the game), the fans suffer from the halo-effect which protects brand loyalty from being tarnished. Poor performances are blamed on a variety of external factors such as poor refereeing, home ground advantage and injuries to star players, to name but a few, and fans remain loyal. This research by Heere and Dickson showed that brand loyalty of sports teams clearly differs from the brand loyalty found in normal business markets. From this observation, care should be taken to apply the model developed in this article to the sports environment because satisfaction and product performance are integral influences of the FMCG brand loyalty measurement model.

Supporting research by Human et al. (2011) identified brand knowledge as an important component leading to the brand loyalty influence of *Brand trust* (accounting for 46.1% in FMCG; see Fig. 1). Human et al. (2011: 39) continue and state that knowledge is gained from advertising and promotional activities, which lead to positive correlations to brand awareness and brand knowledge (0.671), which in turn, leads to brand trust (0.803) and commitment to the brand (0.485), and an eventual positive correlation to brand loyalty of 0.850. Roy (2011:113) adds that the advantages obtained from brand loyalty provides higher trade leverage, attract customers, provides a buffer to act upon competitive threats and also reduces overall marketing costs. He warns, however, that lower advertising might result in the inverse situation, namely that lower advertising spending leads to lower knowledge levels, and eventually lower loyalty levels. *Brand trust* also features as loyalty influence in the higher education market where disloyal behaviour features once students' lose confidence in their university's reputation (Brunson 2010:35). In addition to brand trust, student loyalty to their university further contains the influences *Satisfaction* (with both academic and administrative processes) and *Perceived values*. Both these influences are also present in the FMCG

brand loyalty model, explaining a variance of 76.9% and 33.7% respectively.

Regarding *Switching cost* (59.7%; see Fig. 1) as brand loyalty influence Li and Petrick (2010:27) found that in the financial environment sunk costs are included within the actual switching cost, and that attractive investment alternatives plays a significant role in staying loyal. This is more so in a financial environment because the financial cost and benefit can be accurately calculated before considering a switch, making the actual switch a financial decision, and not a loyalty one (Li and Petrick 2010:32). Such accurate calculations are not possible in the FMCG environment, and enjoyment derived from a product remains subjective and a personal decision based on consumer preferences (Burnso et al. 2002:6).

Roy (2011:113, 116) states that brand loyalty is an integral part of brand equity, and that it should be actively managed. One way to do so is to perform accurate measurements of what brand loyalty levels are, and where the brand is succeeding or failing on the individual brand loyalty influences so that corrective actions could be applied with precision to correct failing influences, but also to maintain the influences the brand is performing well on (Salim 2011:68). However, from the literature discussion above is evident that models to measure brand loyalty differs in different application settings. Although a number of brand loyalty influences seem to be commonly presenting itself in varied application settings (Satisfaction, Brand trust, Brand performance, Perceived value and Switching cost, to name some of them), each application setting requires a somewhat unique measurement approach (for example brand loyalty of sports teams). The research by Salim (2011) is an example of where one model cannot just be directly applied in another application setting. In this research Salim employed the FMCG model (as discussed in this article) directly to the banking industry, and in the process of validation, found that some influences had to be adapted to fit the banking industry. Examples of these adaptations to the FMCG model to fit the banking industry were that:

- ♦ Some of the measuring criteria that measures specific influences did not load onto these influences as they did in the FMCG model;
- ♦ Some influenced developed sub-influences (switching cost and relationship proneness). (Referring to the research by Li and Petrick

(201) these findings by Salim correlates to their findings on switching and sunk cost.)

- ♦ The relative importance (variance explained) by the brand loyalty influences differed.

CONCLUSION

All five the objectives set to validate the model that measures brand loyalty, have been addressed. As a result, it can be concluded that the model to measure brand loyalty is a valid and reliable model to do so.

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