Brand Experience and True Brand Loyalty:
An enquiry into product and customer dimensions

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Ph. D Thesis under the Faculty of Social Sciences

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Certificate

This is to certify that thesis entitled **"Brand Experience and True Brand Loyalty: An enquiry into product and customer dimensions"** is a record of bonafide research work done by Mr. Veeva Mathew, part-time research scholar, under my supervision and guidance.

The thesis is the outcome of his original work and has not formed the basis for the award of any degree, diploma, associateship, fellowship or any other similar title and is worth submitting for the award of the degree of Doctor of Philosophy under the Faculty of Social Sciences of Cochin University of Science and Technology. All the relevant corrections and modifications suggested by the audience during the pre-synopsis seminar and recommended by the Doctoral committee have been incorporated in the thesis.

Dr. Sam Thomas
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Declaration

I hereby declare that this thesis entitled **"Brand Experience and True Brand Loyalty: An enquiry into product and customer dimensions"** is a record of the bona-fide research work done by me and that it has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or any other title of recognition.

Kochi   **Veeva Mathew**
03/07/2015

Dedicated to my Parents…….

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Abbreviations and Notations

AFC	Affective Commitment
AGFI	Adjusted Goodness of Fit
AIC	Akaike's Information Criterion
ANOVA	Analysis of Variances
AVE	Average Variance Extracted
BCC	Browne-Cudeck Criterion
BCR	Brand Credibility
BE	Brand Experience
BIC	Bayes Information Criterion
CAIC	Consistent Akaike's Information Criterion
CEM	Customer Experience Management
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
d.f.	degrees of freedom
Error-cov	Error covariance
ESP	Experiential Selling Paradigm
FCB	Foote Cone & Belding
GFI	Goodness of Fit
HSC	Higher Secondary Certificate
LPG	Liquefied Petroleum Gas
MLE	Maximum Likelihood Estimation
MRSI	The Market Research Society of India
MRUC	Media Research Users Council
NFI	Normed Fit Index
R^2	Squared multiple correlation
RFI	Relative Fit Index
RMR	Root Mean Square Residual
RMSEA	Root Mean Square Error of Approximation
SCDT	Sequential Chi-square Difference Tests
SEC	Socio-Economic-Classification

SEM	Structural Equation Modelling
SRMR	Standardized Root Mean Square Residual
SSC	Secondary School Certificate
TBL	True Brand Loyalty
URL	Uniform Resource Locator
χ^2	Chi-Squared Statistic
$\chi^2/d.f$	Normed-Chi-Square
$\Delta\chi^2$	Change in χ^2
$\Delta\chi^2(n)$	Change in χ^2 with degrees of freedom = n
$\Delta d.f$	Change in degrees of freedom
ΔCFI	Change in Comparative Fit Index
$\rightarrow$	Regression Path

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Chapter 1

INTRODUCTION

Contents	1.1 *Role of Loyalty*
	1.2 *Role of Brand Experience*
	1.3 *Role of Involvement*
	1.4 *Current Study*

Brands are among the most valuable assets of any organization. They are the outcome of the concentrated and focused efforts of marketers over a long period of time. The process of creating a brand is the most time consuming task for marketers, as every successful brand has, behind it, innumerable untold stories of failure. The reason for the importance of a successful brand comes from the fact that there are strongly held beliefs and attitudes which occupy prominent positions in the minds of the customers, which cannot be easily duplicated and so there is a longer and safer expected return from them (Farquhar, 1989). Merriam-Webster's Dictionary defines brand as "a category of products that are all made by a particular company and all have a particular name". A brand is more than just a logo. It is the manifestation of the character, personality, and values of the company, product, or service" (Aaker, 2004). For a consumer, a brand is a guarantee of quality and consistency, inducing loyalty (Erdem & Swait, 1998).

1.1 Role of Loyalty

In response to the increasingly competitive marketplace, marketers are continuously in search of strategies to safeguard their brand and increase profit. One strategy that continues to gain popularity involves increasing the set of loyal customers. Howard and Seth (1969) pointed out that brand loyalty can improve sales. Dick and Basu (1994) have pinpointed the marketing advantages of loyalty such as positive word of mouth and resistance to change under competitive strategies. Thus, retaining loyal customers is less expensive and effortful when compared with creating a new customer. This will reduce the marketing cost which enables the marketers to generate higher rates of return on investment (Reichheld & Teal, 2001). Thus one of the major concerns of brand marketers is to improve the loyalty for the brand.

Brand loyalty is defined as 'the biased (non-random) behavioural response (i.e. purchase), expressed over time, by some decision-making unit with respect to one or more alternate brands out of a set of such brands, and is a function of psychological (decision-making, evaluative) processes' (Jacoby & Kyner, 1973). The study on brand loyalty has a long history of nearly nine decades, since Copeland's introduction of 'brand insistence' (Jacoby & Chestnut, 1978). Since then, researchers have mainly focussed on the operationalization of loyalty. Jacoby and Chestnut were able to classify such operational definitions into three major categories, namely definitions based on behaviour, attitude and composite. Apart from the operational definition classification, the researches in brand loyalty have taken two basic approaches-the first one aligns brand loyalty to a stochastic (pure random process) while the second one assumes a deterministic (non-random process). Studies under the deterministic approach focus on the antecedents of loyalty to explain the

behaviour, while studies under the stochastic approach assume that purchase behaviour could be predicted from the past purchase history.

Many researchers (Ehrenberg, Goodhardt, & Barwise, 1990; Kahn, Kalwani, & Morrison, 1986; Uncles, Hammond, Ehrenberg, & Davis, 1994) believed that repeat purchase of the same brand can capture loyalty. Researchers like Bloemer and Kasper (1995), Fournier (1998) and Odin, Odin and Valette-Florence (2001) recently argued for the need to understand the difference between repeat purchase under inertia (spurious loyalty) and true loyalty. Bloemer and Kasper (1995), Dick and Basu (1994) and Odin et al. (2001) have suggested methods to distinguish true loyalty from inertia. Marketers who are responsible for enhancement of loyalty have lately identified consumer experience to be a major contributor to it. This is because of the very nature of experience as Aaker (1999) has pointed out- 'If a brand is able to stimulate the senses, engage the mind and body, and makes a person feel good, a stimulation seeking organism may strive to receive such stimulation again' (Brakus, Schmitt, & Zarantonello, 2009). Understanding this, companies have even created new executive positions focusing on managing customer experience with brands (Schmitt, 2009), thus illustrating its growing importance.

1.2   Role of Brand Experience

Customer Experience Management (CEM) proposed by Schmitt (2003) focuses on providing value to the consumer beyond the product attributes and benefits. Customer experience management assumes that consumers do not buy products or services alone; rather they also expect the experience associated with it (Morrison & Crane, 2007; Nysveen, Pedersen, & Skard, 2013). This paradigm has identified the important role played by brand

experience in providing value beyond the attributes to the customers. Brand experience is defined as the subjective internal consumer responses (sensations, feelings and cognitions) and behavioural responses evoked by brand related stimuli (Brakus et al., 2009). A consumer receives these brand related stimuli from the product itself, then from logos, signage, packaging, brochures, advertising and the environment (Schmitt, 2003). Research in this area include the contribution of Brakus et al. (2009), Iglesias, Singh, and Batista-Foguet (2011), Ishida and Taylor (2012), Nysveen and Pedersen (2014) and Shamim and Butt (2013) who were able to establish the relation between brand experience and brand loyalty, brand personality, satisfaction, affective commitment, brand attitude, brand credibility, brand equity. However these studies have not tried to distinguish between true loyalty and spurious loyalty.

1.3   Role of Involvement

Involvement with a product is defined as 'perceived relevance of a product class, based on the consumer's inherent needs, interests and values' (Zaichkowsky, 1985). For the past three decades, many researchers have investigated involvement in the context of loyalty (e.g.: Brisoux & Cheron, 1990; Chaudhuri, 1998; Kim, Morris, & Swait, 2008; Knox & Walker, 2003; Mathew, Ali, & Thomas, 2014; Quester & Lim, 2003). However there was a lack of consistency in the findings regarding the effect of involvement on loyalty. Quester and Lim (2003) and Kim et al. (2008) stated that involvement will lead to high levels of loyalty, under both low and high involvement conditions. Further studies in this area have shown that customers show differences in their intensity of information search depending on the level of involvement (Bei & Widdows, 1999; Bloch, Sherrell, & Ridgway, 1986) and

those who show low levels of involvement consider the product to be trivial and take less effort to process the information obtained, when compared to the highly involved (Heath, 2001).

Involvement as a Moderator

Based on these differences, Mathew et al. (2014) were able to demonstrate the differences in the hierarchy-of-effects of *brand awareness → brand credibility → brand commitment → loyalty intention*s among low/high consumer involvement groups of deodorant users. If this is so, how would the efforts taken by the managers to provide memorable brand experience at every touch point of the customer, get converted to loyalty, under low and high involvement? Even though researchers in the area of brand experience have tried to see how this variable contributes to the formation of loyalty, there is very little research that has considered involvement as a moderator variable for brand experience effects.

Other perspectives are also seen in literature, namely 'involvement as a product dependent variable' (Amine, 1998b), 'involvement as an individual dependent variable (ego involvement)' Zaichkowsky (1986) and 'involvement as both product and individual dependent' Chaudhuri (2000) and Zaichkowsky (1994). Adapting all the three approaches in the operationalization is a rarely attempted design for the researches in this area. Thus the researcher decided to investigate the relationship among experience-belief-attitude-behaviour under different levels of involvement.

1.4 Current Study

The present research attempts to investigate the scientific structure in the contribution of brand experience to the formation of brand loyalty by

synthesizing past studies with some critical variables that are theorized to explain the role under different levels of involvement. The important constructs included in this study are brand credibility and affective commitment.

Using the arguments of Krugman (1965) and the attitude theory by Ajzen (1991), the researcher argues that brand credibility and affective commitment will have a mediating role in the effect of brand experience on true brand loyalty and that the mediating role will vary with the level of involvement. This research is an important contribution to marketers highlighting how loyalty could be improved effectively by managing brand experience, brand credibility and affective commitment under different levels of involvement.

1.4.1 Organisation of the Report

This thesis is organised in five chapters. Chapter One is an introduction to the study. Chapter Two provides the review of literature. Chapter Three provides an overview of research methodology used in this study. Data analysis and results obtained with respect to the effect of brand experience on true loyalty are presented in Chapter Four and the discussion on the findings is provided in Chapter Five.

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Chapter **2**

THEORETICAL FRAMEWORK

This chapter presents a brief review of literature to outline the theoretical framework of this study. In the era of Customer Experience Management, brand experience is found to be a major contributor to the formation of loyalty. Brand and customer related concepts like brand credibility, affective commitment and involvement have different roles in this contribution. The current study views that brand credibility and affective commitment have a mediating role in the relationship between brand experience and loyalty. The mediation, however, differs on the basis of involvement. Keeping this view in mind, relevant hypotheses are formulated based on the existing body of knowledge. Further, a conceptual model is proposed based on the stated hypotheses and the possible variation in the conceptual model is also presented in this Chapter.

2.1 Brand Loyalty

The study of brand loyalty has been represented in literature for nearly nine decades. Copeland (1923) was among the first to suggest that an extreme attitude toward a particular brand might have an effect on buyer behaviour. Even though Copeland did not use the term loyalty; he defined this concept under the label 'brand insistence' (Jacoby & Chestnut, 1978).

The researches in the area of loyalty have basically taken two approaches; stochastic approach and deterministic approach. Stochastic approach assumes that loyalty is a purely random process (behaviour) which is dependent on the previous purchase process of the same product, rather than other antecedent variables. Conversely a deterministic approach assumes loyalty as a non-random process where repeat purchase behaviour by the same customer happens as a direct consequence of some underlying consumer behaviour. In this frame work, loyalty is mainly considered as an attitude (Jacoby & Chestnut, 1978; Odin et al., 2001).

Jacoby and Chestnut (1978) classified operational definitions of brand loyalty concept into three main categories based on the approach adapted: behavioural approach, attitudinal approach and the composite of both behavioural and attitudinal approach. Under behavioural approach brand loyalty indices are based on the actual purchasing behaviour of consumer or self-reporting of actual behaviour, while in attitudinal approach brand loyalty is measured through preference statements of likely behaviour; the composite is a combination of behavioural and attitudinal aspects.

The behavioural indices of brand loyalty include the following types.

1)   The measures which are based on proportion of purchase like Churchill (1942), Copeland (1923), Cunningham (1956) etc.

2)   Sequence of purchase measures like Brown (1952), Griffin (1996), Kahn et al (1986), Tucker (1964) etc.

3)   Probability of purchase measures like Frank (1962), Fry, Shaw, Lanzenauer, and Dipchand (1973), Lipstein (1959) etc.; probability of purchase and likelihood of spreading positive word (Shoemaker & Bowen, 2003)

4)   Synthesis measures like Dommermuth (1965), Sheth (1968) etc.

Many of these researchers (Bass, 1974; McAlister & Pessemier, 1982; Reynolds & Wells, 1977; Uncles, Dowling, & Hammond, 2003) had considered loyalty as a stochastic process.

Attitudinal indices of brand loyalty are based on the statements of preference or intentions to behave and not on actual purchase behaviour. This set includes measures like

1)   Brand preference (Boonlertvanich, 2011; Guest, 1942);

2)   Constancy of preference (Guest, 1955);

3)   Brand name loyalty (Monroe & Guiltinan, 1975);

4)   Distance between acceptance and selection (Jacoby & Olson, 1970; Jacoby, 1971);

5)   Relative range of region (Jacoby & Olson, 1970; Jacoby, 1971);

6)   Number/proportion of brands in the acceptance region (Jacoby & Olson, 1970; Jacoby, 1971);

7) Cognitive loyalty (Jarvis & Wilcox, 1976);

8) Psychographic scaling (Reynolds, Darden, & Martin, 1974);

9) Purchase intention measures (Bell, Auh, & Smalley, 2005; Johnson, Herrmann, & Huber, 2006);

10) Combination of trust, commitment, satisfaction and brand preference (Jaiswal & Niraj, 2011).

Composite measures of brand loyalty involve an integration of behavioural and attitudinal approaches. This includes

1) Brand insistence (Copeland, 1923);

2) Price until switching (Pessemier, 1959);

3) Stated brand commitment (Cunningham, 1967);

4) Repeat purchase and favourable disposition (Day, 1969; Kandampully & Suhartanto, 2000);

5) Bayesian Loyalty Measure (Lutz & Winn, 1974);

6) Information Search (Newman & Werbel, 1973);

7) Package Search (Towle & Martin, 1976);

8) Composite Store Loyalty (Bellenger, Steinberg, & Stanton, 1976) etc.

Both deterministic as well as behavioural measures are not free from limitations. The deterministic methods available were mainly dependent on self-declarations rather than an observation of behaviour. They were operationalized using antecedents or consequences of loyalty and not on the basis of loyalty itself (Odin et al., 2001). The behavioural approach has its own limitations. Even

though behavioural measures are dependent on the real behaviour of purchase it cannot explain whether the repeat purchase is out of habit or some situational reasons like stock out or some complex psychological reasons (Odin et al., 2001).

All these definitions represent the operationalization of brand loyalty rather than the theoretical definition. The conceptual definition by Jacoby and Kyner (1973) defines it as a set of six necessary and sufficient conditions. It says brand loyalty is "(1) the biased (non-random) (2) behavioural response (i.e. purchase), (3) expressed over time, (4) by some decision-making unit, (5) with respect to one or more alternate brands out of a set of such brands, and (6) is a function of psychological (decision-making, evaluative) processes". Items (2) and (6) of this definition indicate that they have viewed brand loyalty as both behaviour and attitude. This structure was followed by very few studies (e.g.: Dick & Basu, 1994)

Many researchers (Ehrenberg et.al., 1990; Kahn et al., 1986; Uncles et al., 1994) believed that repeat purchase of the same brand can capture loyalty. Emphasising on the behavioural aspect alone fails to take into account the reasons of purchase like convenience, monetary gains or loyalty. A similar explanation is applicable for using attitudinal measures alone as it fails to take into account competitive effects, familiarity and situational factors (Agrawal, Gaur, & Narayanan, 2012; Day, 1969). Researchers like Bloemer and Kasper (1995) and Odin et al. (2001) argued for the need to understand the difference between repeat purchase under inertia (spurious loyalty) and true loyalty. Bloemer and Kasper defined spurious loyalty as '(1) the biased (non-random) (2) behavioural response (i.e. purchase), (3) expressed over time, (4) by some decision-making unit, (5) with respect to one or more alternate brands out of a set of such brands, and (6) is a function of inertia'. The definition given by

them for true loyalty differs in the sixth item where it is termed as 'a function of psychological process resulting in brand commitment'. Thus a true loyal customer is committed to the brand, while a spuriously loyal customer will buy the brand, without a real motive for the choice made. They may even shift to other brands very easily (Bloemer & Kasper, 1995; Rossiter & Percy, 1987).

2.1.1 True Brand Loyalty

Measurement methods of attitudinal or behavioural approach cannot distinguish spurious loyalty from true loyalty. Bloemer and Kasper (1995), Dick and Basu (1994) and Odin et al. (2001) have suggested measurement methods which distinguishes spurious loyalty from true loyalty. These measurement methods combined the repeated purchase behaviour along with antecedents of loyalty. The method suggested by Bloemer and Kasper has used commitment along with repeat purchase behaviour to distinguish true loyalty from spurious loyalty; Dick and Basu (1994) have used relative attitude along with repeat patronage; and Odin et al. (2001) used brand sensitivity along with repeat purchase behaviour to distinguish them.

Amine (1998b) has suggested combining brand sensitivity with repeat purchase behaviour as a better method to distinguish spurious from true loyalty, due to the following reasons.

- Brand sensitivity is found to mediate the relation between involvement and loyalty.
- Brand sensitivity could interact with both cognitive and affective motives to influence the commitment of the consumer.

These characteristics make it more eligible to be a differentiator (Amine, 1998b). Adapting this approach in the operationalization of true loyalty, Odin

et al. (2001) developed a tool to differentiate spurious loyalty from true loyal consumers. This scale has been adapted by Kim et al. (2008) in his research.

The operationalization of true brand loyalty by Odin et al. (2001) is further based on the argument of Filser (1994) (as cited in Odin et al., 2001) that 'repurchase of the same brand under conditions of strong perceived differences between brands and strong involvement characterizes brand loyalty'. According to Kapferer and Laurent (1983) (as cited in Odin et.al, 2001) 'brand sensitivity is defined as the degree to which brand name plays a key role in the choice process of an alternative in a given product category'. Odin et al. stipulates that 'a belief in differences between brands is an indicator' of brand sensitivity. Thus a consumer who makes the purchase of the same brand on the basis of brand name is considered to be true brand loyal whereas one who makes a purchase without the knowing the difference between the available brands in the same product category is considered to be spurious loyal (figure 2.1). This study distinguishes spurious loyalty from true brand loyalty based on this approach.
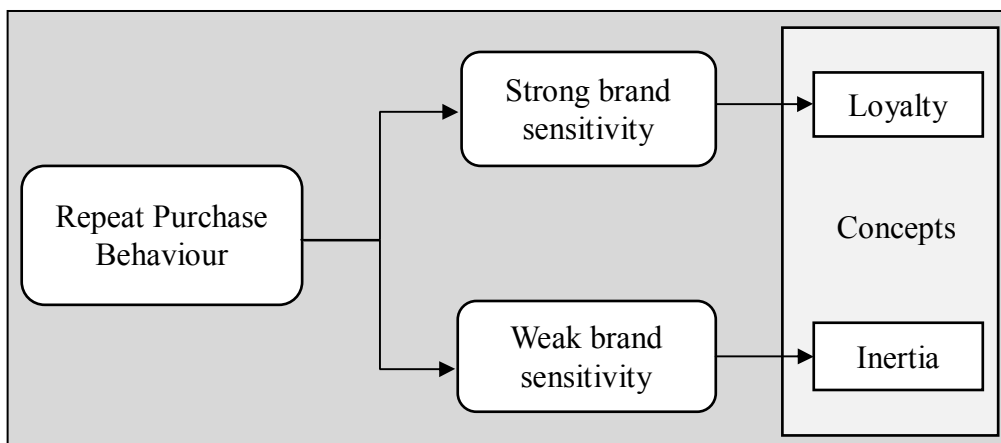
Source: (Odin et al., 2001)

Figure 2.1: Repeat purchase behaviour under conditions of brand sensitivity

2.2   Brand Experience

Brand experience is conceptualized as "subjective internal consumer responses (sensations, feelings and cognitions) and behavioural responses evoked by brand related stimuli that are part of a brand's design and identity, packaging, communications and environments" (Brakus et al., 2009). The concept experience has been contextualised at the various stages of consumer life cycle (Nysveen et al., 2013). This has resulted in different constructs like consumption experience (Holbrook & Hirschman, 1982), service experience (Hui & Bateson, 1991), shopping experience (Kerin, Jain, & Howard, 1992), product experience (Hoch, 2002), customer experience (Gentile, Spiller, & Noci, 2007) and brand experience (Brakus et al., 2009). Further, brand experience is a part of Customer Experience Management (CEM), the paradigm proposed by Schmitt (2003) and has an important role in it.

Customer Experience Management (CEM) (Schmitt, 2003), is the process of strategically managing a customer's entire experience. This new paradigm is expected to overcome the drawbacks of practices based on marketing concept, customer satisfaction and customer relationship management concept. Schmitt (2003) through his book, put forth the idea, 'gone are the days a customer buys a product just for the functional benefits and are looking beyond'. Customers basically assume that the product that they buy, will do what it is expected to, and are more interested in the other features. So it becomes the responsibility of the company to get connected with customer at each touch point and provide a memorable experience. Schmitt provides a frame work through which it could be achieved. This frame work identifies 'designing of brand experience' as an important step. A customer receives brand experience first, from the product itself, where

aesthetics of the product matters a lot as it provides a sensory experience to the consumer. The next level of brand experience is from its logo, signage, packaging etc. attached to it, providing a visual identity and the stimulus. This stimulus is termed as 'look and feel' or brand identity and it should reveal the positioning of the product.

Research in the area of experience has been in discussion since the seminal paper by Holbrook and Hirschman (1982). Since then many researchers have contributed to this literature Gentile et al. (2007), Pine and Gilmore (1998), Schmitt (1999), Verhoef et al. (2009) - to name a few. Holbrook and Hirschman have conceptualised consumption experience as a tri-dimensional construct with 'fantasies, feelings and fun' as its dimensions. Pine and Gilmore defined consumption experience in terms of two bi-polar constructs. First construct, customer-participation (active or passive), second environmental relationship (absorption or immersion). Based on these two dimensions they defined four realms of an experience namely entertainment, educational, aesthetic and escapist (Atwal & Williams, 2009; Ismail, Melewar, Lim, & Woodside, 2011). Further, Gentile et al. conceptualised customer experience as a construct with six components namely sensorial component, emotional, cognitive, pragmatic, lifestyle and relational component, as reported in Ismail et al. (2011). It was during this time, Brakus et al. (2009) defined brand experience and provided a validated scale with four dimensions for the construct.

Brand experience concept as defined by Brakus et al. (2009) has four dimensions namely sensory, affective, intellectual and behavioural. Sensory dimension refers to the ability of a brand in order to provide visual, auditory, tactile, gustative and olfactory stimulations. Affective dimension refers to

feelings and emotions. It reflects the extent to which a brand can influence and create feelings and emotions among consumers. Intellectual dimension refers to consumer's convergent and divergent thinking. This reflects the extent to which a brand can stimulate a consumers' curiosity, thinking and problem solving. Behavioural dimension includes the bodily experiences, lifestyle and physical action referring to the extent to which a brand can engage its consumer in physical activities (Brakus et al., 2009; Iglesias et al., 2011; Nysveen & Pedersen, 2014; Zarantonello & Schmitt, 2010)

2.2.1 Antecedents and Consequences of Brand Experience

Brand experience is different from product experience as product experience requires an interaction of consumer with the product, while brand experience may not require this. Brand experiences vary in strength and intensity - some are stronger than others, and they could be negative or positive. Moreover, the effects of some brand experiences are short lived while others last longer. These long lasting brand experiences will be retained in memory and will affect satisfaction and loyalty (Brakus et al., 2009; Oliver, 1997; Reichheld & Teal, 2001).

Brakus et al. (2009) were also able to empirically validate how brand experience influences the brand related concepts such as brand personality, brand satisfaction and brand loyalty. Based on the conceptual and operational definition for brand experience given by Brakus et al., researchers in this area including Brakus et al., Iglesias et al. (2011), Shamim and Butt (2013), Zarantonello and Schmitt (2010) started looking at its antecedents and consequences. Brakus et al. were also able to empirically show the positive effect of brand experience on brand personality, brand satisfaction and brand

loyalty. Further they proved the mediating role of brand personality and satisfaction between brand experience and loyalty. The result also showed that brand experience is a stronger predictor of buying behaviour than brand personality.

Zarantonello and Schmitt (2010) classified consumers based on brand experiential appeals into five types, namely hedonistic, action-oriented, holistic, inner-directed and utilitarian consumers. The level of experiential appeal was found to moderate the relationship between brand attitudes and purchase intention. This moderating effect was further found to vary among the brands (three brands from automotive, four from consumer electronics and six brands from food and beverages). The strength of the said relationship is also observed to be strongest among holistic and weakest among utilitarian consumers. The role of affective commitment among brand loyalty and brand experience investigated by Iglesias et al. (2011) has shown affective commitment mediates the relationship. Further, Shamim and Butt (2013) investigated the role of brand experience on consumer based brand equity and purchase intention and found that the effect is mediated through brand credibility and brand attitude for eight brands of mobile handsets. Roswinanto and Strutton (2014) has extended the set of consequences and shown that brand experience has a positive influence on brand attitude and brand distinctiveness. Ramaseshan and Stein (2014) investigated the role of brand personality and brand relationship variables (namely, brand trust, brand attachment and brand commitment) in the relationship between brand experience and brand loyalty and found that brand personality and brand relationship variables (brand attachment and brand commitment) mediates the said relationship. Moreover, the research by Şahin, Zehir and Kitapçı (2012)

found that brand trust and satisfaction mediates the relationship between brand experience and loyalty.

In addition, Nysveen et al. (2013) established the need of one more dimension in brand experience namely 'relational experience' which is more relevant for the service sector. They developed a scale for its measurement and re-ascertained the relationship of brand experience on its consequences namely, brand personality, brand satisfaction and loyalty.

A customer experiences a brand at multiple touch points such as point of sale, sales forces, product, media, sponsorships, Internet, word-of-mouth etc. (Chattopadhyay& Laborie, 2005). Further they are also exposed to these stimuli through consumption or product usage, packaging, mascots etc. (Brakus et al., 2009). Schmitt (2003) through the CEM paradigm recommends and explains the need to provide an experiential communication from the firm in order to enhance brand experience. Each communication should follow an Experiential Selling Paradigm (ESP) implementing brand experience focusing on three components namely, experiential positioning, experiential value promise and the overall implementation of theme. Researchers like Harris (2007), Lundqvist, Liljander, Gummerus, and van Riel (2013), Nysveen and Pedersen (2014), Rahman (2014) and Roswinanto and Strutton (2014) looked at the antecedents of brand experiences.

Nysveen and Pedersen (2014) looked at co-creation as an antecedent and satisfaction and loyalty as the consequences of brand experience. They were able to the show that co-creation has a positive influence on brand experience dimensions and hence strengthen the four dimensions of brand experience. Further the study also reconfirmed the relationship of brand experience on

satisfaction and loyalty. Rahman (2014) explained how a branded branding strategy can be used in order to achieve brand differentiation. Branded branding strategy is 'a deliberate effort made by a brand owner to capitalise on brand(s) with high equity owned by other companies' (Rahman, 2014). Roswinanto and Strutton (2014) have identified four antecedents to an advertisement which can influence brand experience of a customer. This includes attitude towards the brand name, connectedness to celebrity endorser, visual imaging manifested in the advertisement and the extent to which the advertising messages aligns with the core values. So an advertisement or a communication should allow the message to go through by informing and entertaining the customer.

Brakus et al. (2009) has defined brand experience as the subjective responses (sensations, feelings and cognitions) and behavioural responses evoked by brand related stimuli. If these stimulations provide pleasurable outcomes, the consumer, as a stimuli seeking organism, is expected to repeatedly buy the brand (Brakus et al., 2009). Further the researches by Brakus et al. (2009), Nysveen et al. (2013), Nysveen and Pedersen (2014) and Şahin et al. (2012) in this area have revealed the effects of brand experience on loyalty. Based on these findings this research proposes the following hypothesis:

Hypothesis: *The higher the brand experience for an individual, the higher the individual's true brand loyalty.*

Based on the above review, this study further posits that both brand and customer related concepts have a role in the contribution of brand experience to the formation of loyalty. Specifically, this study will be looking at the role of brand credibility, affective commitment and involvement in this contribution.

This is further elucidated based on the evidences available in the literature in the remaining section of this chapter.

2.3 Brand Credibility

Brand credibility is defined as 'the believability of product position information contained in a brand, which entails consistently delivering what is promised. Credibility is conceptualized as having two dimensions, trustworthiness and expertise. Trustworthiness means it is believable that a brand will deliver what it has promised, and expertise implies the brand is believed to be capable of delivering the promises' (Erdem & Swait, 1998). Brand credibility represents the cumulative effects of all marketing activities taken by that brand (Erdem, Swait, & Louviere, 2002) and is also referred to as reputation.

The concept brand credibility originates from 'source credibility' literature and when applied to brand it is denoted so (Wang & Yang, 2010). This concept is similar to trust which is conceptualised as 'confidence in exchange partner's reliability and integrity' (Morgan & Hunt, 1994).

Pioneer works in the area of brand credibility include Erdem and Swait (1998, 2004) and Wernerfelt (1988). Erdem and Swait (1998) tried to look at the role of credibility in the consumer choice process under an asymmetric information situation. They argue that an asymmetry exists in the market place, because firms know better about their product than a customer. Under such conditions, the brand and its credibility signals the product position and this increases perceived quality, decreases consumer perceived risk and information cost and thus increase the expected utility (Erdem & Swait, 1998). They found that this role of brand credibility differs with the consumer's perceived importance or relevance of the product and also discusses the

antecedents of brand credibility. Further, Erdem, Swait and Valenzuela (2006) were able to cross validate the role of brand as a signal across different countries. Erdem and Swait (2004) found that brand credibility increases the probability of inclusion of a brand in the consideration set and choice across different product categories. They also reported that it is the trustworthiness dimension of credibility that affects brand consideration and choice more than expertise dimension. Wang and Yang (2010) extended the set of consequences of brand credibility, where they reported its positive effects on the brand's purchase intention. They also observed that this relationship is moderated by brand image and brand awareness.

Looking at the existing body of knowledge, brand credibility is considered as a consequence of brand experience due to the following reasons. Brand experience includes internal responses (sensations, feelings and cognitions) as well as behavioural responses evoked by brand related stimuli. A customer is exposed to such stimulations not only when they are in contact with the product but also through multiple sources (Brakus et al., 2009). Rempel, Holmes and Zanna (1985) found that trust evolves from past experiences and interaction. Any interaction opportunities of a customer with the brand will enhance their trust in it because of the familiarity and knowledge (Garbarino & Johnson, 1999). So, in an information asymmetric world, a customer sees the efforts taken by marketers as a signal of its credibility (Erdem & Swait, 1998). Further, when a customer is repeatedly exposed to the brand experiences, the belief about the brand's expertise and trustworthiness improves (Delgado-Ballester & Munuera-Alemán, 2001; Ha & Perks, 2005; Ramaseshan & Stein, 2014) and the ability to signal the brand's credibility increases when the experiences are consistent with firm's product claims (Erdem & Swait, 1998).

So any such initiatives taken by marketers which provide memorable and consistent brand experience would contribute to the credibility of the brand. Further Shamim and Butt (2013) through their study showed that brand experience has a positive influence on brand credibility. On the basis of these arguments, treating brand credibility as a consequence, it is hypothesised that:

Hypothesis: *The higher the brand experience, the higher will be brand credibility.*

Erdem et al. (2002) describes brand credibility as representing the cumulative effects of all marketing activities carried out for that brand. Using the arguments of the signalling framework (which postulates that efforts of marketers acts as a signal to the customer), brand credibility can exert a positive influence on consumers' brand consideration set and choice (Erdem et al., 2002; Kim & Chan-Olmsted, 2005; Pae, Samiee, & Tai, 2002; Wang & Yang, 2010), which in turn increases the expected utility and motivates the consumer to buy the same brand again (Erdem & Swait, 1998). This repeat purchase is based on brand sensitivity (i.e. with the belief of credibility and knowledge about the differences in the market offerings) and hence leads to true brand loyalty. On the basis of these arguments, the following hypothesis is proposed.

Hypothesis: *The higher the brand credibility, the higher will be the true brand loyalty.*

2.4 Affective Commitment

Scholars have conceptualised commitment in multiple ways -'as a desire to maintain with the relationship' (Morgan & Hunt, 1994), as 'the sacrifice that one makes when a relationship ends' (Anderson & Weitz, 1992), as

resistance to change (Pritchard, Havitz, & Howard, 1999), as a type of attitude strength (Ahluwalia, 2000; Petty & Krosnick, 1995) and as a psychological attachment to an object or position (Kiesler, 1971).

In marketing, some scholars have taken the organizational behaviour view of Allen and Meyer (1990), where commitment has at least two components, namely affective commitment and continuance commitment. Affective commitment is based on emotional attachment or the extent to which the consumer identifies and involves himself with the organization (Allen & Meyer, 1990; Bendapudi & Berry, 1997; Fullerton, 2003; Johnson et al., 2006). Continuance commitment is the extent to which a consumer is bound to an organization (Allen & Meyer, 1990; Fullerton, 2003; Johnson et al., 2006). Further Amine (1998b) asserts that affective commitment expresses the positive feelings, liking or attachment towards a brand. It also reflects the holistic judgement of a brand, independent of its functional attributes' and specific purchase situations. These characteristics of affective commitment make it 'hotter' and explain loyalty better than the other dimensions of commitment (Amine, 1998b; Johnson et al., 2006).

Commitment has also been studied specific to the context of brand experience and has been an important construct in examining how brands shape people's lives e.g. Fournier (1998). According to Fournier, commitment is driven by a consumer's experience with a brand, as well as various forces around an individual (e.g., social networks, culture). Thus, a brand is interpreted across situations and usage experiences in terms of how it seems to fit into overall life patterns and goals rather than how effective it is in satisfying a specific need e.g. Mick and Buhl (1992). Because commitment is deeply rooted within a person, it is difficult to change an individual's attitude

toward a brand to which he or she is committed. Notably, research on commitment converges on the central premise that committed individuals resist attitude change and continue to behave favourably toward the brand to which they are committed (Ahluwalia, 2000). Chaiken, Liberman and Eagly (1989) observed that individuals may even resist information that "supports non-preferred positions." This implies that a consumer who is committed to a brand will not only defend his or her committed brand against attacks, but also discount positive information about a competitive brand unfavourably when compared to an uncommitted customer.

Morgan and Hunt (1994) through their study have proved the causal effect of trust on commitment using social exchange theory. This causal effect was theorised based on the need of trust in relationship exchanges [i.e. relationship built upon trust will be highly valued and so both parties will be committed to it (Hrebiniak, 1974)]. Morgan and Hunt, used social exchange theory to explain this causal relationship based on the principle of generalised reciprocity. This principle states that "mistrust breeds mistrust and as such would serve to decrease commitment in the relationship and shift the transaction to one or more direct short-term exchanges" (McDonald, 1981, p. 834). Through their study, Morgan and Hunt (1994) also established the influence of antecedents on to the said causal relationship and the influence of this relationship on its outcomes. Similar results were also reported by Mathew et al. (2014) who found that brand credibility has a positive effect on brand commitment. Thus based on these findings of Morgan and Hunt (1994) and other researchers like Achrol (1991), Ganesan (1994) and Moorman, Zaltman and Deshpande (1992) it is understood that brand credibility influences affective commitment.

Hypothesis: *The higher the brand credibility the higher will be the affective commitment towards the brand.*

Researchers in the area of true loyalty, have taken multiple views with respect to commitment. For some, like Bloemer and Kasper (1995), commitment is a prerequisite for true brand loyalty and is considered as part of loyalty rather than an antecedent to it. But this study considers commitment as an antecedent to loyalty, by taking the conceptual view of Kiesler (1971), where commitment is a 'pledging or binding of an individual to behavioural acts'. A similar view with respect to affective commitment was also expressed by researchers like Fullerton (2003), Johnson et al. (2006), Kim et al. (2008) and Touzani and Temessek (2009). Further Kim et al. (2008) and Mathew et al. (2014) have shown that commitment has a mediating role between brand credibility and brand loyalty. Thus this study proposes:

Hypothesis: *The higher the affective commitment, the higher will be the true brand loyalty towards the brand.*

Ramaseshan and Stein (2014) found that the customer becomes more committed to a brand when they have positive experiences with it. Further as an experience seeking creature, a customer wants his experiences repeated and this in turn enhances the commitment. Further, the role of affective commitment among brand loyalty and brand experience investigated by Iglesias et al. (2011) has shown that affective commitment mediates the relationship. Further Shamim and Butt (2013) investigated the role of brand experience in consumer based brand equity and purchase intention and found that the effect is mediated through brand credibility and brand attitude. Following these arguments the study hypothesises that:

Hypothesis: *The higher the brand experience for an individual, the higher the individual's affective commitment.*

Role of Brand Credibility and Affective Commitment

Some studies have established the mediating capacity of affective commitment and brand credibility among the relationship between brand experience and brand loyalty. They include, Iglesias et al. (2011) who investigated the role of affective commitment as a mediator and Shamim and Butt (2013) who showed brand credibility can mediate the said relationship. Further, some others have established the mediating capacity of the brand-relationship-quality construct, with Loyalty (Francisco-Maffezzolli, Semprebon, & Prado, 2014; Kim, Park, & Kim, 2014; Park & Lee, 2005; Valta, 2013). Thus based on the available literature it is assumed that affective commitment and brand credibility mediate the relationship between brand experience and true brand loyalty.

Based on these stated hypotheses the conceptual model at this stage is as follows:
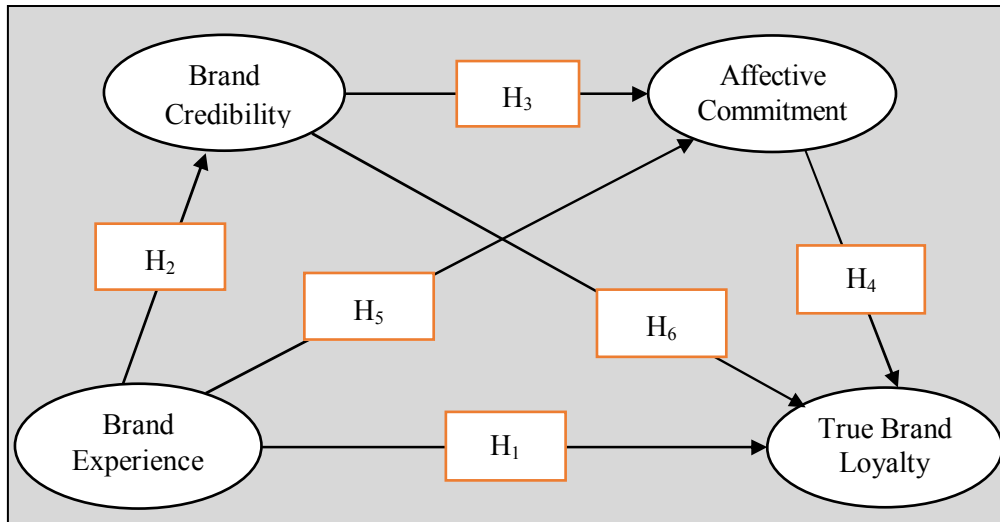
Note: H_1 to H_6 represents the hypothesis 1 to hypothesis 6.

Figure 2.2: Conceptual model without involvement

The conceptual model at this stage (Figure 2.2), posits that brand experience builds true brand loyalty directly as well as indirectly. The indirect effect of brand experience on true brand loyalty, is postulated in three ways, first through the creation of brand credibility (i.e. *brand experience → brand credibility → true brand loyalty*); second through affective commitment (i.e. *brand experience → affective commitment → true brand loyalty*) and third through brand credibility and affective commitment (i.e. *brand experience → brand credibility → affective commitment → true brand loyalty*). This conceptual model is extended further in order to investigate the variation in this direct and indirect effect of brand experience under different levels of involvement.

2.5 Involvement

Involvement is defined as 'perceived relevance of a product class, based on the consumer's inherent needs, interests and values' (Zaichkowsky, 1985, p.342). A product could be relevant to the consumer in many ways. Involvement literature mainly considers the relevance in terms of product's 'importance' and 'hedonic' (Chaudhuri, 1998; McQuarrie & Munson, 1987; Zaichkowsky, 1985, 1987, 1994). Involvement originates from social psychology (Sherif &Cantril, 1947). It refers to the relationship between an individual, an issue or object. This conceptualisation has been adapted in consumer behaviour after Krugman (1965). Many researchers had attempted to conceptualise involvement. All those endeavours considered level of involvement as the extent to which the object/product is personally relevant. (Celsi & Olson, 1988; Michaelidou & Dibb, 2006; Zaichkowsky, 1985)

Houston and Rothschild (1977) proposed three types of involvement namely, situational involvement, enduring involvement and response

involvement. Situational involvement is external to the individual, enduring involvement is internal to the individual and these two together produce the third type, response involvement. These three types of involvement proposed is based on the Stimulus-Organism-Response (S-O-R) paradigm in learning theory (Arora, 1982). Enduring involvement depends on the degree to which the product is related to the individual's self-image, or the pleasure received from thoughts about or the use of the product (Higie, Feick, & Linda, 1991). This is the result of an ongoing interest with the product class and is independent of the situation (Richins & Bloch, 1986). Bloch and Richins (1983) define situational involvement as "a temporary perception of product importance based on the consumers' desire to obtain particular intrinsic goals that may derive from the purchase and/or usage of the product". This type of involvement results from the detailed evaluation of the objective stimuli, such as cost or performance features of the product, or perceived risk (Dholakia, 2000). These two types of involvement combine to influence the response involvement. 'Response involvement refers to the complexity or extensiveness of cognitive and behavioural process characterising the consumer decision process. The decision process entails a sequence of stages. Response involvement exists in different forms depending on the stage of decision process' (Houston & Rothschild, 1977). Thus, in comparison, enduring involvement results from the product's ability to satisfy consumer's enduring and self-identity-related needs, while situational involvement refers to the raised level of interest arising from a specific situation such as a purchase and the response involvement is dependent on the stage of decision process. Thus both situational and response involvement are situation specific and are not long term as in the case of enduring involvement. This study focuses on true brand loyalty, which is considered as a long lasting behaviour reflected

through the repeat purchase of the same brand under brand sensitivity. Hence the researcher decided to consider enduring involvement, which is operationalized in terms of product and subject involvement.

2.5.1 Moderating Role of Involvement

Zaichkowsky (1985) proposed that different people perceive the same product differently and will have inherently different levels of involvement with the same product. Such an approach treats involvement as an individual based concept and it is also referred as ego involvement, by Traylor (1981b). Researchers like Bloch, Commuri and Arnold (2009), Lastovicka and Gardner (1978b), Lastovicka (1979), Martin (1998), Swoboda, Haelsig, Schramm-Klein and Morschett (2009), Tyebjee (1979) and Zaichkowsky (1985) have expressed a similar view. Alternatively, involvement is considered as a product level variable and the researchers in this group categorized products into high and low involvement or made their unit of analysis as product (Chaudhuri, 1998, 2000; Churchill & Surprenant, 1982; Gotlieb, Schlacter, & Louis, 1992; Kim et al., 2008; Quester & Lim, 2003 etc.)

Ray et al. (1973) introduced the idea that involvement can affect the nature of information processing undertaken during a product selection. This made the concept highly researchable. During the decision making process, a highly involved consumer will gather more information and such acquired information will be compared with the already existing knowledge base to form cognitive structures in the memory (Bei & Widdows, 1999; Bloch et al., 1986; Celsi & Olson, 1988). Involvement also influences the way one processes the received information. A highly involved consumer 'will pay higher levels of attention to all information and the processing will be out of

volition, while a low involvement consumer pays low level of attention, as they will consider it as superfluous and the processing will be done automatically'(Heath, 2001). When customers are concerned with the product, they are expected to show positive responses towards the brand (Mathews-Lefebvre & Valette-Florence, 2014) and are expected to be more aware of the product quality (Mulvey, Olson, Celsi, & Walker, 1994). Further, it is true that the brand will serve as a signal for its credibility (Erdem & Swait, 1998). Hence a highly involved customer is more likely to perceive the brand as a signal for its credibility within the product class, than a customer with low involvement. Further the group of customers who are likely to be less involved, consider the product class as trivial and have little bonding or attachment to their brand (Lastovicka & Gardner, 1978b; Traylor, 1981b). However, the group of customers who are highly involved with the product are found to be more committed to the brand (Amine, 1998b; Beatty & Kahle, 1988; Kim et al., 2008; Traylor, 1981b; Warrington & Shim, 2000). There are several studies which have pointed out that consumers with high involvement are more loyal to the brand than low involvement consumers (Amine, 1998a, 1998b; Assael, 1998; Baker, Cronin, & Hopkins, 2009; Quester & Lim, 2003; Traylor, 1981b; Walker & Knox, 1997). Thus the literature on involvement provides sufficient evidence to support the view that involvement influence credibility, commitment and loyalty.

Krugman (1965) posits that under high involvement conditions, a communication is likely to first affect cognition, followed by attitude and then behaviour, whereas under low involvement conditions it is likely to affect cognition first, but it will be followed by behaviour and then attitude. Extending Krugman's proposition and the attitude theory by Ajzen (1991),

to this scenario, it is possible that the effect of credibility (a belief) on commitment (an attitude) and the effect of commitment on loyalty (a behaviour) can vary under different levels of involvement. Further, evidence from Suh and Yi (2006) pin points that involvement has a moderating effect on brand attitude and loyalty and Mathews-Lefebvre and Valette-Florence (2014) pointed out both situational and enduring involvement have a moderating effect on perceived quality and purchase intention. This is since the consumer is more aware of what constitutes product quality, when they are more concerned with the product. Erdem and Swait (1998), found when a consumer perceives their experience is consistent with firm's product claims, the ability of the brand to signal credibility increases. So when a customer is highly involved the effect of brand experience on credibility could be different from the situation in which he/she is low involved.
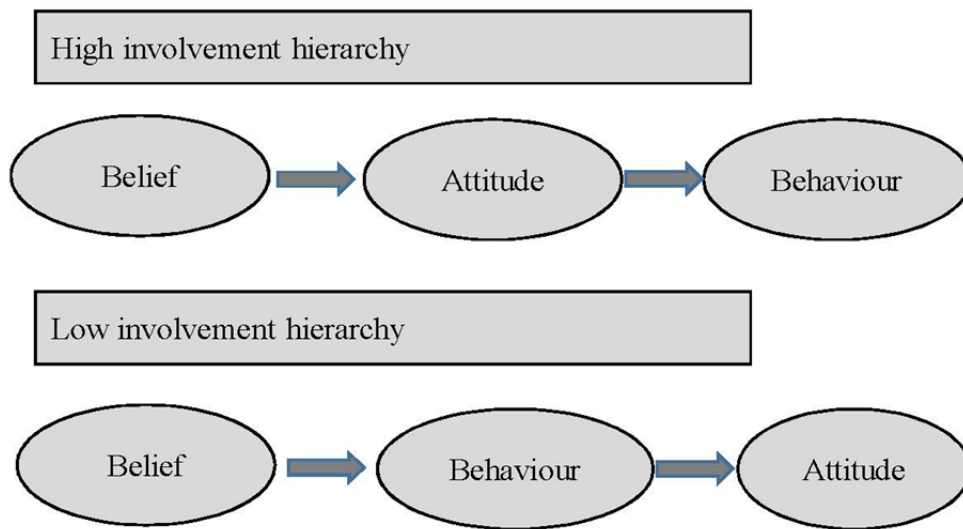
Source: Loudon and Bitta, (1993)

Figure 2.3: Low-high Involvement Hierarchy

Within the Customer Experience Management paradigm, product usage by itself is the first source of brand experience (Schmitt, 2003). But the ability of a consumer to evaluate the correspondence between expectations and performance is dependent on the knowledge of the consumer. Thus, in the case of the low involved consumer, she/he may not be motivated or capable of this evaluation (Bloemer & Kasper, 1995) and so the experience could be different from that of a highly involved consumer. Erdem and Swait (1998) also reports that, under information asymmetry, brand investments (advertisements or related activities) made by the company on the brand, will be a source for its credibility. Under Customer Experience Management, every touch point with the customer is expected to provide a memorable customer experience, whereby the consumers could differentiate the product. Thus any communication or an advertisement from the firm is expected to inform and entertain the customer, thus providing brand experience. Such messages will be retained in their memory (Schmitt, 2003). Since a high involvement customer is more open to any information than a low involved (Heath, 2001; Park, Lee, & Han, 2007), it is likely that the effect of these brand experiences on brand credibility will be different among low and high involved.

Further, for similar reasons mentioned above, a low involved consumer pays less attention and importance to the efforts taken up by the firm to maintain its relationship with its consumers. So the contribution of brand experience on affective commitment and loyalty could be different for high and low involved consumers. Under these circumstances, it is possible that effect of brand experience on the considered consequences namely brand credibility, affective commitment and true loyalty could be moderated by involvement. More specifically, involvement can change the way in which the

brand experience affects true loyalty. Moreover the findings of Kim, Lim and Bhargava (1998) states that when there is little information to cognize, the impact of affect and cognition on attitude formation was found to be an inverse relationship, for a low involvement product like pizza.

Further, Mathew et al. (2014) were able to demonstrate the differences in the hierarchy-of-effects of *brand awareness* → *brand credibility* → *brand commitment* → *loyalty Intentions* among low/high consumer involvement groups. The survey was conducted for a single product, deodorant which belongs to a relatively low-involvement product class. Involvement had a moderating role on the paths *brand credibility* → *brand commitment* → *loyalty intentions*. Further the hierarchy-of-effects on intention is found to be different for low and high involved groups of consumers, supporting the arguments of Krugman (1965). The hierarchy-of-effects supported full mediation among the high involvement groups while for low involvement a partial mediation in the role of brand commitment was observed.

Based on these evidences from literature, the researcher proposes to investigate the moderating role of involvement on the above stated hypotheses and the model per se. More specifically, this study is extended to investigate the hierarchy-of-effect of brand experience, brand credibility, affective commitment on loyalty intention under low and high levels of involvement.

Research in the area of involvement lacks consistency in its operationalization. Researchers like Assael (1998), Dick and Basu (1994) and Jensen and Hansen (2006) argue that "true brand loyalty comes from repeat purchasing of high involvement products, whereas repeat purchasing of low involvement products simply represents habitual purchase behaviour".

Jensen and Hansen (2006) found that "Consumers seek more variety with low-involvement products and are more willing to vary their purchase experiences by switching brands". Amine (1998b) found that consumers' commitment to a brand is indirectly affected by their level of product involvement. All these researches have considered involvement as a product dependent concept, classifying the products into low and high involvement groups. But several others have opined that for any given product category, consumers' level of involvement will differ (Bloch et al., 2009; Houston & Rothschild, 1978; Lastovicka & Gardner, 1978a; Martin, 1998; Tyebjee, 1979; Zaichkowsky, 1985). This is because involvement is partly dependent on his/her values and needs, so that personal meaning or the relevance of the individual attributes of the product will vary and different individuals will have inherently different levels of involvement with the same product (Zaichkowsky, 1986). These researches have considered the consumers' involvement for a particular product, by classifying consumers according to their different levels of involvement. Further, Chaudhuri (2000), Nkwocha, Bao, Johnson and Brotspies (2005) and Zaichkowsky (1994) have stated that involvement can also result from the interaction of the person with the product. Research under this approach considered multiple products belonging to different levels of product-involvement and also considered subjects' involvement with the respective products.

These three approaches in the operationalization of involvement treat the concepts differently. The first approach considers the reason for variation in involvement as situation, the second approach considers the reason as the individual and the third approach takes an interactionist position as suggested by Hornik (1982). Explicating further, under the first, the factors related to the

context i.e. product in this case, accounts for the major cause of variation in involvement. While in the second approach it is assumed that subjects (personal factors) by themselves are expected to account for the major source of the variance. Finally, according to the interactionist approach, neither the subject differences nor contextual factors alone are assumed to be important per se. Instead the interaction of the subject within the context is expected to explain most of the variance.

The approaches in operationalization of involvement explained above provide the scope for extending the investigation of this study in three ways. First - treating involvement purely as a product related concept (referred to as between-product involvement in this study), second - by treating involvement purely as a subject (consumer) related concept (referred to as between-subject involvement) and third - as an interaction of product and subject (referred to as interaction-effect). Thus, incorporating all these, the present study is extended to investigate the hierarchy-of-effect of brand experience on true brand loyalty under three conditions, namely between-product-involvement, between-subject-involvement and interaction-effect of between-product and between-subject involvement. Based on these arguments, considering involvement as a moderator, the following hypotheses were formulated:

Hypothesis 7: *Involvement will moderate the relationships posited in the figure 2.2, thereby suggesting that those stated relationships among the high involvement will be different from low involvement.*

The above stated hypothesis has three sub-hypotheses, which are based on the three operationalization of involvement and are as follows:

Hypothesis 7a: *The stated relationships as given in figure 2.2 among the high involvement products will be different from low involvement products (i.e. between-product-involvement).*

Hypothesis 7b: *The stated relationships as given in figure 2.2 among the high involvement consumers will be different from low involvement consumers (i.e. between-subject-involvement).*

Hypothesis 7c: *The stated relationships as given in figure 2.2 among the six subgroups of low and high involvement consumers within products will be different (i.e. between-subject and between-product interaction groups).*

2.6   Conceptual Model

The conceptual model in this study tries to answer the following questions:

1)   How the efforts taken by the managers towards creating a better brand experience would get converted to true brand loyalty under low and high involvement?

2)   Do they differ at all? If they do, do they differ on the basis of *products* which belong to different level of involvement (between-product), or on the basis of *individual* differences in involvement (between-subject) or on the basis of the interaction of between-product and between-subject?

Thus the researcher decided to investigate the hierarchy-of-effects among brand credibility-affective commitment-true brand loyalty in the presence of brand experience under different levels of involvement. Using the arguments of Krugman (1965) and the theory of reasoned action by Ajzen (1991), the

researcher argues that brand experience has both direct and indirect effects on true brand loyalty. The direct effect and indirect effect will vary by the involvement, measured in terms of product difference, subject difference and an interaction of product and subject differences. The expected differences in the direct and indirect effect of brand experience across different levels of involvement (between-products, between-subjects and interaction effect) will have direct implications for managers who are engaged in creating experiences, establishing trustworthiness and developing customer relationships.

Thus the conceptual model (Figure 2.4) first posits that brand experience builds true brand loyalty directly, and indirectly through the creation of product as well as customer dimensions namely brand credibility and affective commitment. Further the researcher would like to explore the changes in the direct and indirect effects as mentioned above, under the conditions of low and high involvements because of the between-product-involvement, differences in perceived relevance (between-subject-involvement) and an interaction of between-product and between-subject involvement.

The indirect effects of brand experience on true brand loyalty, are postulated in three ways, first through the creation of brand credibility (i.e. *brand experience → brand credibility → true brand loyalty*); second through affective commitment (i.e. *brand experience → affective commitment → true brand loyalty*) and third through brand credibility and affective commitment (i.e. *brand experience → brand credibility → affective commitment → true brand loyalty*). Further the direct and indirect effects of brand experience vary under conditions of low and high involvements. The conditions of involvement are operationalized as product-involvement, subject-involvement and an interaction of product and subject involvement.
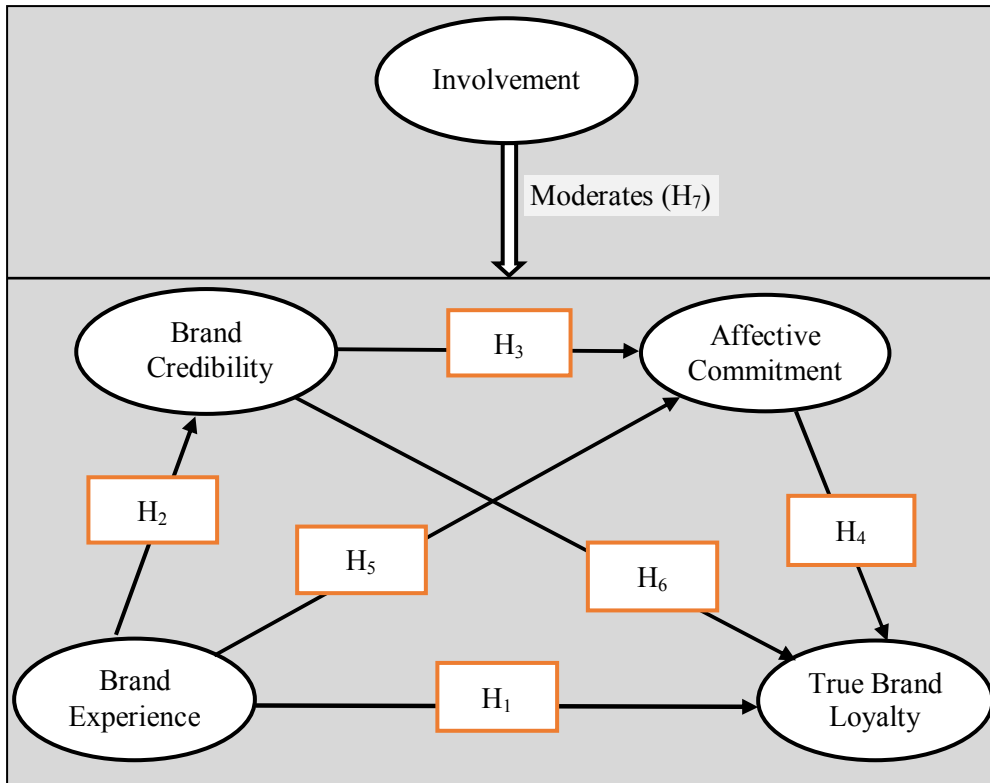
Figure 2.4: Conceptual model

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Chapter **3**

RESEARCH METHODOLOGY

3.1 Statement of the Problem

In an increasingly competitive market place, maintaining loyal customers is a critical challenge faced by many organisations. The recent literature on brand loyalty has identified brand experience as one such factor which helps marketers in maintaining loyal customers. So today's marketers take special efforts to develop strategies for providing everlasting experience at every customer touch point. Conscious efforts are also taken to maintain relationships with customer as well as development of trust with the brand. Brand experience is expected to contribute to the formation of product and customer dimensions which are the major determinants of loyalty. But, even with all these efforts, it is

a known fact that not all brands succeed. So there is much more to understand about when brand experience successfully creates true loyalty and when it does not. Thus, this study tries to consider the relationship of brand experience and select product and customer dimensions on true brand loyalty.

3.2 Objectives

Based on the conceptual focus discussed and the model delineated in the previous chapter, the study continues to investigate the following set of objectives and test the hypotheses stated.

3.2.1 Major Objective

To study the hierarchy-of-effects of brand experience, brand credibility, affective commitment on true brand loyalty across varying levels of involvement.

3.2.2 Specific Objectives

1) To study the direct effect of brand experience on true brand loyalty.

2) To study the indirect effect of brand experience on true brand loyalty mediated through

    (a) brand credibility

    (b) affective commitment

    (c) brand credibility and affective commitment

3) To investigate the variation in the direct and indirect effects of brand experience on true brand loyalty under:

    (a) low and high levels of between-product-involvement;

    (b) low and high levels of between-subject-involvement.;

    (c) interaction effect groups of between-product and between-subject involvement

3.3 Research Hypotheses

Based on the literature given, the following six hypotheses are formulated about the expected relationship between the variables.

Hypothesis 1: *Higher the brand experience, higher is the true brand loyalty towards the brand.*

Hypothesis 2: *Higher the brand experience, higher is the brand credibility towards the brand.*

Hypothesis 3: *Higher the brand credibility, higher is the affective commitment towards the brand.*

Hypothesis 4: *Higher the affective commitment, higher is the true brand loyalty towards the brand.*

Hypothesis 5: *Higher the brand experience, higher is the affective commitment towards the brand.*

Hypothesis 6: *Higher the brand credibility, higher is the true brand loyalty towards the brand.*

The hypotheses stated here are based on the conceptual model presented earlier. Further the researcher would like to investigate the variations in the conceptual model under high and low involvements. Thus involvement is treated as a moderator variable in this study, which is operationalized in three ways, namely between-product involvement, between-subject involvement and an interaction of between-product and between-subject involvement. Accordingly, the following hypothesis is included:

Hypothesis 7: *Involvement will moderate the relationships posited in the figure 2.2, thereby suggesting that those stated relationships among high involvement will be different from low involvement.*

The above stated hypothesis has three sub-hypotheses, which are based on the three operationalizations of involvement and are as follows:

Hypothesis 7a: *The stated relationships as given in figure 2.2 among the high involvement products will be different from low involvement products (i.e. between-product-involvement)*

Hypothesis 7b: *The stated relationships as given in figure 2.2 among the high involvement consumers will be different from low involvement consumers (i.e. between-subject-involvement)*

Hypothesis 7c: *The stated relationships as given in figure 2.2 among the six subgroups of low and high involvement consumers within products will be different (i.e. between-subject and between-product interaction groups).*

3.4   Definitions

3.4.1 True Brand Loyalty

Theoretical definition:

True Brand loyalty is defined as a repeat purchasing behaviour under conditions of strong brand sensitivity. But repeat purchase behaviour under weak brand sensitivity is considered as brand inertia (Odin et al., 2001). Brand sensitivity is defined as the degree to which the brand name plays a key role in the choice process of an alternative in a given product category (Kapferer & Laurent, 1983 as cited in Odin et al., 2001).

Operational definition:

Operationally true brand loyalty is the product of repeat purchase behaviour and brand sensitivity (Odin et al., 2001). Repeat purchase behaviour is operationalized in terms of responses given by respondents for themselves about the 'behaviour of always buying the same brand' and 'the behaviour of being loyal to one brand within the product class' as obtained by using the tool developed by Odin et al.. Brand sensitivity is operationalized as the belief held by the consumer about the differences between the brands within the product class as obtained from the responses to the tool developed by Kapferer and Laurent (1983) (as cited in Odin et al., 2001). Repeat purchase behaviour is measured using a three item scale (namely RPB_1, RPB_2, RPB_3) proposed by Odin et al. and the brand sensitivity measured using a single item scale (namely BS_1) of Kapferer and Laurent (as cited in Odin et.al., 2001). The product of *the response of the item of brand sensitivity* and *the response in the three items of repeat purchase behaviour of a consumer*, gives the score of true brand loyalty.

$$TBL_1 = RPB_1 \times BS_1; \quad TBL_2 = RPB_2 \times BS_1 \text{ and } TBL_3 = RPB_3 \times BS_1.$$

3.4.2 Brand Experience

Theoretical definition:

Brand experience is defined as "subjective internal consumer responses (sensations, feelings and cognitions) and behavioural responses evoked by brand related stimuli that are part of a brand's design and identity, packaging, communications and environments" (Brakus et al., 2009).

Operational definition

Operationally, this concept is measured in terms of its four dimensions namely sensory, affective, intellectual and behavioural. The sensory dimension

refers to visual, auditory, tactile, gustative and olfactory stimulations provided by the brand. The affective dimension refers to feelings and emotions induced by the brand. The intellectual dimension refers to the ability of the brand to evoke the consumer's convergent and divergent thinking. The behavioural dimension includes the bodily experiences, lifestyle and physical action induced by the brand (Brakus et al., 2009; Iglesias et al., 2011; Zarantonello & Schmitt, 2010). Brand experience concept is measured using the scale developed by Brakus et al. (2009).

3.4.3 Brand Credibility

Theoretical definition:

'Brand credibility is defined as the believability of the product information contained in the brand, which requires that consumers to perceive the brand as having the ability (i.e. expertise) and willingness (i.e. trustworthiness) to continuously deliver what has been promised' (Erdem et al., 2006; Erdem & Swait, 2004).

Operational definition:

Brand credibility has been operationalized in terms of two dimensions, namely trustworthiness and expertise. Trustworthiness implies that a brand is willing to deliver what is promised, while expertise implies that it is capable of delivering (Erdem & Swait, 1998). Thus the responses given by the respondents for themselves about the brand that they own/use on the perceived attributes such as 'delivers its promises', 'believability in claims and advertisements', 'trustable name', 'using technology to deliver better product', 'competent and knowledgeable'. The measurement is done by using the scale adapted from Erdem and Swait (1998). It is treated as a one-dimensional

variable in this research following the suggestion given by Erdem et al. (2006).

3.4.4 Affective Commitment

Theoretical definition:

'Affective commitment is the degree to which a customer identifies and is personally involved with a company' (Bendapudi & Berry, 1997; Garbarino & Johnson, 1999; Johnson et al., 2006; Morgan & Hunt, 1994).

Operational definition:

Affective commitment has been operationalized in terms of the responses given by the respondents for themselves about the brand they use/own. The respondents have proposed perceived attributes such as 'continuing relationship', 'belief that manufacturer is interested in the way I use the product', 'providing feedback' and 'arranging events to show new products'. These attributes would reflect the perception held by the respondent about the attachment that he/she has towards the brand/manufacturer. Affective commitment is measured using the scale developed by Johnson et al. (2006).

3.4.5 Involvement

Theoretical definition:

Involvement with a product is defined as 'perceived relevance of a product class, based on the consumer's inherent needs, interests and values' (Zaichkowsky, 1985, p.342).

Operational definition:

This study focuses on true brand loyalty, which is considered as a long lasting behaviour. Hence this study has considered enduring involvement. This

involvement is operationalized in three different ways. First, in terms of products, where they are classified into low and high involvement products; second, in terms of subjects' perceived relevance, and third, as an interaction of subject and product based involvement.

Product involvement:

FCB (Foote Cone & Belding) developed a comprehensive communication model known as FCB grid (Vaughn, 1980) based on the traditional consumer response theories (Kotler, 1965) and hierarchy-of-effects model (Vaughn, 1986). This model proposed a grid, which classifies the products based on 'low-high involvement' and 'think-feel'. FCB grid was later modified by Rossiter and Percy incorporating awareness instead of 'think-feel', which is known as Rossiter-Percy Grid (Rossiter, Percy, & Donovan, 1991). As categorized in these grids, car was selected as a high involvement product and toothpaste a low involvement product (Laurent & Kapferer, 1985; Rossiter et al., 1991). Apart from these two products, mobile phone handset was selected as a product whose involvement is between car and toothpaste (Nkwocha et al., 2005). This method of classifying involvement is referred as between-product involvement in this study. Such an approach of operationalizing product involvement based on product categories was adopted by (Amine, 1998b; Assael, 1998; Chaudhuri, 1998, 2000; Dick & Basu, 1994; Jensen & Hansen, 2006; Kim et al., 2008).

Subject involvement:

The second operationalization of involvement is based on subject (or consumer), reflecting the perceived relevance depending on his or her values and needs. Operationally subject involvement is the degree to which the

product is related to the individual's self-image, or the pleasure received from thoughts about or the use of the product (Higie et al., 1991; Richins & Bloch, 1986; Zaichkowsky, 1985).This also reflects the hedonic and self-expression components as conceptualized by Higie and Feick (1989) and Laurent and Kapferer (1985). Subject involvement is measured using the 10-item scale of enduring involvement developed by Higie and Feick (1989) which is a modified scale of Zaichkowsky (1985). The sum of the responses of these 10 items is categorized into high- involvement and low-involvement, based on the centre of the scale. This involvement is referred to as between-subject involvement in this study. Thus both between-product and between-subject involvement consider involvement as high and low.

Interaction of between-subject and between-product involvement:

The third operationalization of involvement is based on the view of Chaudhuri (2000), Nkwocha et al. (2005), Zaichkowsky (1994). According to them, involvement is the result of an interaction of the person with the product. Researches based on this approach have considered products belonging to different levels of product-involvement and considered the subjects' involvement within these products (Chaudhuri, 2000; Nkwocha et al., 2005).Thus for the purpose of the study within each product (car, mobile phone handset and toothpaste) the subjects will be classified into low and high based on the between-subject-involvement score.

3.5 Scope of the Study

Through the scope of the study, the researcher is trying to define the boundaries of this research with respect to time, place or location, population and source(s) from which the relevant information have been obtained. The

study has considered the following products: car, mobile phone handset and toothpaste; where car and toothpaste represented high and low involvement products respectively, mobile phone handset falls in between car and toothpaste in terms of product-involvement.

3.5.1 Time Dimension

This study is cross sectional in capturing the concepts of brand experience, brand credibility, affective commitment and true brand loyalty and focuses on the hierarchy-of-effects under high and low involvement conditions. This study does not consider 'the past' and 'the future' time dimensions of the variables considered. The time span relevant for the observation in this study is from June to November 2013, the period during which actual data collection was completed.

3.5.2 Place

The study is geographically limited to the State of Kerala

3.5.3 Data Source and Data Collection

The very objective of the study is about the variation in hierarchy of effects of brand experience, brand credibility, affective commitment on true brand loyalty of high and low involved owners of car or mobile phone handset or consumers of toothpaste. So, the source of data has been primary in nature and was collected from owners and users of the said products.

Questionnaire survey is a widely accepted as an efficient tool for measuring perceptions of individual on a particular subject. The survey research method is very useful to collect data from a large number of respondents within a relatively shorter period of time. The cost implications

are also less compared to other methods of data collection. The questionnaires were distributed to the eligible respondents both in person and through the online survey portal, SurveyMonkey.

3.6 Population
3.6.1 Products Selected

As mentioned earlier, the hierarchy of effects by the antecedent variables on the outcome variable were compared, by design, across variations in degree of involvement of consumers. Cars, mobile phone handsets and toothpaste were adjudged by experts as representing descending degrees of involvement in that order. This also ensured that only search and experience goods are included in the study.

'Search goods' are products or services whose usefulness can be verified even before the purchase and 'experience goods' are products or services whose usefulness can be verified only after the consumption (Arora, 2006; Srinivasan & Till, 2002). The third category, 'credence goods' can be defined in the following manner. 'Credence goods are products or services whose usefulness or necessity to the buyer is better known to the seller than to the buyer. The information asymmetry implied, often persists even after the credence good is consumed' (Fong, 2005). Moreover, it would be costly for a consumer to judge the attribute, even after consumption (Hahn, 2004). In case of such products, it is likely that the product credibility could lead to its consumption or experience. Therefore, the study excluded credence goods per se.

3.6.2 Socio-Economic-Classification Included

This research had used The Market Research Society of India – Media Research Users Council - 2011 (MRSI & MRUC, 2011) classification criteria for

SEC. Operationally Socio-Economic-Classification is defined in terms of educational qualification of the chief earning member of the household and the number of consumer durables owned by the family. The list of consumer durables owned is a predefined list of 11 household items namely electric connection, ceiling fan, LPG stove, two wheeler, colour television, refrigerator, washing machine, personal computer/laptop, car/jeep/van and air conditioner. The educational qualification is classified into seven groups namely, Illiterate, Literate but no formal schooling or done schooling up to 4 years, attended school for 5 to 9 years, SSC/ HSC, attended some college (including diploma) but not Graduate, Graduate or Post Graduate (General), Graduate or Post Graduate (Professional). Based on these two variables, a family could be classified into one of the 12 categories of SEC namely A_1, A_2, A_3, B_1, B_2, C_1, C_2, D_1, D_2, E_1, E_2 and E_3 as per the new system (MRSI & MRUC, 2011). The criteria for this classification are given in table A1.1, page 167. Of these 12 categories of SEC, the present study has considered only A_1 and A_2 which represents the highest level of SEC.

The restriction in SEC categories was enforced to ensure greater homogeneity in sample selection in order to control the variation in the conceptual model because of the possible moderation effect of SEC.

Population defined: Thus the population for the study is defined as owners of the car, mobile phone handset or consumers of toothpaste, who belong to A_1 and A_2 categories of Socio-Economic-Classification (SEC) and residing in the state of Kerala.

3.7 Basic Research Design

The study is descriptive cum explanatory in nature. The study is descriptive as it tries to portray the characteristics of loyalty, commitment, credibility,

brand experience and involvement for the three products selected namely car, mobile phone handset and toothpaste. The study also looks into the precedent-outcome relationships between brand experience and its consequences like credibility, commitment and loyalty and also investigates the direct and indirect effect of brand experience on loyalty. Further, it tries to look into the variation in the direct and indirect effects of brand experience and is thus explanatory also in character.

3.8   Sampling Design

As per the definition of population, the researcher needed to take samples from owners of cars, mobile phone handsets and users of toothpastes who belonged to A_1 and A_2 categories of Socio-Economic-Classification (SEC) residing in the state of Kerala, India. Since the source list (sampling frame) for such a population is non-existent, it was decided to proceed with non-probability sampling method for this study.

3.8.1 Sampling Method and Sample Size

The researcher has used quota sampling method where quotas were specified for the owners or consumers of the products selected. Product formed the major criteria for quota as it is the focus of the research. This is because the research basically focuses on the variation among the population in terms of their product involvement, as borne out by the conceptual model.

The sample size required for the study was estimated based on the focus of the study and the analysis design. The focus of this study is mainly on the variation in the influence of brand experience on its outcome variables due to involvement. The variation is assessed by using multi-group-invariance testing procedure in Structural Equation Modelling (SEM) (Byrne, 2010). SEM method

requires sufficiently large samples as it uses Maximum Likelihood Estimation (MLE) procedures. So the sample size estimation considered the requirements of SEM. There is lack of consistency in literature with respect to sample size requirements in SEM. Anderson and Gerbing (1984) found that a sample size of 150 will usually be sufficient to obtain a converged and proper solution for models with three or more indicators per factor'. Boomsma (1982) recommended a sample size of 400, while Bentler and Chou (1987) suggested that a ratio of 5 subjects per variable would be sufficient for normal and elliptical distributions, when the latent variables have multiple indicators and that a ratio of at least 10 subjects per variable would be sufficient for other distribution' (Schumacker & Lomax, 2004). Muthén and Muthén (2002) suggests a sample size of 315 when data is non-normal and has missing values and a sample size of 150 when data is normal and is without any missing values based on a Monte-Carlo study in MLE.

Involvement under this study is construed in three ways namely between-product involvement, between-subject involvement and interaction of between-product and between-subject. Under the first operationalization, between-product-involvement three products are selected. The study tries to explicate the variations in influence of brand experience on outcome variables across these three products. In the second operationalization, subjects (respondents) will be categorized into two groups, namely low and high for between-subject involvement groups and the variations in influence across the groups are assessed. In the third operationalization, subjects (respondents) are categorised into low and high groups for each product. This process will result in six sub-groups in the sample namely, car-low, car-high, mobile-low, mobile-high, toothpaste-low and toothpaste-high. Further, the study tries to explicate

the variations in influence across these six groups. Thus the conceptual model needs to be tested for the variation in path coefficients in all these six sub-groups.

The variation in influence is estimated by using multi-group invariance testing procedure in SEM. The sample size in each of these subgroups must meet the minimum requirements mentioned above. Since the number of subgroups is maximum as per the third operationalization (six subgroups), this number has been considered for the sample size estimation. As per above mentioned requirements, the sample size needs to be between 300 and 400 in each of these six subgroups. Further there are two subgroups within each product. Hence the quota for each product was fixed at 1000 adding to a total sample of 3000 respondents.

3.8.2 Units of Observation

The unit of observation is an individual owner of a car or mobile phone handset or a consumer of toothpaste who also belongs to A_1 or A_2 Socio-Economic-Classification (SEC) of 2011. The unit of observation and the sampling unit are the same, for the purpose of this study.

3.9   Tools for Data Collection

3.9.1 Questionnaire Structure

The questionnaire consisted of two parts, Part A and Part B. In Part A, the statements were about the product, which includes statements of involvement towards the product and brand sensitivity. Part B began with questions about the brand name of the product they own/use and also measured the extent of agreement towards the given statements about the four

constructs namely brand experience, brand credibility, affective commitment and repeat purchase behaviour. As mentioned before, this research selected three products. Hence there were three questionnaires, one for each product. A copy of the questionnaires used for data collection is provided in appendix III.

3.9.2 True Brand Loyalty

True brand loyalty is operationalized in terms of repeat purchase behaviour and brand sensitivity. The repeat purchase behaviour was measured using a three item questionnaire of Kim et al. (2008), which is a modified version of Odin et al. (2001). The respondents were asked to indicate their agreement or disagreement to the statements on a seven point scale ranging from 'strongly disagree' to 'strongly agree'. Brand sensitivity was measured using a single item questionnaire from Odin et al., which was adapted from Kapferer and Laurent (1983) (as cited in Odin et al., 2001). The respondents were asked to indicate their agreement or disagreement to the statement on a seven point scale ranging from 'strongly disagree' to 'strongly agree'.

3.9.3 Brand Experience

Brand experience is operationalized as a second order variable consisting of four factors/dimensions namely sensory, affective, intellectual and behavioural experiences. The measurement of this variable was done using Brand Experience scale developed by Brakus et al. (2009). This scale consists of 12 items, measuring the four dimensions of brand experience dimensions namely sensory (3 items), affective (3 items), intellectual (3 items) and behavioural (3 items). The respondents were asked to indicate their extent of agreement with each of the 12 items listed in the questionnaire, on a 7-point scale ranging from strongly disagree to strongly agree, with midpoint 4, labelled as neutral.

3.9.4 Brand Credibility

Brand credibility was measured using a seven item questionnaire adapted from Kim et al. (2008), which is a modified version of Erdem and Swait (1998). The respondents were asked to indicate their agreement or disagreement to these statements on a seven point scale ranging from 'strongly disagree' to 'strongly agree'.

3.9.5 Affective Commitment

Affective commitment was measured using a five item questionnaire derived from Johnson et al. (2006). One item for this scale was removed from the questionnaire, after its pre-testing (explained later). Accordingly this statement was removed from the questionnaire. The respondents were asked to indicate their agreement or disagreement to the statement on a seven point scale ranging from 'strongly disagree' to 'strongly agree'.

3.9.6 Enduring Involvement

The subject (customer) involvement is measured using the scale adapted from Higie and Feick (1989) which is a modified version of Zaichkowsky (1985). This scale has 10 items of which the first five items measuring self-image and the remaining items measuring pleasure were obtained. The respondents were asked to mark their agreement or disagreement to each of those 10 items using a 7-point scale ranging from 'strongly disagree' to 'strongly agree' with the mid-point representing neutral position.

3.9.7 Socio-Demographic Profile

The tool for data collection also included questions for capturing the demographic profile of the respondents like gender, age, occupational status,

place of residence and socio economic classification. Measurement of Socio-Economic-Classification was based on method suggested by MRUC and MRSI 2011(further details refer page 167). Questions to identify the brands they own/use for car, mobile phone handset and toothpaste (for car and mobile phone handset it can be either name of manufacturer or brand) were also included.

3.10 Pre-testing of the Questionnaires

The process of pre-testing the questionnaires was conducted among a convenient sample of 149 business/self-employed, salaried class and house wives. Out of this sample, 50 responded to the questionnaire on car, 49 responded to the questionnaire on mobile phone handset and another 50 responded to the questionnaire on toothpaste. Out of 149 respondents, 60.4 percent belonged to A_1 and the remaining in A_2 group of SEC. It was also observed that 72 percent of respondents in car were classified as high in subject involvement, while 38.8 percent were classified as high in subject involvement for mobile phone handset and for toothpaste 30 percent are classified as high in subject involvement. Thus, the pilot study revealed that probability of getting respondents who are 'low-involved' in the product car was low and getting 'high involved' respondents in toothpaste was also low.

3.10.1 Reliability

Reliability of an instrument is the degree to which it yields a consistent score of the variable under consideration. There are several methods to establish the reliability of an instrument. Of all the methods, internal consistency is the most effective method. The internal consistency of a set of items refers to the homogeneity of items in a particular scale. Internal

consistency is estimated using a reliability coefficient called Cronbach's Alpha (Cronbach, 1951). Cronbach's Alpha values based on the pilot study for the tools were found to vary between 0.929 and 0.959 except for affective commitment. For affective commitment, Alpha value was found to be 0.774. A further investigation revealed that one of the item [If the (product) manufacturer were a person, I would like to have him or her as a friend] had an item-to-total correlation of -0.094, a low value. If this item was dropped the Alpha value would increase to 0.913. Thus it was decided to drop the statement, from the questionnaire and so, affective commitment was measured using 4 items. Alpha values based on the pilot study for the four dimensions of brand experience are, sensory 0.949; affect 0.952; behavioural 0.944; intellectual 0.959; for brand credibility 0.929 and for true brand loyalty 0.955. An Alpha value of 0.7 or more is considered to be the criterion for demonstrating strong internal consistency of established scales (Nunnally, 1978). Alpha value for these variables based on the final sample is reported in the chapter IV.

3.11 Generation of Data Records

The researcher distributed the questionnaires in person to the target respondents as well as through 'SurveyMonkey', a web-portal for conducting online survey. Questionnaires were personally distributed at business houses and households of the respondents in six districts in Kerala, Thiruvanathapuram, Kottayam, Idukki, Ernakulam, Trichur and Palakkad. Personal follow-ups were made, in case of no response. For the purpose of online survey, all three questionnaires were made available in the website of 'SurveyMonkey' and the URL to access one of those questionnaires along with a covering letter sent via e-mail to those listed in the database. The database of email addresses was

created from the alumni list of the post graduate Programmes of two management institutes in Kochi, Kerala and also from the personal contact list of the friends and relatives of the researcher. All those who were residing out of the state of Kerala were removed from the available database. Those who had completed the Master programme during the year 2013 were also excluded. The database obtained thus had 1830 email addresses and were sorted in alphabetical order. This database was divided into three groups by assigning first person to first group, second to the second group, third to third group, fourth person to first group and so on. Each of these group is assigned with a product, namely the first group was assigned with the product car, second with mobile phone handset and third group with toothpaste. After assigning the product, personalised emails intimating respondents about the data collection were send to all those who were in the database, from the personal email-id of the researcher. Further, a system generated URL for one product, along with a brief introduction about the survey and the research were mailed from the 'SurveyMonkey' online portal web-account. Three system-generated personally addressed follow-up mails were send from the web-portal, first after 3 days, second after 7 days and final one after 15 days to those who had not responded.

The questionnaire started with a question 'do you own/use the respective product'. If the response is 'No', the survey ended and in such cases reallocation of product (questionnaire) was done. The product wise details of questionnaire distributed and response rate are provided in Table 3.1.

Table 3.1: Product wise details of survey method and responses collected

Product	Method of survey	No. of Questionnaires distributed	No. of responses received	No. of invalid responses	No. of valid responses	Response rate (percent)
Car	Personally distributed	1100	759	56	703	0.639
	Online Survey	610	420	22	398	0.652
	Total for car	*1710*	*1179*	*78*	*1101*	*0.644*
Mobile Phone Handset	Personally distributed	1100	739	83	656	0.596
	Online Survey	610	357	12	345	0.566
	Total for mobile	*1710*	*1096*	*95*	*1001*	*0.585*
Tooth paste	Personally distributed	1100	823	72	751	0.683
	Online Survey	610	406	34	372	0.610
	Total for toothpaste	*1710*	*1229*	*106*	*1123*	*0.657*
Total		**5130**	**3504**	**279**	**3225**	**0.629**

The researcher distributed 5130 questionnaires in the two different methods mentioned earlier, for the three products. 3504 filled-in questionnaire were received back. A detailed examination of data resulted in deletion of 279 data records. Thus the final data set included 3225 records. This has resulted in an overall response rate of 62.9 percent. The response rate varies from 56 percent to 68 percent depending on the method adopted for the data collection for the respective product. The rejection of 279 data records was either

because the respondent is ineligible as they belong to SEC category other than A1 and A2 or their place of residence is presently out of the geographical region of Kerala State or they haven't provided the demographic details. Further sample details are given in Chapter IV.

3.12 Statistical Analysis and Validation

Comparison of arithmetic means, t-test and ANOVA for comparison of arithmetic means and Structural Equation Modelling (SEM) were the statistical tools used during the analysis. In SEM, Confirmatory Factor Analysis (CFA), testing of causal structure, Sequential Chi-square Difference Tests (SCDT), Multi-group Invariance Testing procedures were used. SEM procedures have been executed using the software IBM-SPSS-AMOS-21 and other statistical analyses were done using SPSS-17. MS-Excel-2013 was also used to execute the procedures of testing variation of the conceptual model using multi-group invariance testing, in SEM.

The analysis of data was initiated from the respondent profile on the basis of socio-demographic variables like gender, age, occupational status, region of residence and socio economic classification. Analysis covered inter alia the validity and reliability of the tools used and eventually progressed to the conceptual model for testing. Further, the variations in conceptual model were explicated for the subgroups, namely between-products, between-subjects and interaction effect subgroups.

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ASSESSMENT OF THE CONCEPTUAL MODEL AND ITS VARIATION ACROSS SUBGROUPS

4.1   Analysis Overview

This chapter deals with the empirical validation of the present study on the basis of results obtained from analysing the final data. The analysis and the results are explained in four stages. The chapter begins with the sample profile, which forms the first stage. It then proceeds to Confirmatory Factor Analysis (CFA) which establishes the overall fit of the measurement model.

The second stage also looks into the reliability and validity of each of the measurement tools. The assessment of conceptual model without including involvement forms the third stage. The final stage presents the results of an investigation into the variation in the conceptual model due to involvement.

4.2   Profile of the Respondents

4.2.1 Classification Based on Gender

Out of 3225 respondents 50.7 percent were men, while the remaining are 49.3 percent were women. Further details are given in the table 4.1.

Table 4.1: Classification of respondents based on Product and Gender

Product		Gender		Total
		Male	Female	
Car	*Frq*	709	392	1101
	Percent	64.4	35.6	100
Mobile phone handset	*Frq*	428	573	1001
	Percent	42.8	57.2	100
Toothpaste	*Frq*	499	624	1123
	Percent	44.4	55.6	100
Total	***Frq***	1636	1589	3225
	Percent	50.7	49.3	100
Abbreviations used: Frq = frequency.				
Note: Percent calculation is based on the total of the row.				

Out of 1101 respondents for the product car, 64.4 percent are men, while 42.8 percent respondents of mobile phone handset are men out of 1001 respondents and of 1123 respondents of toothpaste 44.4 percent respondents are men.

4.2.2 Classification Based on Age

Age in completed years of the respondent was classified into three groups namely age from 22-30, 31-45 and 45 and above. Age of the respondent ranges from 22 to 69, of which 46.2 percent belong to the age group of 22 to 30, another 43.7 percent belong to the age group of 31 to 45 and the remaining 10.2 percent are between 46 and 69. For the product car, the age of the respondent ranges from 25 to 68, with 88.3 percent are in age-bracket less than or equal to 45. For the product mobile phone handset the age ranges from 22 to 69, with 87.9 percent in the age-bracket less than or equal to 45, while for toothpaste, the age was between 22 and 67 where 93.1 percent were less than or equal to 45. Further details are given in the table 4.2.

Table 4.2: Classification of respondents based on Product and Age

Product		Age			Total
		22 to 30	31 to 45	46 to 69	
Car	Frq	376	596	129	1101
	Percent	34.2	54.1	11.7	100
Mobile phone handset	Frq	467	412	122	1001
	Percent	46.7	41.1	12.2	100
Toothpaste	Frq	646	400	77	1123
	Percent	57.5	35.6	6.9	100
Total	**Frq**	1489	1408	328	3225
	Percent	46.2	43.7	10.2	100

Abbreviations used: Frq = frequency.
Note: Percent calculation is based on the total of the row.

4.2.3 Classification Based on Occupation

The respondents were divided into salaried, self-employed/business and others. Out of 3225 respondents 74.3 percent belong to salaried class, while 16.6 percent belong to self-employed/business and remaining 9.1 percent were home makers or retired employees which were regrouped as 'others'. Approximately 73 percent of respondents in car and mobile phone handset and 75 percent of toothpaste respondents belonged to the salaried class. 23 percent respondents of car, 15.8 percent respondents of mobile phone handset and 11 percent of toothpaste users were self-employed or having their own business and the remaining in all three groups were home makers or retired persons. Further details are given in the table 4.3.

Table 4.3: Classification of respondents based on Product and Occupation

Product		Occupation			Total
		Salaried	**Business/Self -Employed**	**Others**	
Car	Frq	813	253	35	1101
	Percent	73.8	23.0	3.2	100
Mobile phone handset	Frq	734	158	109	1001
	Percent	73.3	15.8	10.9	100
Toothpaste	Frq	850	125	148	1123
	Percent	75.7	11.1	13.2	100
Total	**Frq**	2397	536	292	3225
	Percent	74.3	16.6	9.1	100
Abbreviations used: Frq = frequency.					
Note: Percent calculation is based on the total of the row.					

4.2.4 Classification Based on Place of Residence

The respondents are from the different parts of Kerala namely, Northern Kerala, Central Kerala and Southern Kerala are given below. Southern Kerala includes Thiruvananthapuram, Kollam, Pathanamthitta, Alappuzha and Kottayam districts while Central Kerala includes Idukki, Ernakulam, Trichur districts and the remaining districts are in Northern Kerala. 25.8 percent respondents are from Southern Kerala, 56.9 percent from Central Kerala and remaining from Northern Kerala. Between 54 to 60 percent respondents in all the products are from Central Kerala, 23 to 27 percent from Southern Kerala and remaining from the Northern part. Further details are given in the table 4.4.

Table 4.4: Classification of respondents based on Product and Region

Product		Region			Total
		Southern Kerala	Central Kerala	Northern Kerala	
Car	Frq	347	473	281	1101
	Percent	31.5	43.0	25.5	100
Mobile phone handset	Frq	294	456	251	1001
	Percent	29.4	45.6	25.1	100
Toothpaste	Frq	419	439	265	1123
	Percent	37.3	39.1	23.6	100
Total	**Frq**	1060	1368	797	3225
	Percent	32.9	42.4	24.7	100
Abbreviations used: Frq = frequency. Note: Percent calculation is based on the total of the row.					

4.2.5 Classification Based on Socio-Economic-Classification

Table 4.5: Product and Socio-Economic-Classification details of respondents

Product		Socio-Economic-Classification		Total
		A1	**A2**	
Car	Frq	802	299	1101
	Percent	72.8	27.2	100
Mobile phone handset	Frq	596	405	1001
	Percent	59.5	40.5	100
Toothpaste	Frq	565	558	1123
	Percent	50.3	49.7	100
Total	**Frq**	1963	1262	3225
	Percent	60.9	39.1	100
Abbreviations used: Frq = frequency. Note: Percent calculation is based on the total of the row.				

As per the sampling plan, this study has considered A1 and A2 SEC groups. Approximately 61 percent of respondents belong to A1 group while 39 percent belong to A2. 72 percent respondents of car belong to A1 group, while 59.5 percent respondent of mobile phone handset and 50.3 percent respondent of toothpaste belong to A1. Further details are given in the table 4.5.

The profile of the sample shows that sample selected got sufficient representation from different segments of the population, which enables the researcher to proceed to the empirical validation of the proposed conceptual model and its variations.

4.3 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) focuses on the extent to which the observed variables are generated by the underlying factors. This is achieved by a priori specification of relationship between the observed measures and the underlying factors. CFA allows the researcher to test the factorial structure of an instrument in order to determine the extent to which the items expected to measure a particular latent construct actually measures it (Byrne, 2010). Thus the focus of CFA is primarily on the link between observed and latent variables within the framework of Structural Equations Modelling (SEM) and so it is often considered to be a measurement model. This measurement model will then be evaluated statistically in order to determine the goodness-of-fit in the sample data (Anderson & Gerbing, 1988).

CFA model in this study hypothesises a priori that (1) responses to the brand experience can be explained by four factors namely, sensory, affective, behavioural and intellectual; and responses to brand credibility, affective commitment and true brand loyalty is explained by a single factor (since involvement is considered as a dichotomous variable with low/high values, it is not considered for CFA). (2) each item has a non-zero loading to the respective factor and zero loadings on all other factors (3) the latent constructs are correlated (4) error term associated with the items of measurement are uncorrelated (Byrne, 2010).

The measurement model includes the items measuring the four constructs in the conceptual model. Corresponding to each of those four constructs, the measuring instrument includes 12 items of brand experience (three items each for four dimensions of brand experience), seven items of

brand credibility, four items measuring affective commitment and three items measuring true brand loyalty.

Apart from the coefficients calculated, the measurement model is evaluated statistically in order to determine the goodness-of-fit of the model in the sample data. Indices used are Chi-squared, Normed Chi-Squared, GFI, AGFI, RMSEA, SRMR, NFI, CFI and RFI. Further tools used for comparison of models like AIC, CAIC, BIC and BCC and Hoelter index are also reported. A brief description of these set of indices used in this report is given below:

4.3.1 Chi-Square Statistic

Chi-squared (χ^2) statistic tests the null hypothesis that the *estimated* variance-covariance matrix of indicator reproduces the *observed* or *sample* variance-covariance matrix. In SEM, a good fit is implied when χ^2 statistic is insignificant (Bagozzi & Yi, 2012). χ^2-value is sensitive to sample size and so, in case of a large sample size, the chances of getting a satisfactory model decreases. As a result, researchers have suggested many alternate indices. One such index is χ^2/degrees of freedom (Normed-Chi-square) suggested by Wheaton, Muthen, Alwin and Summers (1977).

4.3.2 Goodness of Fit and Adjusted Goodness of Fit Indices

Jöreskog and Sörbom (1989) have suggested the two goodness-of-fit indices namely GFI (Goodness of Fit) and AGFI (Adjusted Goodness of Fit). GFI is a measure of the relative amount of variance and covariance in the sample data that could be jointly explained by the hypothesised model. AGFI adjusts GFI for model parsimony and incorporates penalty for additional parameters used. Both GFI and AGFI vary between 0 and 1; a

value greater than 0.90 is required to accept a model (Byrne, 2010; Hox & Bechger, 1998).

4.3.3 Root Mean Square Error of Approximation and Root Mean Square Residual

Root Mean Square Error of Approximation (RMSEA) tries to assess the average amount of misfit for a model per degree of freedom (Bagozzi & Yi, 2012). A lower value shows that the given model approximates well, and usually RMSEA values less than 0.06 are acceptable (Bagozzi & Yi, 2012; Hu & Bentler, 1998, 1999). Confidence interval for RMSEA shows whether the value calculated is significantly larger than the required (Byrne, 2010). Root Mean Square Residual (RMR) represents the average residual obtained by fitting the residual value derived from fitting variance-covariance matrix of the sample data to the variance-covariance matrix hypothesized model. The magnitude of RMR is relative to the observed variance and covariance, and is difficult to interpret. While Standardized RMR (SRMR) represents the average value across all standardized residuals and ranges from 0 to 1, a value less than 0.08 for SRMR are acceptable (Bagozzi & Yi, 2012; Byrne, 2010; Hu & Bentler, 1998, 1999).

4.3.4 Normed Fit Index, Comparative Fit Index and Relative Fit Indices

Bentler and Bonett (1980) suggested Normed Fit Index (NFI), which provides an indication of variation in the data. Bentler (1990) modifies NFI in order to consider sample size and has proposed Comparative Fit Index (CFI). NFI and CFI compare the hypothesized model with an independence (null) model. Independence model is the model which assumes the correlation between all variables as zero). Relative Fit Index (RFI) is also a modification of NFI proposed by Bollen (1986). Values of NFI, CFI and RFI

varies between 0 and 1 and values greater than 0.90 (Bentler, 1990) is considered to be requisite, but later Hu & Bentler (1999) revised the cut off to 0.95.

4.3.5 Fit Measures Used for Comparison

Akaike's Information Criterion (AIC), Bozdogan's consistent version of the AIC (CAIC), Browne-Cudeck Criterion (BCC) (Browne & Cudeck, 1989) and the Bayes Information Criterion (BIC) were used in the comparison of two or more models, with smaller values representing a better fit of the hypothesized model (Hu & Bentler, 1995). The basic difference among these indices is that both the BCC and BIC impose greater penalties than either the AIC or CAIC for model complexity (Byrne, 2010).

Hoelter (1983) Critical N (or Hoelter's 0.05 and 0.01 indices) focuses directly on the adequacy of sample size, rather than on model fit. Its purpose is to estimate a sample size that would be sufficient to yield an adequate model fit for a χ^2 test (Hu & Bentler, 1995). Hoelter proposed that a value in excess of 200 is indicative of sample adequacy.

4.3.6 Distributional Assumptions of MLE

For estimating the parameters in SEM, Maximum Likelihood (ML) methods are employed. An important assumption of ML estimation is the distributional assumption of data, that is, the data follows multivariate normal. For this, the kurtosis of every item was looked into. This is because kurtosis effects tests of variances and covariances while skewness effects tests of means (Byrne, 2010, p.103). The kurtosis values found to vary between -1.469 and 1.246 except one item in brand credibility with value 2.478. These values found to be much lesser than the cut-off score of 7 (Kline, 2005). Hence, we

can conclude that no item is substantially kurtotic. In order to test multivariate normality, Mardia's normalised estimate was considered. It is stated that 'when the sample size is sufficiently large and is multivariate normal, Mardia's normalised estimate is distributed as a unit normal variate such that large values reflect significant positive kurtosis and large negative values reflect significant negative kurtosis. Bentler, (2005) has suggested values > 5.00 are indicative of data that are non-normally distributed' (Byrne 2010). For the data, it was observed that the value as 43.108, showing that the data shows non-normal characteristics. However, Chou & Bentler, (1995) suggested that 'MLE estimators are quite robust to violation of normality. That is, the estimates are good estimates, even when the data are not normally distributed'. Based on these arguments, researcher has decided to proceed with MLE method in Structural Equations Modelling procedures.

4.3.7 Confirmatory Factor Analysis Results

The values of fit measures obtained from CFA for the conceptual model without considering involvement are as follows; Chi-Squared with 289 degrees of freedom, $\chi^2 (289) = 2396.054$, p<0.01; the ratio of chi-square to the number of degrees of freedom (normed χ^2) = 8.291; Comparative Fit Index (CFI) = 0.971; Goodness of Fit Index (GFI) = 0.941; Adjusted Goodness of Fit Index (AGFI) =0.921; Normed Fit Index (NFI) = 0.968; Relative Fit Index (RFI) = 0.963; the Standardized Root Mean Squared Residual (SRMR) = 0.035; Root Mean Square Error of Approximation (RMSEA) = 0.048 (90 percent confidence interval for RMSEA lies between 0.046 and 0.049). The Akaike's Information Criterion (AIC), Browne-Cudeck Criterion (BCC), Bayes Information Criterion (BIC) and consistent version of the AIC (CAIC) values for hypothesised model, saturated model

and independence model are reported in the table 4.6. These values are expected to be smallest for the hypothesised model or at least closer to the saturated model (Byrne, 2010, p.82). Only CAIC value for hypothesised model is lower than independence model and saturated model.

Table 4.6: Model comparison indices: Before re-specification

Model	AIC	BCC	BIC	CAIC
Hypothesized model	2520.054	2521.101	2896.933	2958.933
Saturated model	702.000	707.929	2835.620	3186.620
Independence model	73801.830	73802.270	73959.876	73985.876
Abbreviations used: AIC = Akaike's Information Criterion; BCC = Browne-Cudeck Criterion; BIC = Bayes Information Criterion; CAIC = Consistent Akaike's Information Criterion				

Hoelter's 0.05 and 0.01 critical N values are 444 and 469. Hoelter's critical N values being greater than 200 show that the sample size of this study is satisfactory for the model (Byrne, 2010, p.93).

Further, the Modification Indices were looked into, and theoretically justifiable re-specifications were made for the said conceptual model (Anderson & Gerbing, 1988; Bagozzi & Yi, 2012; Byrne, 2010). From the modification indices, the error covariance for the two items e28 and e29 was found to be 333.404 and were freed to estimate, as they were found to be closely related. This re-specification procedure produced some improvement in chi-square χ^2 (288) = 2036.066; $\Delta\chi^2$ (1) = 359.988, p<0.01; and the change in chi-square, $\Delta\chi^2$, is significant.

Proceeding in the same way, based on modification index, four more error covariances were added to the model; (1) e27 and e28 (2) e23 and e24 (3) e24 and e25 (4) e35 and e37. Adding each of these error covariances, one at a time,

produced significantly better measurement (refer table A2.1, page 170 for further details). Standardized factor loadings after re-specification are given figure 4.1. The unstandardized factor loadings and its significance provided in table A2.2, squared multiple correlations in table A2.3, and model comparison indices in table A2.4 are in appendix II (page 171-172).

Error covariance reflects the overlapping of content in items measuring the constructs (Byrne, 2010, p.202). While including the error covariances this aspect was considered. Four out of five error covariances used are among the items of brand credibility and the remaining error covariance is among the two items of affective commitment. The items under brand credibility are 'brand name you can trust', 'forefront in using technology to deliver a better product', 'someone who is competent and knows what he/she is doing', 'brand gives me what it promises' and 'claims are believable', believe what ads says'. Clearly, all these items check the respondents' belief in the brand they own/use and so their errors can vary together. Similarly, the items in affective commitment namely 'give feedback' and 'continue my relationship' is overlapping by the content and thus their errors may correlate.

The fit measures of the measurement model (after four re-specifications) are as follows: χ^2 (284) = 1311.966, p<0.01; normed χ^2 = 4.620; CFI = 0.986; GFI = 0.968; AGFI =0.961; NFI = 0.982; RFI = 0.980; SRMR = 0.034; RMSEA = 0.034 (90 percent confidence interval for RMSEA is 0.032 to 0.035), showing that the measurement model has been substantially improved by this process. BIC and CAIC values for the hypothesized model are lower than the saturated model and the independence model, and AIC and BCC have decreased, showing an improvement (refer table A2.4). These results show that the measurement model, as such, has improved by the re-specification procedure.
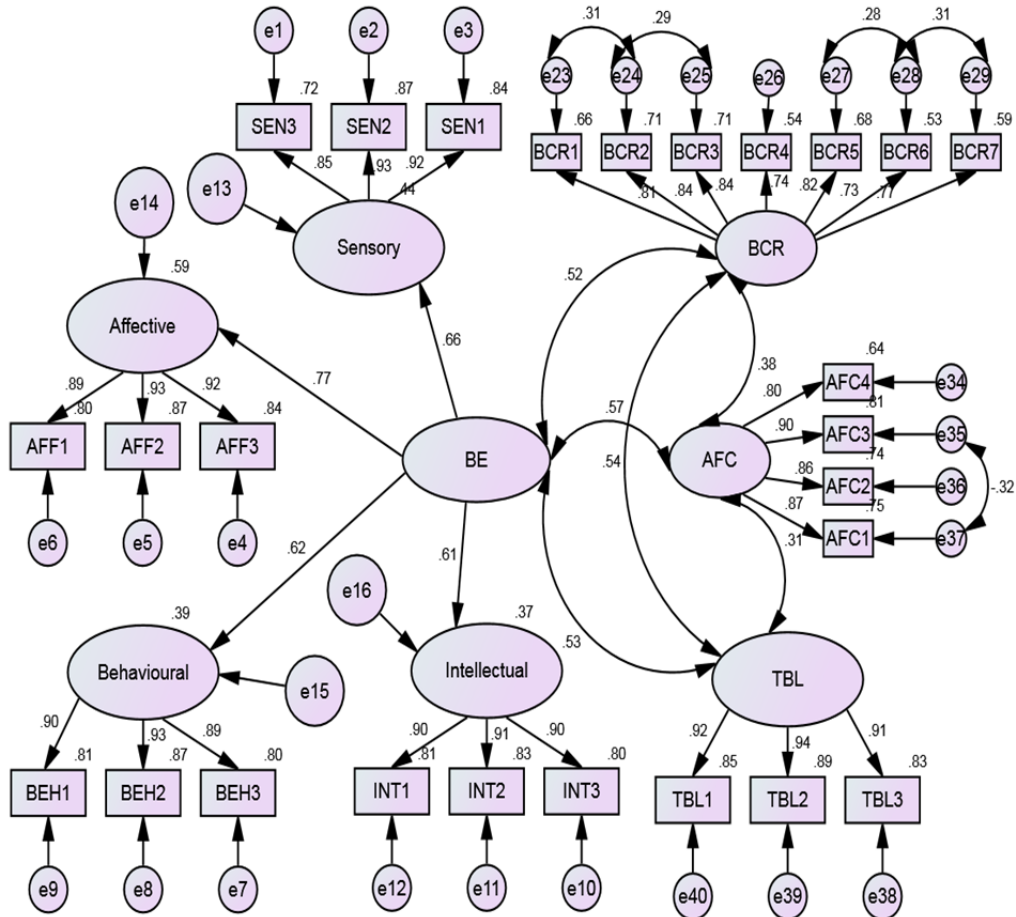
Note: Numbers given on the path are standardised factor loadings, squared multiple correlations and error covariances.

Abbreviations used: TBL = True Brand Loyalty; AFC = Affective Commitment; BE = Brand Experience; BCR = Brand Credibility; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measure Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual dimensions of Brand Experience; tbl1 to tbl3 measure True Brand Loyalty; e1 to e40 are error terms associated.

Notes: Refer appendix III (page 194) for questionnaires.

Figure 4.1: Confirmatory Factor Analysis model output

Thus, considering the statistical significance of all parameter estimates and an acceptable level of goodness of fit, especially by the indicators RMSEA (0.035) and CFI (0.986), the present CFA model was accepted. So it is concluded

that the present measurement structure as shown in the diagram (refer figure 4.1) provides an adequate description of the four constructs, namely brand experience, brand credibility, affective commitment and true brand loyalty.

4.4 Reliability and Validity

The reliability reported in table 4.7 is based on the pooled data of all three products (car, mobile phone handsets and toothpaste). The measuring instrument includes 12 items for brand experience (three items each for four dimensions namely sensory, affective, behavioural and intellectual), seven items for brand credibility, four items for affective commitment, three items measuring true brand loyalty and ten items for subject involvement. The reliability of tools used to measure the variables is estimated using Cronbach's alpha (Nunnally, 1978) as well as construct reliability. Alpha value was found to vary from 0.887 to 0.947. These values are at an acceptable level, the minimum requirement being 0.7, as suggested by Nunnally.

Table 4.7: Cronbach's Alpha of measurement tools

Construct	Cronbach's Alpha	Construct	Cronbach's Alpha
Subject involvement	0.887	Brand credibility	0.928
Brand experience – sensory	0.927	Affective commitment	0.911
Brand experience - affective	0.938	Repeat purchase behaviour	0.915
Brand experience - behavioural	0.934	True brand loyalty	0.947
Brand experience - intellectual	0.930		

4.4.1 Construct Reliability

Construct reliability were manually calculated based on the method suggested by Fornell and Larcker (1981). It is calculated as the ratio between square of the sum of standardised factor loadings to the sum of square of

standardised factor loadings and standardised error variance.

$$\text{Construct reliability} \;=\; \frac{(\sum\limits_{i=1}^{n} \lambda_i)^2}{(\sum\limits_{i=1}^{n} \lambda_i)^2 + (\sum\limits_{i=1}^{n} \delta_i)}$$

where λ_i represents the standardised factor loadings and δ_i represents the standardised error variance (Fornell & Larcker, 1981) and the value is expected to be greater than 0.7. Construct reliability values for the four dimensions of brand experience (sensory, affective, behavioural and intellectual) are found to be 0.935, 0.943, 0.940 and 0.937 respectively, while brand credibility, affective commitment and true brand loyalty have a construct reliability of 0.930, 0.920 and 0.950 respectively. All these values are found to be greater than 0.7 and so the tools have sufficient construct reliability. High values for construct reliability represents internal consistency, and this shows the measures consistently represents the latent variable.

4.4.2 Construct Validity

Construct validity represents the extent to which a set of observed variables represent the theoretical latent constructs they are expected to measure. It is measured through four components namely; face validity, convergent validity, discriminant validity and nomological validity (Churchill, 1979). These methods, try to evaluate the degree of convergence for a set of indicators of a construct, and also the capability to discriminate between the indicators of other constructs and its own (Bagozzi & Yi, 2012). Face validity is implied as this research has adapted standardized scales to measure its constructs.

4.4.3 Convergent Validity

For measuring convergent validity three measures are used: first factor loadings, second Average Variance Extracted (AVE) and construct reliability.

The standardized factor loadings are expected to be at least greater than 0.5 and ideally greater than 0.7 in order to have sufficient convergent validity. From the CFA results, the standardized factor loading corresponding to each item of the latent construct in the model, is significant (p value < 0.001) and the values are greater than 0.7. The least standardized factor loading estimated is 0.729 and the maximum value is 0.943 for first order measurements (refer figure 4.1 for further details).

Fornell and Larcker (1981) suggest that the average variance extracted (AVE) should be estimated for each latent construct in the model and its value should exceed 0.5 for each latent construct, in order to have sufficient convergent validity. AVE is calculated as the sum of the squared standardized factor loadings divided by the number of items, for each latent variable (Fornell & Larcker, 1981). AVE values for the four dimensions of brand experience (sensory, affective, behavioural and intellectual) are found to be 0.827, 0.847, 0.839 and 0.831 respectively, while brand credibility, affective commitment and true brand loyalty have 0.657, 0.743 and 0.864. All these values are found to be greater than 0.5 and so the tools have sufficient convergent validity.

Looking at all results of factor loadings, AVE and construct reliability, it can be concluded that all the measurement items corresponding to the latent constructs can be retained and provides sufficient evidence for convergent validity.

4.4.4 Discriminant Validity

Discriminant validity shows the extent to which a construct is truly distinct from other constructs. This validity is assessed using the method suggested by Anderson and Gerbing (1988, p.416). According to them, discriminant validity can be tested 'for two estimated constructs by constraining the estimated correlation parameter between them to 1.0 and then performing a Chi-square difference test on the values obtained for constrained and unconstrained models' (Jöreskog, 1971 as cited in Anderson & Gerbing, 1988). If the Chi-square value for the unconstrained model is significantly lower than the constrained model, then the tested constructs are not perfectly correlated. This confirms discriminant validity (Bagozzi & Phillips, 1982). Further, the difference test need to be done for one pair of factors at a time and not simultaneously. This is because 'a non-significant value for one pair of factors can be obfuscated by being tested with several pairs that have significant values' (Anderson & Gerbing, 1988, p. 416).

Table 4.8: Chi-square difference tests: Discriminant validity

Model	Constraint imposed	χ^2 Value	d.f.	$\Delta\chi^2$	Δd.f	Proba-bility
Unconstrained Model	Nil	1311.966	284			
Model 1	Corr.(AFC, TBL) =1	1486.527	285	174.561	1	p<0.01
Model 2	Corr.(BCR, AFC) = 1	1414.161	285	102.195	1	p<0.01
Model 3	Corr.(BE, BCR) = 1	1561.345	285	249.379	1	p<0.01
Model 4	Corr.(BCR, TBL) = 1	1985.664	285	673.698	1	p<0.01
Model 5	Corr.(BE, AFC) = 1	1360.672	285	48.706	1	p<0.01
Model 6	Corr.(BE, TBL) = 1	1815.461	285	503.495	1	p<0.01

Abbreviations used: d.f. = degrees of freedom; $\Delta\chi^2$ = difference in Chi-square; Δd.f. = difference in degrees of freedom; p<0.01 = difference in Chi-square is significant; NS = Not Significant; Corr. = Correlation; TBL = True Brand Loyalty; AFC = Affective Commitment; BE = Brand Experience; BCR = Brand Credibility.
Note 1: All models are compared with Unconstrained model for $\Delta\chi^2$ and Δd.f.

The result obtained for Chi-square difference test is given in the table 4.8. In this table the Chi-squared value for all constrained models are compared with the value of the unconstrained model. The Chi-squared value for the unconstrained model is given in the first row of table 4.8. The values are $\chi^2 = 1311.966$, d.f = 284. Next row in the table reports the Chi-squared values for Model 1, where the correlation between affective commitment and true brand loyalty are constrained to 1.0. The values are $\chi^2 = 1486.527$, d.f = 285. Thus the difference in chi-square between model 1 and the unconstrained model, $\Delta\chi^2 = 174.561$, Δd.f = 1 and found to be significant. This shows unconstraint model and model 1 are not perfectly correlated. Similarly every pair has been compared with unconstrained model and found to be significant. These results confirm the constructs have sufficient discriminant validity.

4.4.5 Nomological Validity

Nomological validity is tested by examining whether the correlations between the constructs in the measurement model is as expected (Spiro & Weitz, 1990). As per the table: 4.9, correlations between the constructs are found to be positive and also significant (p<0.001). Thus the inter-construct correlations are consistent with the conceptual model/hypothesis stated. Thus the nomological validity of the stated model is established.

Table 4.9: Inter-construct correlation and average variance extracted

	BE	BCR	AFC	TBL
BE	1.000			
BCR	0.514	1.000		
AFC	0.544	0.378	1.000	
TBL	0.517	0.531	0.282	1.000

Note: All correlations between the constructs are found to be significant (p value < 0.001).
Abbreviations used: BE = Brand Experience, BCR = Brand Credibility, AFC = Affective Commitment, TBL = True Brand Loyalty.

4.4.6 Testing for Common Method Bias

Common Method Bias or Common Method Variance can be a source of error when data for dependent, independent and mediating variables are derived from the same respondent (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). This study uses self-reported data from owners/users of Car, Mobile-Phone or Toothpaste for true brand loyalty, affective commitment, brand credibility and brand experience. This bias is tested using Harman's single factor test. This test works with the principle that under situations of common method variance there exists a single factor which could explain the majority of the covariance among the measures (Podsakoff et al., 2003). Accordingly, an exploratory factor analysis was conducted in order to extract a single factor from all the measures and examined the unrotated factor solution to determine the effect. Test results showed that common method variance is not a problem in this study as the single factor extracted could explain 37 percent of the variance which is much lesser than the cut-off of 50 percent (Podsakoff & Organ, 1986). Further details are provided in appendix Table A2.4A (page 173).

4.5 Assessing the Measurement and Structural Models

A two-stage approach as suggested by (Anderson & Gerbing, 1988) was employed for the assessment of measurement and structural models. The measurement model which depicts the relationships between the latent constructs and the observed measures was analysed at the first stage. The structural model, which investigates the relationships among the latent constructs was analysed in second stage (Koufteros, 1999; Morton & Koufteros, 2008).

4.5.1 Evaluation of Measurement Model

The measurement model, as discussed in the previous section, showed an acceptable fit. With this accepted measurement model, the conceptual model (i.e. the structural model) is tested.

4.5.2 Assessment of the Conceptual Model without Including Involvement

The accepted measurement model is retained as such while testing the conceptual/structural model. Accordingly, the factor loadings obtained will be the same as elaborated in the previous section [figure 4.1, page 74 and table A2.2, page 171] (Byrne, 2010). The unstandardized regression path coefficients with its significance are provided in table 4.10 and standardized coefficients in figure 4.2.

Table 4.10: Regression path coefficients and significance: Conceptual model without including involvement

Regression path			Regression Coefficient	Standard Error	Probability
From	**→**	**To**			
BE	→	BCR	0.587	0.024	p <0.001
BCR	→	AFC	0.141	0.026	p <0.001
BE	→	AFC	0.710	0.033	p <0.001
AFC	→	TBL	-0.317	0.163	NS
BE	→	TBL	3.959	0.281	p <0.001
BCR	→	TBL	3.474	0.195	p < 0.001

Abbreviations used: TBL=True Brand Loyalty; AFC=Affective Commitment; BCR =Brand Credibility; BE = Brand Experience; NS = Not Significant (i.e. p>0.05); '→' = regression path.

Squared multiple correlation (R^2) shows the percentage variation in the concerned variable that could be explained by its predictors. Thus, based on the R^2 value, this model could explain approximately 37.5 percent of variation of true brand loyalty.
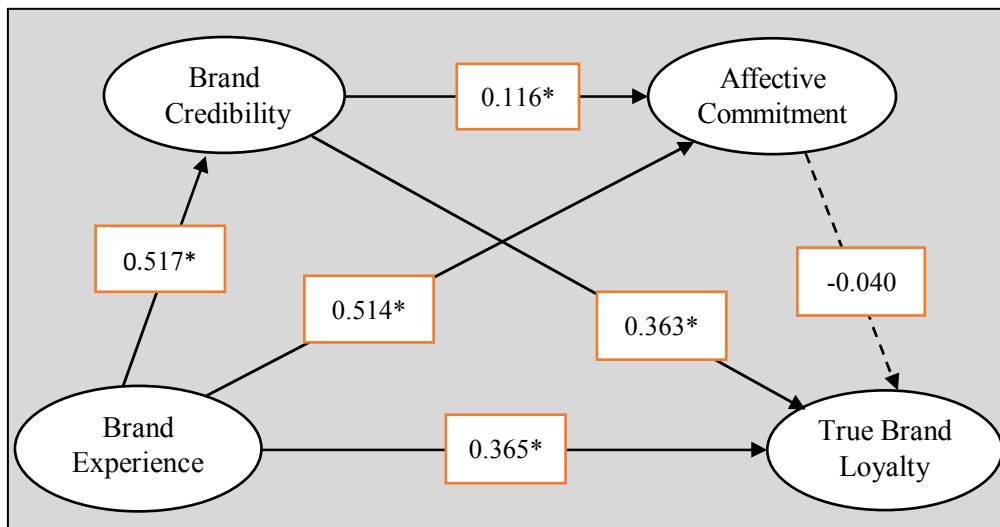
Note: path cofficients represents standardized regression coeffcients; * denotes p< 0.001; dotted line represent insignificant path.

Figure 4.2: Standardised regression coefficients: Conceptual model without involvement

The model fit values are as follows: χ^2 (284) = 1311.966, p<0.01; normed χ^2 = 4.620; CFI = 0.986; GFI = 0.968; AGFI =0.961; NFI = 0.982;   RFI = 0.980; SRMR = 0.034; RMSEA = 0.034 (90 percent confidence interval for RMSEA is 0.032 to 0.035).   AIC, BCC, BIC and CAIC values are given in table: A2.5, page 174. Fit indices shows that the conceptual model fits well. Also BIC and CAIC values for the Conceptual Model are lower than the Saturated Model and the Independence Model, while AIC and BCC values are closer to the saturated model than to the independence model. This shows, by the comparative fit

measures, the conceptual model is better than both saturated and independence model.

Based on the regression coefficients and its significance (refer figure 4.2) the following observations were made. All hypotheses, H_1 to H_6, except H_4 stated in the conceptual model are found to be satisfied and significant. Since the path, *affective commitment → true brand loyalty* is insignificant, the existence of rival/better models within the conceptual model needs to be further investigated.

Even though the conceptual model fits well with data, it is always better to explore the possibilities for better/rival models within the conceptual model. Such exploration provides opportunities to test alternate explanations for the same phenomena and should be tested within the same study, whenever possible (Anderson & Gerbing, 1988). Here one alternate model/rival model (namely M_1) is compared with the conceptual model (M_t). This model M_1, is obtained by constraining the path *affective commitment → true brand loyalty* equal to zero, which is found to be insignificant. Thus in M_1, the direct effect of affective commitment on true brand loyalty is set to zero (other effects are set as-is-in M_t). The comparison of this rival model is done using Sequential Chi-square Difference Test (SCDT) (Anderson & Gerbing, 1988) using IBM-SPSS-AMOS-21.

The chi-square difference test conducted will have a null hypothesis which states 'no significant difference between the two models' (Anderson & Gerbing, 1988, p. 419). If this null hypothesis is proved, the more constrained model could be tentatively accepted. This is because relaxing the constrained parameter does not significantly improve the explanation of the construct

covariance, and parsimony is preferred (Anderson & Gerbing, 1988, p. 420). It should also be noted that the number of parameters that are freely estimated in M_1 is a subset of M_t. Hence, they are considered to be nested models. 'A model M, is said to be nested within another model N, when its set of freely estimated parameters is a subset of those estimated in N' (Anderson & Gerbing, 1988). Thus, in this case, M_1 is nested in M_t, showing that the model M_1 is increasingly restrictive. The result of this test is given in table 4.11.

These results show that comparing M_t with M_1, the difference in Chi-square ($\Delta\chi^2$) in not significant (as p>0.01). Thus the alternate model M_1 is accepted, as it is more restricted. The model fit values for M_1 are as follows: χ^2 (285) = 1315.743, p<0.01; normed χ^2 = 4.617; CFI= 0.986; GFI= 0.968; AGFI =0.961; NFI = 0.982; RFI = 0.980; SRMR = 0.0338; RMSEA = 0.034 (90 percent confidence interval for RMSEA is 0.032 to 0.035). Fit index values of model M_1 are similar to the conceptual model M_t. Indices AIC, BCC, BIC and CAIC are 1447.743, 1448.858, 1848.937 and 1914.937. BIC and CAIC values for the model M_1 are found to be lower than the conceptual model M_t. Thus based on SCDT, the alternate model M_1 is preferred to the conceptual model M_t.

Table 4.11: Chi-square difference tests for rival models

Model	Paths Constrained to zero	χ^2 Value	d.f	Model-Compared with	$\Delta\chi^2$	Δd.f	Probability
M_t	Nil	1311.966	284	-	-	-	-
M_1	AFC→TBL	1315.743	285	M_t	3.777	1	NS

Abbreviations used: d.f=degrees of freedom; $\Delta\chi^2$ =difference in Chi-square; Δd.f = difference in degrees of freedom, AFC=Affective Commitment; TBL=True Brand Loyalty; NS = Not Significant (i.e. p>0.05); M_t= Conceptual Model; M_1 is the rival model/alternate model considered; '→' = regression path.

Thus the comparison of the alternate model within the conceptual model resulted in accepting all hypotheses except H_4. This result contradicted the findings of other researchers like (Iglesias et al., 2011; Johnson et al., 2006; Kim et al., 2008 etc.). The reasons for the rejection of hypothesis H_4 (i.e. the hypothesis *affective commitment* → *true brand loyalty*) need to be further investigated.

The remaining part of the analysis will try to explicate this finding through 'the role of involvement'.

4.6 Assessment of Variation in the Conceptual Model

4.6.1 Design Adopted

The variation in the conceptual model, because of difference in involvement, is investigated further under three situations namely between-product-involvement, between-subject-involvement and interaction of between-subject and between-product involvement. This is achieved through the three different operationalizations of involvement mentioned earlier (refer section 3.4.5, page 45). The design adapted for the creation of three situations is detailed below.

In order to investigate the variation in between-product-involvement, the conceptual model will be tested for three products namely car, mobile phone handset and toothpaste. Of these products, car belongs to high involvement product category while toothpaste belongs to the low involvement category (Rossiter et al., 1991) and mobile phone handset is in between the car and toothpaste (Nkwocha et al., 2005). Thus a simultaneous test of the conceptual model across the three products will look into the variations in the model due to a difference in product based involvement. This variation is termed as 'between-product variations'.

Second, the conceptual model will be tested in a group of respondents who are categorized into high and low based on their subject-involvement score. The difference thus observed will be because of the respondent's perceived involvement with the product. These variations are termed as 'between-subject variations'.

Third, the conceptual model will be tested for its variations due the interaction effect of between-product-involvement and between-subject-involvement. Here, the respondents are categorised into two groups, high and low in involvement within each product based on the subject involvement score. This procedure has resulted in six subgroups within the sample, namely car-low involvement group, car-high involvement group, mobile phone-low involvement group, mobile phone-high involvement group, toothpaste-low involvement group and toothpaste-high involvement group. Further, the conceptual model will be tested simultaneously among all these six subgroups in order to obtain the interaction effect of between-product and between-subject.

The variation in the conceptual model, in the situations mentioned above, is tested using the Multi-group Invariance method in Structural Equation Modelling (SEM). This process of Multi-group Invariance (equivalence) testing is explained further.

4.6.2 Process of Testing Variation in the Conceptual Model

In SEM literature, the procedure related to the testing of differences or similarities in a hypothesis or conceptual model across different groups of the sample is commonly referred to as test of model invariance or multigroup invariance (Byrne, 2010; Koufteros & Marcoulides, 2006). These modelling methods are basically a subset of a general class of approach in SEM.

The process of testing is done in two stages. The first stage compares whether the measurement model used in the study remain invariant (equivalent) across the group. This stage is called Measurement Model Invariance Testing. This invariant measurement structure is then used to establish the variation in the structural paths across groups. According to Byrne (2010) measurement model need not be fully invariant across groups and has suggested an alternate approach, which is used in this study.

4.6.3 Process of Testing Invariance in the Measurement and Structural Model

The procedure for testing multi-group invariance (equivalence) was proposed by Jöreskog (1971). According to him, 'all tests for equivalence begin with a global test of the equality of covariance structures across the groups of interest. In the case where the groups are considered to have equivalent covariance structures, tests for invariance are not needed' (Byrne, 2010, p.198). However, in cases where the non-equivalence of the groups is established, the source of non-equivalence has to be identified before the subsequent testing procedures.

Byrne (2010) has pointed out some inconsistencies with the global test of invariance suggested by Jöreskog (1971) and suggested the testing of 'equality of specific sets of model parameters' approach for multi-group invariance. This approach suggested the test of equivalence of factor loadings, equivalence of factor covariances and equivalence of structural regression paths. While doing the test of invariance, these parameters are tested in a 'logically ordered and increasingly restrictive fashion' (Byrne, 2010). i.e. during the process, first the factor loadings for each measure of the latent variable is tested for its invariance between the groups; and, in all subsequent

tests of invariance, the measures of the latent variable which are found to be equivalent are constrained to be equal.

Byrne (2010) has proposed that the test of factor loading equivalence has to begin with the identification of a baseline model for each group separately. Byrne defines baseline model as the 'one which best fits the data in terms of both parsimony and substantive meaningfulness' (p.199). Since the measuring instrument can behave differently across groups, it is possible that these baseline models may not be completely invariant (Byrne, Shavelson, & Muthén, 1989; Byrne, 2010). So, it is possible that the measurement model could be well fitting in one group while in another group it can have an error covariance or a cross loading. Under such conditions, Byrne et al. (1989), Byrne (2010) and Koufteros and Marcoulides (2006) suggested the implementation of a partial measurement invariance before proceeding with the invariance testing of multi-group structural paths.

Thus while testing multi-group equivalence of regression paths, it is possible that some measurement parameters could be left unconstrained (non-equivalent) across groups. Thus the proposed method of testing of invariance by Byrne (2010) is conducted with the perspective that an a priori knowledge of model specification differences is critical and this perspective is adapted during the analysis.

Thus as mentioned earlier, this testing procedure will be done in two stages. In stage one the baseline measurement model will be tested for its invariance or partial invariance across the groups. In stage two, using the fully or partially constrained measurement model, the invariance (equivalence) of structural paths are tested. The flow chart (figure 4.3) below depicts the process of testing.
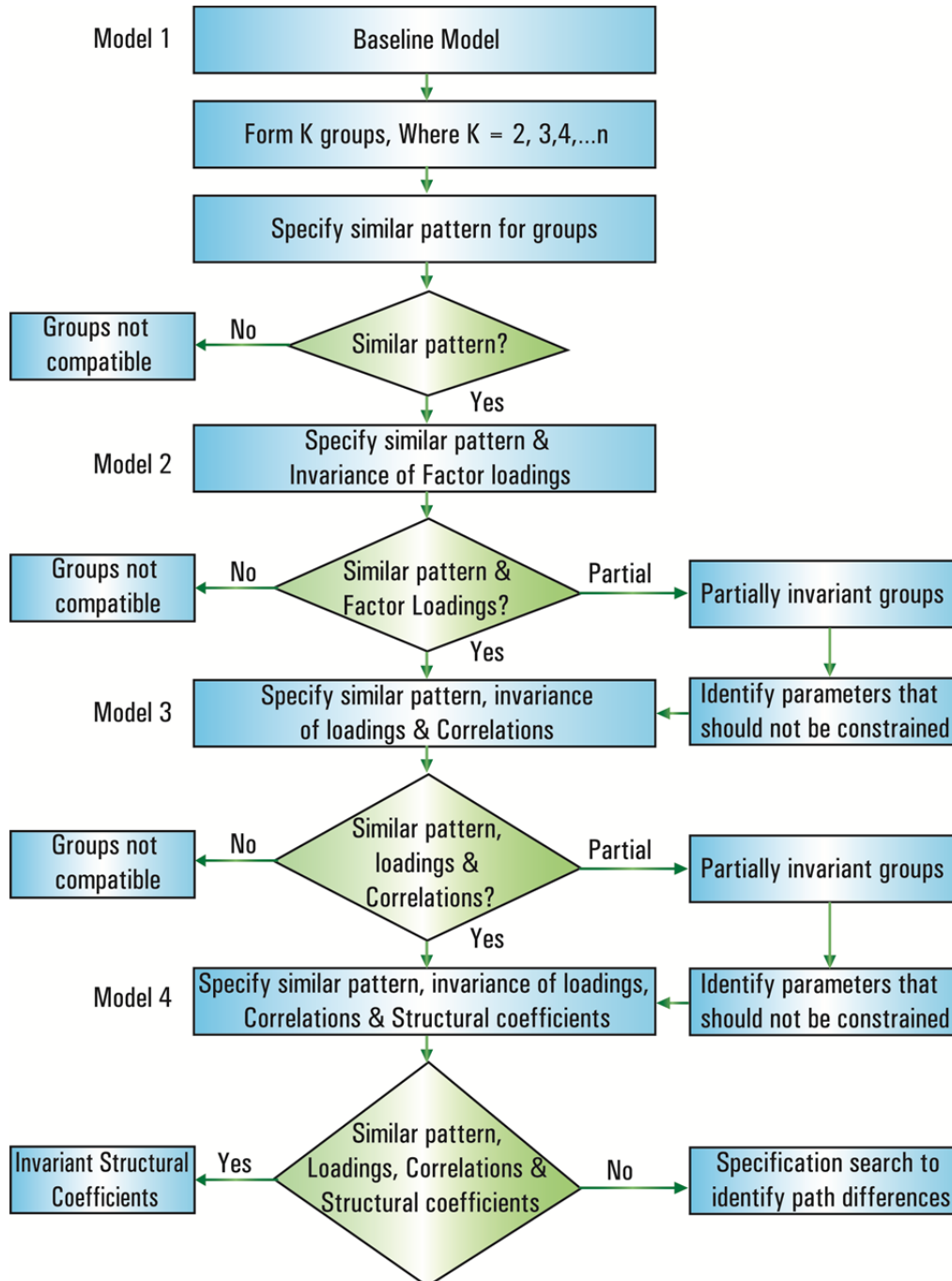
Source: Adapted from Koufteros and Marcoulides (2006)

Figure 4.3: Multi-group invariance testing approach

The procedure and results obtained while testing the variations in the conceptual model are given in the following sections.

4.7 Assessment of Variation in the Conceptual Model: Between-Product Involvement

First, the variation in the conceptual model, because of between-product involvement (i.e. variation in the conceptual model among car, mobile-phone handset and toothpaste) is tested.

4.7.1 Procedure and Results of Testing Multi-Group Invariance

As mentioned in the previous section, the tests of invariance started with the search of a baseline model for all groups separately (namely car, mobile phone handset and toothpaste). For this, the validity test of the measurement model for the products was conducted separately. The results obtained for this test were found to be almost consistent for all products. Based on the modification index, five error-covariances were included for all products. This includes error-cov (23, 24), error-cov (24, 25), error-cov (27, 28), error-cov (28, 29) and error-cov (35, 37). The results obtained for each product for measurement model are shown in table 4.12.

Table 4.12: Fit measures of confirmatory factor analysis: Between-product involvement groups

Group	χ^2-value	Normed-χ^2	CFI	GFI	AGFI	RFI	RMSEA	SRMR
Car	724.362*	2.551	0.980	0.951	0.940	0.963	0.038	0.036
Mobile Phone	591.079*	2.081	0.987	0.954	0.944	0.971	0.033	0.036
Toothpaste	760.076*	2.676	0.982	0.950	0.938	0.968	0.039	0.041

Abbreviations used: χ^2= Chi-square; * = p < 0.01; Normed-χ^2 = χ^2 /d.f; CFI = Comparative Fit Index; GFI=Goodness of Fit Index; AGFI=Adjusted Goodness of Fit Index; RFI= Relative Fit Index; RMSEA=Root Mean Square Approximation; SRMR=Standardized Root Mean square Residual
Note: degrees of freedom (d.f) for each group is 284.

The values of fit indices show the measurement model fits well and it is concluded that the present measurement structure provides an adequate description of the four constructs namely, brand experience, brand credibility, affective commitment and true brand loyalty across the three products. This measurement model is thus accepted as the baseline model.

During the test of invariance across products, this baseline measurement model, referred to as the configural model, is tested simultaneously across the products. In all subsequent models, some or all parameters of the configural model will be constrained to be equal across all groups and are compared with the configural model. The subsequent models obtained will be nested in the configural model (as the freely estimated parameters in a subsequent model will be a subset of the configural model) (Anderson & Gerbing, 1988). Hence, the fit measures of a configural model provide a baseline value against which all subsequently defined model fit values are compared. For the comparison of models Jöreskog (1971) suggested the difference in Chi-square ($\Delta\chi^2$) method. If the difference in Chi-square ($\Delta\chi^2$) between the configural model and the subsequent constrained model is statistically insignificant, invariance of the constrained parameter is claimed, else non-equivalence. An alternate method was suggested by Cheung and Rensvold (2002), which was based on difference in CFI (i.e. ΔCFI). This method suggests, invariance exists if the difference in CFI between the configural model and the subsequent model is less than 0.001. Throughout the analysis, both methods ($\Delta\chi^2$ and ΔCFI) are reported, but the more stringent method suggested by Jöreskog has been followed.

The results of the invariance tests are given in the table 4.13. The fit values for simultaneous test of the configural model across the three products

are provided in the first row of table 4.13. The values are $\chi^2 = 2075.518$, d.f = 852 and CFI=0.983. The next row in the table reports the fit values for Model 1, where all factor loadings, error covariances and covariances are constrained to be equal. The fit values for Model 1 are $\chi^2 = 2525.858$, d.f = 920 and CFI=0.978. Thus the difference in Chi-square between Model 1 and the configural model, $\Delta\chi^2 = 450.340$, $\Delta d.f = 68$ is found to be significant. This show, constraining factor loadings, error covariances and covariances to be equal across products in Model 1, have made it significantly different from the configural model. Hence the constrained paths are found to be not equivalent between the products. If the measurement model were the same between the products, the difference in chi-square could not be significantly different from the configural model. The reasons/sources for this non-invariance were investigated through the following steps and an attempt was made to obtain a partially invariant/equivalent model across all products. For this purpose, Model 2 is created by setting free all constrained path in Model 1, except the factor loadings of true brand loyalty. The result shows the difference in Chi-square, $\Delta\chi^2$ to be insignificant, implying that factor loadings of items measuring true brand loyalty are equivalent across products. Hence in all subsequent models considered in this invariance test, these factor loadings are kept constrained to be equal. Further Model 3 is created by constraining all factor loadings of affective commitment in Model 2, to be equal across the products. The result suggests they are non-equivalent, as $\Delta\chi^2$ is significant. So, a further investigation is required in order to identify the sources of non-invariance and to obtain partially invariant items in affective commitment.

Table 4.13: Invariance tests of measurement model: Between-product involvement groups

No		Model	Equality constraint imposed	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f.	Probability	ΔCFI
1		*Configural model*	No equality constraint imposed	2075.518	852	0.983				
2		*Model 1*	All Factor Loadings, Covariances and Error Covariances.	2525.858	920	0.978	450.340	68	p<0.01	0.005
3		*Model 2*	All FL of TBL	2088.262	856	0.983	12.744	4	NS	0.000
4		*Model 3*	Model 2 plus all FL of AFC	2183.571	862	0.982	108.053	10	p<0.01	0.001
		Model 4	Model 2 plus FL of afc1	2116.323	858	0.982	40.805	6	p<0.01	0.001
		Model 5	Model 2 plus FL of afc2	2099.265	858	0.983	23.747	6	p<0.01	0.000
		Model 6	Model 2 plus FL of afc3	2117.996	858	0.982	42.478	6	p<0.01	0.001
		Model 7	Model 2 plus all FL of BCR	2116.319	868	0.983	40.801	16	p<0.01	0.000
		Model 8	Model 2 plus FL of bcr2	2093.531	858	0.983	18.013	6	p<0.01	0.000
		Model 9	Model 2 plus FL of bcr3	2088.453	858	0.983	12.935	6	NS	0.000
5		*Model 10*	Model 9 plus FL of bcr4	2094.152	860	0.983	18.634	8	NS	0.000
		Model 11	Model 10 plus FL of bcr5	2100.545	862	0.983	25.027	10	p<0.01	0.000
		Model 12	Model 10 plus FL of bcr6	2098.325	862	0.983	22.807	10	NS	0.000
		Model 13	Model 12 plus FL of bcr7	2101.417	864	0.983	25.899	12	NS	0.000
		Model 14	Model 13 plus all FL of BE	2159.512	888	0.982	83.994	36	p<0.01	0.001
		Model 15	Model 13 plus all FL of Sensory	2105.674	868	0.983	30.156	16	NS	0.000

table continued ......

No	Model	Equality constraint imposed	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f	Probability	ΔCFI
	Model 16	Model 15 plus all FL of Affective	2111.700	872	0.983	36.182	20	**NS**	0.000
	Model 17	Model 16 plus all FL of Behaviour	2121.578	876	0.983	46.060	24	p<0.01	0.000
	Model 18	Model 16 plus FL of beh1	2115.022	874	0.983	39.504	22	**NS**	0.000
	Model 19	Model 18 plus all FL of Intellectual	2124.363	878	0.983	48.845	26	p<0.01	0.000
	Model 20	Model 18 plus FL of int1	2122.181	876	0.983	46.663	24	p<0.01	0.000
6	*Model 21*	Model 18 plus FL ofint2	2117.203	876	0.983	41.685	24	**NS**	0.000
	Model 22	Model 21 plus BE→Aff, BE→Sen, BE→Beh, BE→Int	2148.484	884	0.982	72.966	32	p<0.01	0.001
	Model 23	Model 21 plus BE→Sensory	2123.735	878	0.983	48.217	26	p<0.01	0.000
	Model 24	Model 21 plus BE→Aff	2118.451	878	0.983	42.933	26	**NS**	0.000
	Model 25	Model 24 plus BE→Beh	2139.361	880	0.982	63.843	28	p<0.01	0.001
	Model 26	Model 24 plus BE→Int	2126.979	880	0.983	51.461	28	p<0.01	0.000
	Model 27	Model 24 plus all Error-Covariance in the model	2163.197	888	0.982	87.679	36	p<0.01	0.001
7	*Model 28*	Model 24 plus Error-Cov(23,24)	2119.134	880	0.983	43.616	28	**NS**	0.000
	Model 29	Model 28 plus Error-Cov (24,25)	2124.572	882	0.983	49.054	30	**NS**	0.000
	Model 30	Model 29 plus Error-Cov(27,28)	2151.869	884	0.982	76.351	32	p<0.01	0.001
	Model 31	Model 29 plus Error-Cov(28,29)	2126.790	884	0.983	51.272	32	**NS**	0.000
	Model 32	Model 31 plus Error-Cov(35,37)	2136.600	886	0.983	61.082	34	p<0.01	0.000

table continued ……

No	Model	Equality constraint imposed	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f	Probability	ΔCFI
	Model 33	Model 31 plus all Covariances	2312.319	896	0.98	236.801	44	p<0.01	0.003
	Model 34	Model 31 plus Cov(BE, BCR)	2145.016	886	0.982	69.498	34	p<0.01	0.001
	Model 35	Model 31 plus Cov(BCR, AFC)	2130.824	886	0.983	55.306	34	**NS**	0.000
8	Model 36	Model 35 plus Cov(AFC, TBL)	2154.750	888	0.982	79.232	36	p<0.01	0.001
	Model 37	Model 35 plus Cov(BCR, TBL)	2259.110	888	0.981	183.592	36	p<0.01	0.002
	Model 38	Model 35 plus Cov(BE, TBL)	2140.387	888	0.983	64.869	36	p<0.01	0.000
	Model 39	Model 35 plus Cov(BE, AFC)	2150.423	888	0.982	74.905	36	p<0.01	0.001

Abbreviations used: d.f.= degrees of freedom; CFI = Comparative Fit Index; $\Delta\chi^2$ =difference in Chi-square; Δd.f = difference in degrees of freedom; ΔCFI = difference in CFI; p<0.01=difference in Chi-square; NS = Not Significant; FL = Factor Loading; TBL= True Brand Loyalty; AFC= Affective Commitment; BCR= Brand Credibility; Cov =Covariance; Sen = Sensory; Aff = Affective; Beh = Behavioural; Int = Intellectual; '→' = regression path.; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measures Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual dimensions of Brand Experience.
Note 1: All models are compared with Unconstrained model for $\Delta\chi^2$, Δd.f and ΔCFI.

Proceeding in a similar way, the following parameters are found to be invariant across three products.

- Factor loadings of
  - all items measuring true brand loyalty (Model 2);
  - items bcr3, bcr4, bcr6 and bcr7 of brand credibility (Model 8 to 13);
  - All items measuring sensory dimension (Model 15),
  - All items measuring affective dimension (Model 16) of brand experience;
  - Item beh1 of behavioural dimension (Model 18) and
  - Item int2 of intellectual dimension (Model 21) of brand experience;
- Second order regression path *brand experience → affective* (Model 24);
- Error covariances namely, error-cov (23, 24), error-cov (24, 25), error-cov (28, 29) (Model 27 to Model 32) and
- Covariances - between brand credibility and affective commitment; brand experience and affective commitment (Model 33 to Model 39).

The invariance test of measurement model concluded that the factor loadings, error covariances which are constrained to be equal in Model 31, are found to be equivalent. These results obtained (as per Model 31) need to be included during the test of equivalence of the structural model. In summary, all those factor loadings and error covariances which are found to be equivalent (as per Model 31) are constrained to be equal, and others are left free in the next stage of multi-group-invariance testing. The next section discusses the procedure and results obtained from invariance tests of the structural model.

4.7.2 Invariance of Structural Regression Model

Testing the invariance of regression paths were conducted after constraining previously mentioned invariant factor loadings and error-covariances to be equal across all three products. The results of this test are provided from Model 40 to Model 46, in the table 4.14 (this table needs to be read as a continuation to table 4.13).

Table 4.14: Invariance tests of structural model: Between-product involvement groups*

Model	Equality constraint imposed on	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f	Proba-bility	ΔCFI
*Configural model^*	No equality constraint imposed	2075.518	852	0.983				
Model 40	31 plus all [#] Regression Paths	2434.495	897	0.979	358.977	45	p<0.01	0.004
Model 41	31 plus BE→BCR	2145.016	886	0.982	69.498	34	p<0.01	0.001
Model 42	31 plus BCR→AFC	2138.718	886	0.983	63.200	34	p<0.01	0.000
Model 43	31 plus AFC →TBL	2137.267	886	0.983	61.749	34	p<0.01	0.000
Model 44	31 plus BCR→TBL	2178.106	886	0.982	102.588	34	p<0.01	0.001
Model 45	31 plus BE→TBL	2139.993	886	0.983	64.475	34	p<0.01	0.000
Model 46	31 plus BE→AFC	2138.447	886	0.983	62.929	34	p<0.01	0.000

Notes:
(1) '' this table needs to read as a continuation of table 4.13; (2) '#' Model 31 refers to model number as per table 4.13; (3) '^' configural model is same as in table 4.13; (4) All models are compared with configural model for $\Delta\chi^2$, Δd.f and ΔCFI.*
Abbreviations used: d.f. = degrees of freedom; CFI = Comparative Fit Index; $\Delta\chi^2$ =difference in Chi-square; Δd.f = difference in degrees of freedom; ΔCFI = difference in CFI; p<0.01 = difference in Chi-square is significant; NS = Not Significant; TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility; '→' = regression path.

It was found that all regression paths are group variant. That is, all path coefficients in the conceptual model vary according to the product selected. This result supports our view of between-product-involvement as a moderator for the model.

The results obtained from multigroup-invariance testing (model 31) are provided in the figure 4.4, table 4.15 and table A2.6. The values provided in figure 4.4 are standardized regression coefficients. Table 4.15 reports unstandardized regression coefficients of the structural model and its significance, while table A2.6 (page 175) reports unstandardized factor loadings of measurement model. The paths are constrained to be equal across all the products and are marked separately in table A2.6. The fit measures and model comparison indices are also explained below.

Squared multiple correlation (R^2) for true brand loyalty for the three products are as follows: for car 0.394; for mobile phone handset 0.416 and for toothpaste 0.323. The model fit values are as follows: χ^2 (884) = 2126.790, p<0.01; normed χ^2 = 2.406; CFI = 0.983; GFI = 0.951; AGFI =0.941; NFI = 0.971; RFI = 0.968; SRMR = 0.035; RMSEA = 0.021 (90 percent confidence interval for RMSEA is 0.020 to 0.022). AIC=2464.790 and BCC=2473.530. Values for this model are lower than the respective Independence model and closer to the Saturated model (Independence model AIC=72932.329, Independence model BCC=72936.362, Saturated model AIC=2106.000, Saturated model BCC=2160.454). The fit measures indicate that the data fits the proposed model well.

Based on the regression coefficients and its significance (table 4.15 and figure 4.4) the following observations were made. Hypothesis, H_1 to H_6, stated in the conceptual model are found to be satisfied and significant, for products car and mobile phone handset. For toothpaste, all paths except *brand credibility → affective commitment* and *affective commitment → true brand loyalty* (hypotheses H_3 and H_4) were satisfied and significant. Thus the hypothesis on moderating effect of between-product involvement (H_{7a}) is satisfied.

Conceptual model for Car
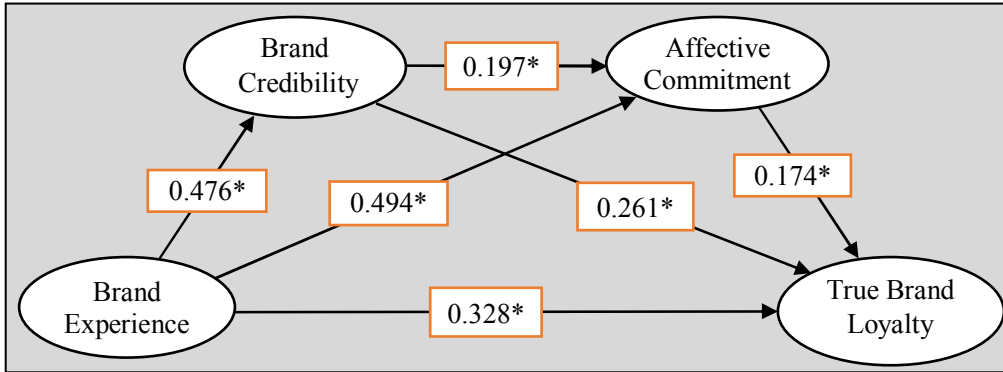
Conceptual model for Mobile Phone Handset
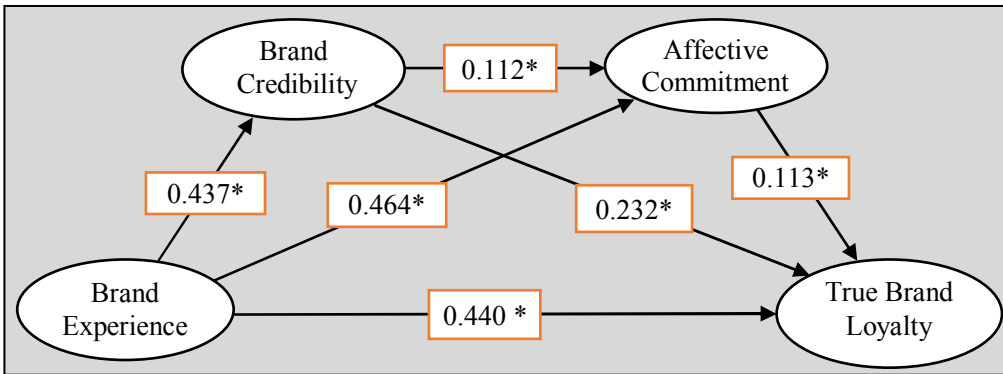
Conceptual model for Toothpaste
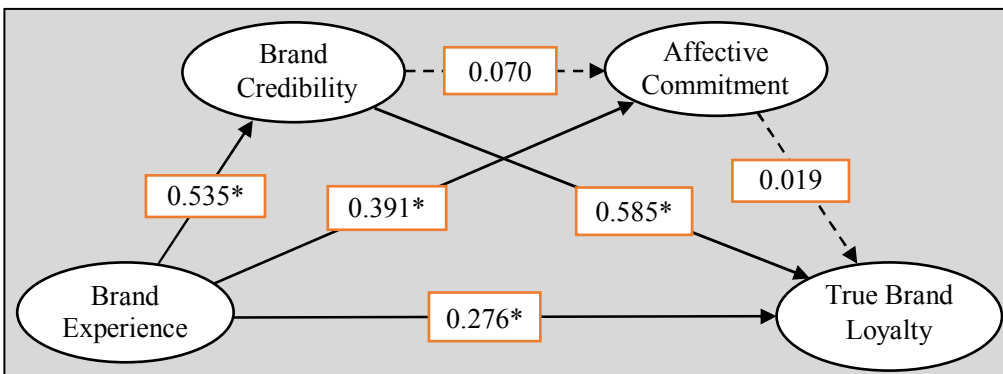
Note: coefficients given on the path represent standardized regresssion coefficient; Dotted line represents insignificant regression coefficients; * denotes $p < 0.001$.

Figure 4.4: Conceptual model variation: Between-product involvement groups

The direct and indirect effects of brand experience on true brand loyalty were investigated in detail. This effect occurs through four paths. First, a direct effect of *brand experience → true brand loyalty*, second an indirect effect through the path b*rand experience → affective commitment → true brand loyalty*, third an indirect effect *brand experience → brand credibility → true brand loyalty* and fourth an indirect effect through b*rand experience → brand credibility → affective commitment → true brand loyalty*. In the case of car and mobile phone, the direct as well as all three indirect effects are significant. However, in the case of toothpaste, the direct effect of *brand experience → true brand loyalty*, and the indirect effect *brand experience → brand credibility → true brand loyalty*, are found to be significant. The other two indirect effects were found to be insignificant. These differences observed between the products support our hierarchy-of-effects view. The hierarchy is different because among car and mobile phone the role of affective commitment (as a mediator) is significant in the development of true brand loyalty, while it is insignificant in toothpaste. Albeit, the role of affective commitment is similar among car and mobile phone handset, the structural path coefficients of the product car are significantly different from mobile phone. The direct effect of brand experience on true brand loyalty is– Car: 0.328; Mobile phone: 0.440; Toothpaste: 0.276; and the indirect effect is– Car: 0.227; Mobile phone: 0.159; Toothpaste: 0.313. Thus the total effects on true brand loyalty are – Car: 0.554; Mobile phone: 0.599 and for Toothpaste: 0.589. Thus the direct effect of brand experience on true brand loyalty is greater for Car and mobile phone, while for tooth paste, the indirect effect of brand experience is greater. While calculating indirect effects only significant regression coefficients are considered. i.e. Insignificant coefficients are assumed to be zero.

Table 4.15: Unstandardized regression path coefficients and significance: Between-product involvement groups

Regression path			Car		Mobile Phone		Toothpaste	
From	→	To	b-value	Proba bility	b-value	Proba bility	b-value	Proba bility
BE	→	BCR	0.441	p<0.01	0.492	p<0.01	0.670	p<0.01
BCR	→	AFC	0.243	p<0.01	0.140	p=0.002	0.058	**NS**
BE	→	AFC	0.566	p<0.01	0.653	p<0.01	0.407	p<0.01
BCR	→	TBL	2.821	p<0.01	2.374	p<0.01	5.077	p<0.01
AFC	→	TBL	1.519	p<0.01	0.925	p<0.01	0.196	**NS**
BE	→	TBL	3.273	p<0.01	5.062	p<0.01	3.000	p<0.01

Abbreviations used: '*'=shows the path is constrained to be equal for all three products; b-value=unstandardized regression coefficient; NS = Not Significant (i.e. p>0.05); TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility; '→' = regression path.

From table 4.16, the moderating effect of between-product-involvement on different paths in the conceptual model can be identified. The moderation effect on different paths is calculated as the difference between highest and lowest beta value. For e.g.: the maximum beta-value on *brand experience →brand credibility* is 0.535 for toothpaste and the lowest value is 0.437 for mobile phone. Thus the maximum moderation effect on this path is 0.098 (i.e. 0.535-0.437). A comparative analysis shows us that the moderation effect is maximum on the path *brand credibility → true brand loyalty* and lowest on the path *brand experience → brand credibility*.

Table 4.16: **Effect of moderation on the conceptual model: Between-product involvement groups**

Paths			Car	Mobile Phone	Toothpaste	Difference
From	→	To				
BE	→	BCR	0.476	0.437	0.535	**0.098**
BCR	→	AFC	0.197	0.112	0.07	0.127
BE	→	AFC	0.494	0.464	0.391	0.103
BCR	→	TBL	0.261	0.232	0.585	**0.353**
AFC	→	TBL	0.174	0.113	0.019	0.155
BE	→	TBL	0.328	0.44	0.276	0.164

Abbreviations used: TBL=True Brand Loyalty; AFC=Affective Commitment; BE=Brand Experience; BCR= Brand Credibility; '→' = regression path.

Note: Figures given in the table are standardized regression coefficients; The 'difference' is calculated as the difference between the highest and lowest standardized regression coefficient for the respective path across the products.

4.7.3 Summary of Variations: Between-Product Involvement Groups

Before concluding this section, a brief summary of findings on the variations of conceptual model due to between-product-involvement is due. Multi-group invariance testing showed that all paths in the conceptual model vary in their effect across the three products. Thus it can be concluded that the between-product-involvement moderates all the paths, supporting H_{7a}. Further, all the hypotheses in conceptual model are found to be significant for the product car and mobile phone handset. While for toothpaste, the paths *brand credibility → affective commitment → true brand loyalty,* was found to be insignificant. This shows that, for low involvement products, both brand experience (an experience) and brand credibility (a belief) have a role in the formation of true brand loyalty (a behaviour), supporting our view of

theorized low-involvement hierarchy. For high involvement products, affective commitment (an attitude) along with brand experience (an experience) and brand credibility (a belief) contributes for the development of true brand loyalty, supporting the hypothesized high-involvement hierarchy. Thus the hierarchy of effects in the formation of true brand loyalty are different for low-involvement and high-involvement products. These differences show brand experience and brand credibility are the prime concerns in the development of true brand loyalty for low-involvement products and while for high-involvement products, all three namely, brand experience, brand credibility and affective commitment have their roles. Also, it is observed that the direct effect of brand experience on true brand loyalty is more for car and mobile phone, while for toothpaste indirect effect of brand experience is more.

4.8 Assessment of Variation in the Conceptual Model: Between-Subject Involvement

The variation in the conceptual model because of the consumer's perceived relevance of the product [also known as 'ego-involvement' (Traylor, 1981a)] is investigated here. This variation is termed as 'between-subject variations'. The low and high groups in between-subject-involvement are created based on the subject involvement score, as mentioned in section 3.4.5, page 45. So, before testing variation in the model, we need to establish that these groups (low and high groups) are significantly different in involvement. After establishing the difference, the assessment of variation in conceptual model due to between-subject involvement was conducted.

The difference in involvement was established by comparing of the arithmetic means of subject involvement for the two groups (low and high) of subjects, and is tested using t-test in SPSS 17.0. The arithmetic means (*AM*), standard deviation *(s.d.)* and sample size *(n)* for the two groups are as follows: for low-involvement *AM*=28.12, *s.d.*=7.628, *n*=1901; for high-involvement *AM*=50.959, *s.d.*=6.737, *n*=1324. The difference in involvement between low and high groups was found to be significant as p<0.001, showing that the low and high groups are significantly different in between-subject-involvement. This being the case, the multi-group invariance tests can be conducted in order to investigate the variation in the conceptual model.

4.8.1 Process for Testing Multi-Group Invariance

The variation in the conceptual model is investigated using multi-group invariance test, as suggested by Byrne (2010).

4.8.2 Procedure and Results of Testing Multi-Group Invariance

The test of multi-group invariance among between-subject-involvement started with the search of a baseline model for two groups (i.e. low and high involvement groups) separately which was followed by the tests for equivalence of factor loadings, error covariances, factor covariances and regression paths.

The baseline model was developed after including five error-covariance based on the modification index. The error covariance included are error-cov (23, 24), error-cov (24, 25), error-cov (27, 28), error-cov (28, 29) and error-cov (35, 37), same as in previous case. The fit measures for the baseline model among low-involvement and high-involvement groups are given in the table 4.17 (refer table A2.7 page 176 for further details). The fit indices show the

measurement model fits well and it is concluded that the present measurement structure provides an adequate description of the four constructs among the groups. This measurement model is thus accepted as the baseline model. Further, this measurement model is tested simultaneously among between-subject-involvement groups and is referred as the configural model. As in the previous case, all subsequent models are tested against this configural model. In the table A2.8 page 177, both $\Delta\chi^2$ and ΔCFI are reported; however followed the $\Delta\chi^2$ method (as in previous case) suggested by Jöreskog (1971) has been followed.

Table 4.17: Fit measures of Confirmatory Factor Analysis: Between-subject involvement groups

Group	χ^2-value	Normed-χ^2	CFI	GFI	AGFI	RFI	RMSEA	SRMR
Low	785.940*	2.767	0.988	0.968	0.961	0.978	0.030	0.034
High	782.448*	2.755	0.981	0.956	0.945	0.966	0.036	0.037

Abbreviations used: χ^2 = Chi-square; * = p < 0.01; Normed-χ^2 = χ^2 /d.f; CFI = Comparative Fit Index; GFI = Goodness of Fit Index; AGFI = Adjusted Goodness of Fit Index; RFI = Relative Fit Index; RMSEA = Root Mean Square Approximation; SRMR = Standardized Root Mean square Residual

Note: degrees of freedom (d.f) for each group is 284

4.8.3 Invariance of Measurement Model

The results of invariance tests of measurement model are given in table A2.8 (page 177). Configural model fit values are χ^2 = 1568.387, d.f. = 568 and CFI=0.985. Further all factor loadings, error covariances and covariances are constrained to be equal (Model 1). The fit values for model 1 are χ^2 = 1841.372, d.f. = 602 and CFI=0.981. The difference in Chi-square between Model 1 and Configural Model, $\Delta\chi^2$ = 272.985, Δd.f. = 34, is found to be significant, showing that the measurement model is not equivalent across the between-

subject-involvement groups. Further, as in between-product-involvement groups, partial invariance of the measurement model is investigated among low and high groups. This investigation showed that the following parameters are invariant across the low and high involvement groups (between-subject-involvement groups):

- Factor loadings of

  - all items measuring true brand loyalty (Model 2),

  - item afc1 of affective commitment (Model 4);

  - all items measuring brand credibility (Model 7);

  - of all items measuring sensory dimension (Model 9),

  - item aff1 of affective dimension (Model 11),

  - item beh2 of behavioural dimension (Model 14) and

  - all items of intellectual dimension of brand experience (Model 15);

- Second order regression path *brand experience → behaviour and brand experience → intellectual* (Model 19);

- Error-cov (28,29) (Model 24)

- Covariance between brand experience and brand credibility and between brand experience and true brand loyalty (Model 26 to Model 32). [refer table A2.8, page 177, for further details].

4.8.4 Invariance of Structural Regression Model

Testing invariance of regression paths was conducted after constraining the above mentioned invariant factor loadings and error-covariances to be equal among low and high involvement groups. The results of this test are

provided from Model 33 to Model 39, in the table 4.18. All these subsequent models are compared against the Configural Model to obtain $\Delta\chi^2$, $\Delta d.f.$ and ΔCFI.

The results obtained by testing Model 39 from table 4.18 (where all invariant paths are constrained to be equal) are discussed further and are given the figure 4.5 and table A2.9. The values provided in figure 4.5 are the respective standardized regression coefficients. Table A2.9 (page 180) reports unstandardized regression coefficients of measurement as well as (regression) structural model and its significance. Path coefficients of constrained paths will be equal (unstandardized coefficients) across the low and high groups, and are marked separately in the table.

The results obtained are further explicated. Through the invariance test, it was found that *brand experience → true brand loyalty; brand experience → brand credibility; brand experience→ affective commitment; brand credibility → true brand loyalty* are found to be group invariant (equivalent). The path coefficients of *brand credibility→ affective commitment* and *affective commitment→ true brand loyalty* (i.e. H_3 and H_4) are non-equivalent, showing they are moderated by between-subject-involvement. The path *affective commitment → true brand loyalty* was found to be insignificant in both low and high groups.

Table 4.18: Invariance tests of structural model: Between-subject involvement groups*

No	Model	Equality constraint imposed on	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f.	Probability	ΔCFI
1	*Configural model*^	No equality constraint imposed	1568.387	568	0.985				
2	*Model 33*	Model 24# plus all Regression Paths	1649.840	592	0.984	81.453	24	p<0.01	0.001
	Model 34	Model 24 plus BE→BCR	1603.511	587	0.985	35.124	19	**NS**	0.000
	Model 35	Model 34 plus BCR→AFC	1619.069	588	0.984	50.682	20	p<0.01	0.001
	Model 36	Model 34 plus AFC→TBL	1606.594	588	0.985	38.207	20	p<0.01	0.000
	Model 37	Model 34 plus BCR→TBL	1604.296	588	0.985	35.909	20	**NS**	0.000
	Model 38	Model 37 plus BE→TBL	1604.642	589	0.985	36.255	21	**NS**	0.000
	Model 39	Model 38 plus BE→AFC	1607.467	590	0.985	39.080	22	**NS**	0.000

Notes:
(1) '' this table need to be read as a continuation of table A2.8, page 177; (2) '#' Model 24 refers to model number as per table A2.8; (3) '^' Configural Model is same as in table A2.8; (4) All models are compared with configural model for $\Delta\chi^2$, Δd.f. and ΔCFI.*
Abbreviations used: d.f. = degrees of freedom; CFI = Comparative Fit Index; $\Delta\chi^2$ =difference in Chi-square; Δd.f= difference in degrees of freedom; ΔCFI = difference in CFI; p<0.01=difference in Chi-square is significant; NS = Not Significant; TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility.

Squared multiple correlation (R^2) for true brand loyalty among between-subject involvement groups are as follows - low-involvement: 0.382, and high-involvement: 0.365.
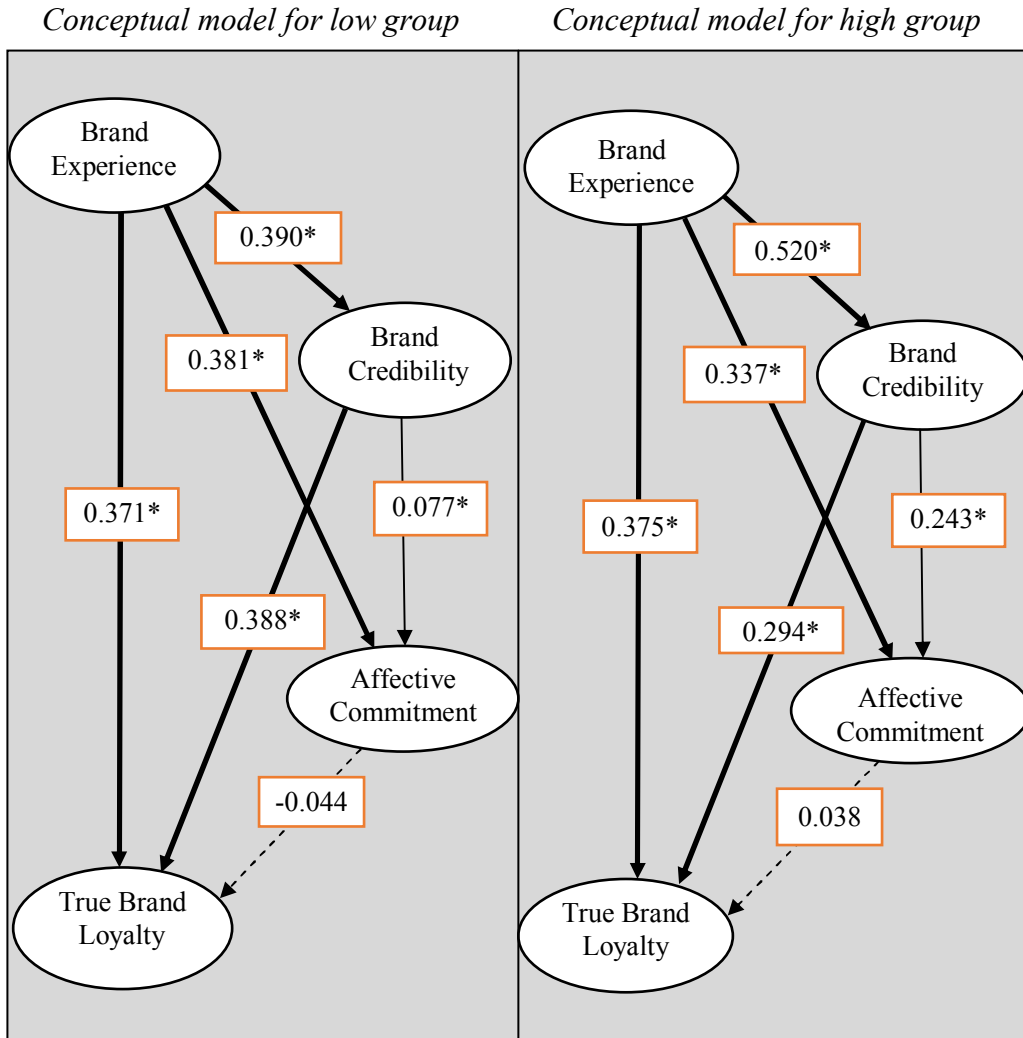
Note: 1. Numbers given on the path are standardized regression coefficient. 2. Dotted lines represent insignificant regression coefficients. 3. Bold lines represent invariant regression paths, which are constrained to be equal. Unstandardized regression coefficients are constrained to be equal and so, standardized coefficient may be slightly different (refer table A2.9, page 180 for further details). 4. '*' denotes p< 0.01.

Figure 4.5: Conceptual model variation: Between-subject involvement groups

The model fit values are as follows: χ^2 (590) = 1607.467, p<0.01; normed χ^2 = 2.725; CFI = 0.985; GFI = 0.962; AGFI =0.955; NFI = 0.976; RFI = 0.974;

SRMR = 0.036; RMSEA = 0.023 (90 percent confidence interval for RMSEA is 0.022 to 0.024). AIC=1831.467 and BCC=1835.414 values for this model are lower than the respective Independence model and closer to the Saturated model (Independence model AIC = 66934.538 and BCC = 66936.371, Saturated model AIC = 1404.000 and BCC = 1428.745. The fit measures indicate that the data fits the proposed model well.

Based on the regression coefficients and its significance (figure 4.5, page 109 and table A2.9, page 180) the following observations were made. All hypotheses, except H_4 are found to be significant for both low and high between-subject-involvement groups. For the low group the path *affective commitment → true brand loyalty* (i.e. H_4) was found to be negative and insignificant, while for high group it is positive but insignificant. These results do not support our view of hierarchy-of-effects in between-subject-involvement.

All regression paths except *brand credibility → affective commitment → true brand loyalty* are constrained to be equal, as per multi-group invariant testing (refer Model 39, table 4.18). This shows that between-subject involvement has a moderating effect only on two paths (H_3 and H_4) and hence the hypothesis H_{7b} is true for these two relationships. Since all paths other than the two mentioned are invariant, the direct effect and indirect effects of brand experience remains approximately equal for both groups. The direct effect of brand experience on true brand loyalty for the low group is 0.371 and indirect effect is 0.151. Thus the total effect on true brand loyalty is 0.522. For the high group, the direct effect is 0.375 and the indirect effect is 0.152 and the total effect is 0.527. While calculating indirect effects only significant regression coefficients are considered. i.e. Insignificant coefficients are assumed to be zero.s

4.8.5 Summary of Variations: Between-Subject Involvement Groups

Before concluding this section, a brief summary of findings from between-subject variation in the conceptual model is provided. After incorporating partial invariance of factor loadings, error-covariance, the structural model (conceptual model) was tested for its variation. It was found that group invariance exists for four regression paths namely *brand experience →brand credibility, brand credibility → true brand loyalty, brand experience → affective commitment* and *brand experience → true brand loyalty* (i.e. H_1, H_2, H_5 and H_6) and non-equivalence was observed in paths *brand credibility → affective commitment and affective commitment → true brand loyalty* among between-subject-involvement. It was also found that in both low and high involvement groups, the hypothesis H_4 (i.e. *affective commitment → true brand loyalty*) is insignificant. These results also show that affective commitment does not have any role in the formation of loyalty while brand experience and brand credibility do play a role. The hierarchy-of-effects is the same in both high and low groups of between-subject-involvement. Also the direct effect of brand experience contributes more to true brand loyalty than the indirect effects in both groups.

The findings show that Krugman's hierarchy of effects argument is supported when involvement is defined in terms of products (between-product-involvement). However when the concept is defined in terms of consumers (between-subject-involvement), Krugman's argument is not supported as the low-high involvement hierarchy was found to be the same. Thus it is important, at this stage, to analyse the variations in the conceptual model, when the concept involvement is defined as an interaction of product

and subject (interaction of between-product and between-subject). The results of this investigation are given the following section.

4.9 Assessment of Variation in the Conceptual Model: Interaction of Between-Product and Between-Subject Involvement

The variation observed in the conceptual model when involvement is defined as a combination of subject and product (i.e. subjects within the product) is explicated here. This operationalization of involvement is achieved by dividing the respondents within each product into two groups viz. low and high, based on their subject involvement score. This process resulted in six groups namely *car-low, car-high, mobile phone-low, mobile phone-high, toothpaste-low* and *toothpaste-high*. Further, the variation of the conceptual model in these six groups was investigated (termed as interaction effect of between-subject and between-product). The assessment of variation in the conceptual model is investigated using the multi-group-invariance method (Byrne, 2010). Thus the assessment procedures in estimating the variation are the same as in the previous cases of 'between-product-involvement' and 'between-subject-involvement'.

Before testing the variation of the conceptual model among these six groups, the difference in involvement among the six groups needs to be established. This was done by comparing the arithmetic means of subject involvement using one-way ANOVA in SPSS 17.0. Further a post-hoc analysis in one-way ANOVA was also conducted for pair-wise comparison. The arithmetic mean, standard deviation and sample size details for the six groups are given in table 4.19. The difference observed among six groups is found to be significant [$F_{(5, 3219)} = 1694.863$, $p < 0.001$]

Pair-wise comparison of six subgroups (using 'LSD' method of post-hoc analysis in one way ANOVA) revealed that all excluding the pair *mobile phone-high* and *toothpaste-high,* are significantly different in involvement (refer table: A2.10, page 182, for further details). These results enable us to explore the variation in the model due to involvement, and also compare between any two subgroups, except mobile phone-high and toothpaste-high.

Table 4.19: Descriptive statistics of involvement: Interaction involvement groups

Involvement Group	Arithmetic Mean	Standard Deviation	Sample Size
Car-Low	31.564	6.259	408
Car-High	52.766	7.221	693
Toothpaste-Low	26.609	8.232	833
Toothpaste-High	48.879	5.669	290
Mobile-Low	27.887	6.908	660
Mobile-High	49.055	5.400	341
Total	37.495	13.387	3225
Note: ANOVA results - $F_{(5, 3219)}$ = 1694.863, $p < 0.001$			

4.9.1 Procedure and Results of Testing Multi-Group Invariance

The tests of invariance started with the search for a baseline model for six groups separately (*car-low, car-high, mobile phone-low, mobile phone-high, toothpaste-low* and *toothpaste-high*) and then proceeded with the tests for equivalence of factor loadings, error covariances, factor covariances and regression paths. This procedure is same as the procedures adopted in previous cases.

The baseline model was developed after including five error-covariances based on the modification index. The error covariances included are error-cov (23, 24), error-cov (24, 25), error-cov (27, 28), error-cov (28, 29) and error-cov (35, 37) just as in the previous case. While testing the validity of the measurement model for the six groups separately, the fit measures were found to be almost consistent. Further, the chi-square value for all six groups are found to be lower than the values for 'between-subjects-involvement' and 'between-products-involvement' groups showing that the items adequately explain four constructs. Fit measures for all six groups are reported in tables A2.11 and A2.12 (page 183,184).

High values of fit measures, low RMSEA and SRMR values, and low comparative measures prove that the measurement model fits sufficiently well for all the six groups. Hence the measurement model is accepted as the baseline model. This measurement model is further tested simultaneously across all six groups and is referred to as the configural model. All subsequent models are compared against this configural model. This comparison is done on the basis of $\Delta\chi^2$ or ΔCFI. Even though, both $\Delta\chi^2$ and ΔCFI are reported, $\Delta\chi^2$ method was followed, as suggested by Jöreskog (1971) for testing the invariance.

The results of the invariance tests of the measurement model are given in table A2.13 (page 185). Comparing all subsequent models with the configural model, the following parameters are found to be invariant across the six interaction groups:

- factor loadings of
  - all items measuring true brand loyalty (Model 2);

- o items bcr2, bcr3, bcr4 and bcr5 of brand credibility (Model 8);

- o all items measuring sensory, affective, intellectual dimensions (Model 12),

- o and item 'beh2' measuring behavioural dimension of brand experience (Model 15).

- ▪ Error covariance, error-cov (28, 29) (Model 25).

4.9.2 Invariance of Structural Regression Model

The invariance of regression paths was tested after constraining all invariant factor loadings and error-covariance to be equal across all six groups. The results of this test are provided from Model 34 to Model 40, in table 4.20. The invariance tests of regression paths showed that none of the six regression paths are group invariant. This implies that all regression path coefficients in the conceptual model vary among the six groups. Thus, involvement when defined as an interaction of between-product and between-subject acts as a moderator for the whole conceptual model.

The results obtained by testing invariance of the Structural Model (Model 25) are given in the figures 4.6a to 4.6c and table A2.14a to A2.14c. The values provided in figure 4.6a, 4.6b and 4.6c are the respective standardized regression coefficients. Tables A2.14a, A2.14b & A2.14c (page 188 - 193), reports unstandardized regression coefficients of measurement model as well as regression model and its significance.

Table 4.20 Invariance tests of the structural model: Interaction involvement groups*

No	Model	Equality constraint imposed on	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f	Probability	ΔCFI
1	*Configural model* ^	No equality constraint imposed	3126.735	1704	0.979				
2	*Model 34*	Model 25# plus all Regression Paths	3413.219	1804	0.976	286.484	100	p<0.01	0.003
	Model 35	Model 25 plus BE→BCR	3251.453	1779	0.978	124.718	75	p<0.01	0.001
	Model 36	Model 25 plus BCR→AFC	3245.484	1779	0.978	118.749	75	p<0.01	0.001
	Model 37	Model 25 plus AFC→TBL	3242.599	1779	0.978	115.864	75	p<0.01	0.001
	Model 38	Model 25 plus BCR→TBL	3278.235	1779	0.977	151.500	75	p<0.01	0.002
	Model 39	Model 25 plus BE→TBL	3239.666	1779	0.978	112.931	75	p<0.01	0.001
	Model 40	Model 25 plus BE→AFC	3236.650	1779	0.978	109.915	75	p<0.01	0.001

Notes:
(1) '' this table needs to be read in continuation to table A2.13, page 185; (2) '#' Model 25 refers to model number as per table A2.13; (3) '^' configural model is same as in table A2.13; (4) All models are compared with the configural model for $\Delta\chi^2$, Δd.f. and ΔCFI.*
Abbreviations used: d.f. = degrees of freedom; CFI = Comparative Fit Index; $\Delta\chi^2$ = difference in Chi-square; Δd.f. = difference in degrees of freedom; ΔCFI = difference in CFI; p<0.01=difference in Chi-square is significant; NS = Not Significant; TBL = True Brand Loyalty; AFC = Affective Commitment; BE = Brand Experience; BCR = Brand Credibility; '→' = regression path.

The model fit values are as follows: χ^2 (1774) = 3222.112, p < 0.01; normed χ^2 = 1.816; CFI = 0.978; GFI = 0.928; AGFI =0.915; NFI = 0.953; RFI = 0.948; SRMR = 0.042; RMSEA = 0.016 (90 percent confidence interval for RMSEA is 0.015 to 0.017). AIC (3886.112) and BCC (3927.859) values for this model are lower than the AIC and BCC values of the Independence Model as well as the Saturated Model (Independence model AIC = 68699.376,

BCC = 68718.992; Saturated model AIC = 4212.000, BCC = 4476.816). The fit measures indicate that the data fits the proposed model well.

Findings on the variation in conceptual model among the six interaction groups have been detailed below in the following order—findings from car-low and car-high groups followed by toothpaste-low and toothpaste-high, and finally findings from mobile-low and mobile-high. This approach enables the researcher to explore the trend in the variation as well as the differences in the six groups. As per the conceptual model, the effect of brand experience on true loyalty can occur through a direct effect as well as three indirect effects namely, *brand experience → affective commitment → true brand loyalty*; *brand experience →brand credibility → true brand loyalty* and *brand experience → brand credibility → affective commitment → true brand loyalty*.

Before explicating the variation in the conceptual model, the characteristics of six groups are revisited once again. Of the three products considered in the study, car belongs to the high involvement product category while toothpaste belongs to the low involvement product category and mobile phone handset in between the car and toothpaste. Further, within each product category the customers are classified into *low* and *high* based on their involvement score, which resulted in six interaction effect groups. Thus by nature of involvement, car-high group could be placed at the one extreme (as both product involvement and subject involvement score are at high level) while toothpaste-low at the other extreme (as both at low level).

Based on the results obtained (figure 4.6a and table A2.14a) all hypotheses stated in the conceptual model are found to be significant in car-high group, while in car-low group all hypotheses except H_4 were found to be

significant. Thus car-high and car-low groups vary in the effect of brand experience on true brand loyalty. For the car-high group path *affective commitment → true brand loyalty* is significant while for the car-low group, it is insignificant.
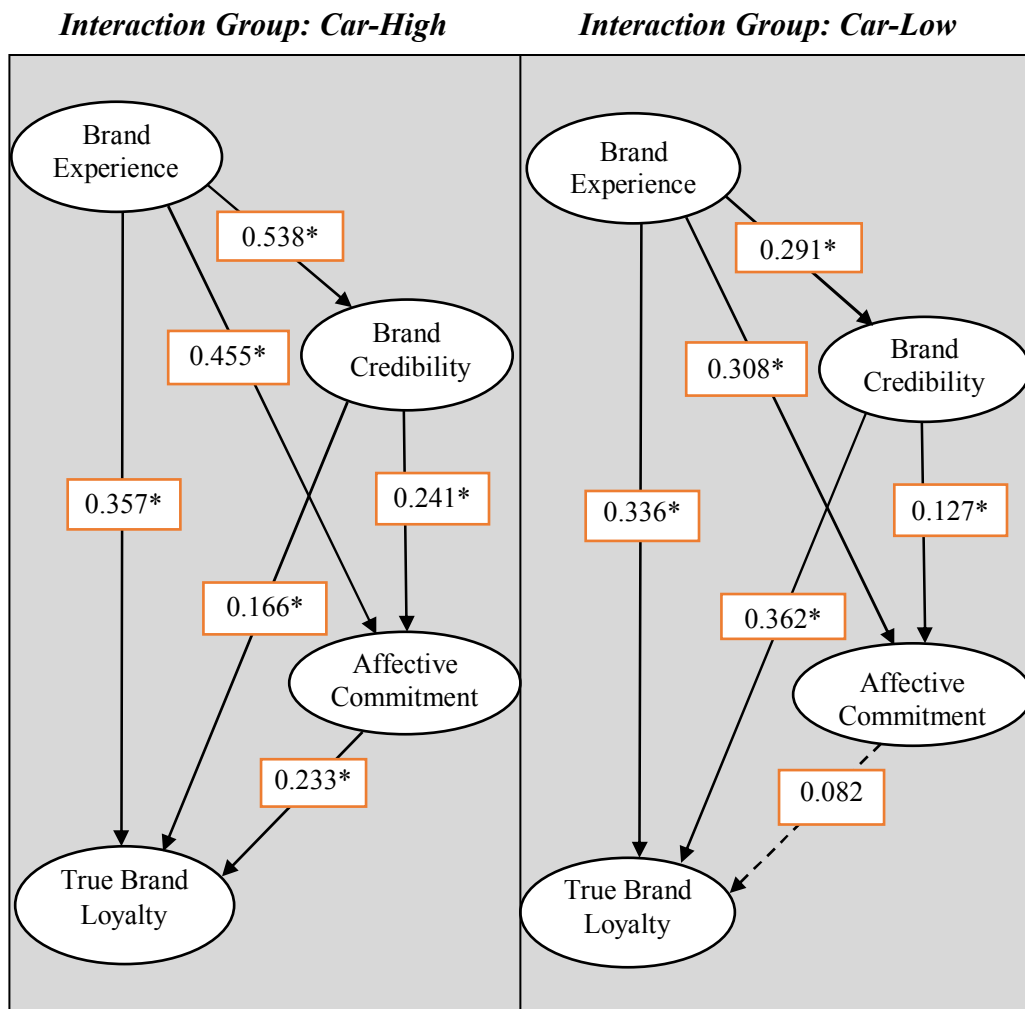
Note: 1. Number given on the path represents standardized regression coefficient. 2. Dotted line represents insignificant regression coefficients. 3. '*' denotes p< 0.01.

Figure 4.6a: Conceptual model variation: Interaction involvement groups

Thus among the car-high group, the direct as well as all three indirect effects of brand experience are significant. While in the car-low group, the direct effect and one indirect effect *brand experience →brand credibility → true brand loyalty* are significant. All indirect effects through affective commitment are insignificant among the car-low group. This shows the difference in role played by brand experience, brand credibility and affective commitment in the formation of true loyalty between car-high and car-low groups. This difference observed between the groups in the hierarchy of formation of true brand loyalty supports Krugman (1965) hierarchy-of-effects argument between low and high involvement. Thus when both product and customer perception of involvement are high (car-high), all paths in the conceptual model are found to be significant.

While calculating indirect effects only significant regression coefficients are considered. i.e. Insignificant coefficients are assumed to be zero. The direct effect and indirect effect of brand experience on true brand loyalty are given below:

- for car-high group
  o direct effect is 0.357, indirect effect 0.226, total effect is 0.583;
  o R^2 value for true brand loyalty is 0.407

- for car-low group,
  o direct effect 0.336, indirect effect 0.105 and total effect is 0.441.
  o R^2 value for true brand loyalty is group 0.353.

The result based on the invariance tests of regression coefficient for toothpaste-low and toothpaste-high groups are as follows: Toothpaste is a product which is low in product involvement. When consumers also perceive it as low, the group becomes low in both product involvement as well as subject involvement. Among toothpaste-low group, two hypotheses H_3 and H_4 (i.e. *brand credibility → affective commitment* and *affective commitment → true brand loyalty*) are found to be insignificant while others are significant. Among toothpaste-high, all hypotheses stated in the conceptual model are found to be significant except H_4 (i.e. *affective commitment → true brand loyalty*). Thus these groups differ in the effect of brand experience on true loyalty. The direct effect of brand experience is statistically significant in both groups. All indirect effects through affective commitment are found to be insignificant. Further, in toothpaste-high, the contribution of brand experience and brand credibility has led to the formation of affective commitment, but affective commitment in turn does not contribute to true loyalty. But this is not so in the group toothpaste-low, as the contribution of brand credibility is insignificant. These differences point towards the variation in the conceptual model among toothpaste-low and toothpaste-high. This also shows that at the other extreme of interaction of between-product and between-subject involvement (toothpaste-low) paths *brand credibility → affective commitment → true loyalty* is found to be insignificant.

Note: 1. Number given on the path represents standardized regression coefficient. 2. Dotted line represents insignificant regression coefficients. 3. '*' denotes p< 0.01

Figure 4.6b: Conceptual model variation: Interaction involvement groups

The direct and indirect effects of brand experience on true loyalty as well as the R^2 value for true brand loyalty in both groups are given below:

- Toothpaste-low –
  - direct effect : 0.304, indirect effect :0.297, total effect is 0.601;
  - R^2 value for true brand loyalty : 0.301

- Toothpaste-high –
  - direct effect: 0.229, indirect effect : 0.226, total effect : 0.455.
  - R^2 value for true brand loyalty: 0.340
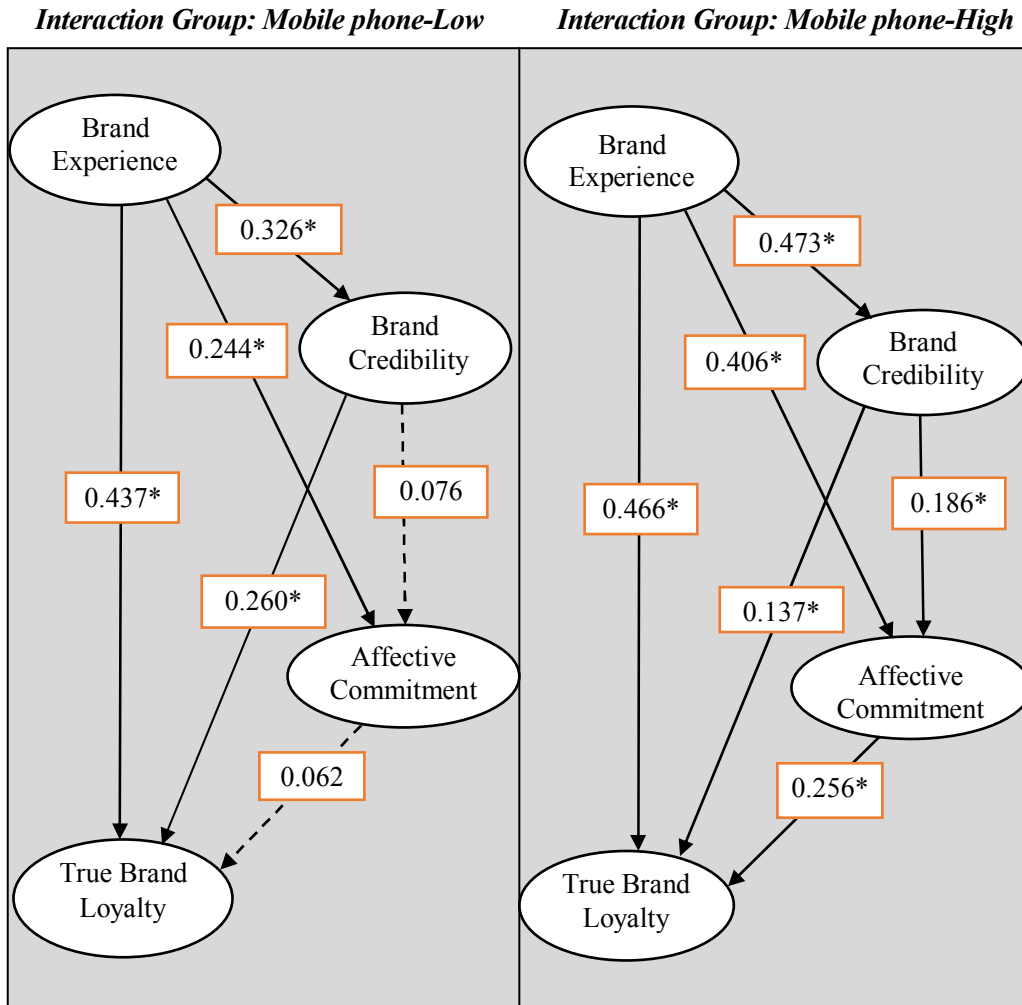
Interaction Group: Mobile phone-Low   *Interaction Group: Mobile phone-High*

Note: 1. Number given on the path represents standardized regression coefficient. 2. Dotted line represents insignificant regression coefficients. 3. '*' denotes p<0.01.

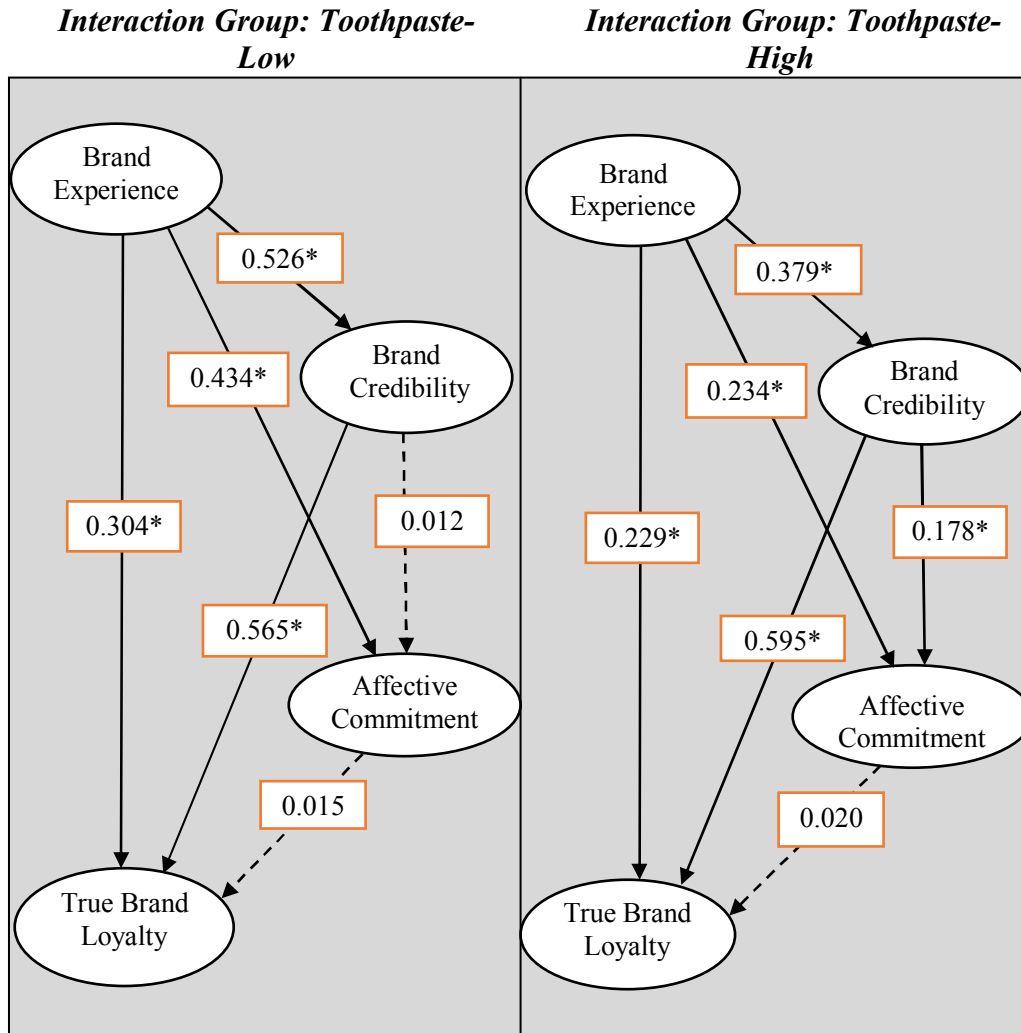**Figure 4.6c: Conceptual model variation: Interaction involvement groups**

The results based on the regression coefficients for mobile-low and mobile-high groups are as follows. Mobile phone handset is a product which lies between car and toothpaste in involvement. When the consumer perceives it as high in involvement (mobile-high group), all hypotheses stated in the conceptual model are found to be significant. But in mobile-low group, all hypotheses except H_3 and H_4 (i.e. *brand credibility → affective commitment* and *affective commitment → true brand loyalty*) are found to be significant.

Thus, in the mobile-high group, all three concepts brand experience, brand credibility and affective commitment have a significant contribution in the development of true loyalty, but in the mobile-low group, only brand experience and brand credibility contribute significantly. The mobile-high and car-high groups share the same characteristics and so do mobile-low and toothpaste-low groups.

The difference in hierarchy-of-effect of brand experience on true loyalty is also observed among mobile-high and mobile-low group. It should also be noted that the behaviour of the conceptual model among mobile-low and mobile-high groups come in between the two extreme positions of the involvement scale occupied by car-high and toothpaste-low respectively.

Further, the direct and indirect effects of brand experience as well as the R^2 value for true brand loyalty in both groups are given below:

- Mobile -low –

  - direct effect : 0.437, indirect effect :0.085, total effect is 0.522;
  - R^2 value for true brand loyalty : 0.356

- Mobile -high –
  - direct effect : 0.466, indirect effect : 0.191, total effect : 0.657.
  - R^2 value for true brand loyalty : 0.506

Thus the hypotheses H_{7c} is proved showing that involvement when defined as an interaction of between-product and between-subject moderates all relationships mentioned in the conceptual model. Further the results also show that the effect of involvement as a moderator is different for different paths in the conceptual model. The variation produced on these paths (based on standardized regression coefficient) is given in the table 4.21. The effect size is found to be maximum on the path *brand credibility → true brand loyalty*. The standardized regression coefficient on this path varies between 0.137 in mobile-high to 0.595 in toothpaste-low. Thus the difference due to moderation is 0.458. For all other paths the difference seen across the groups is found to be approximately equal.

Table 4.21: Effect of moderation on the conceptual model: Interaction involvement groups

Paths			Car-low	Car-high	Mobile-low	Mobile -high	Toothpaste-low	Toothpaste-high	Difference
From	→	To							
BE	→	BCR	0.291	0.538	0.326	0.473	0.526	0.379	0.247
BCR	→	AFC	0.127	0.241	0.000	0.186	0.000	0.178	0.241
BE	→	AFC	0.308	0.455	0.244	0.406	0.434	0.234	0.221
AFC	→	TBL	0.000	0.233	0.000	0.256	0.000	0.000	0.256
BE	→	TBL	0.336	0.357	0.437	0.466	0.304	0.229	0.237
BCR	→	TBL	0.362	0.166	0.260	0.137	0.565	0.595	0.458

Note: Abbreviations used: BE= Brand Experience; BCR = Brand Credibility; AFC = Affective Commitment; TBL = True Brand Loyalty.
Notes: Numbers given in the table are standardized regression coefficients; insignificant path coefficients are taken as zero; the 'difference' is calculated as the difference between the highest and lowest standardized regression coefficient-value for the respective path across the groups.

The characteristics of the conceptual model among the six involvement groups exhibited certain trends which could be categorized into three patterns (Figure 4.7). In the first pattern, all paths are significant; the second pattern has two insignificant paths viz., *brand credibility → affective commitment and affective commitment → true brand loyalty* while all other paths are significant; and in the third pattern, the path *affective commitment → true brand loyalty* was found to be insignificant while other paths are significant. These patterns supported Krugman (1965) hierarchy of effects which points out that under high involvement conditions the hierarchy would be *cognition → attitude → behaviour*, whereas under low involvement it would be *cognition → behaviour*.

In order to explain the pattern observed, it is necessary to look at the characteristics of six groups with respect to involvement. These six groups are formed by the definition of involvement as a combination of subject (consumer) within the product (i.e. interaction of subject and product). Among the six groups, the car-high group is at one extreme of the order in involvement and toothpaste-low group is at the other. Car-high is defined as a group as the product car is classified as a high-involvement-product, and the owners also perceive it as high in involvement. Similarly in the case of the group defined as toothpaste-low, the product toothpaste is classified as a low-involvement-product and its consumers also perceive it as such. Thus these two groups form the extreme possibilities while others fall in between. Based on the group characteristics the variations in the conceptual model are further elaborated.

Pattern 1   *Pattern 2*   *Pattern 3*
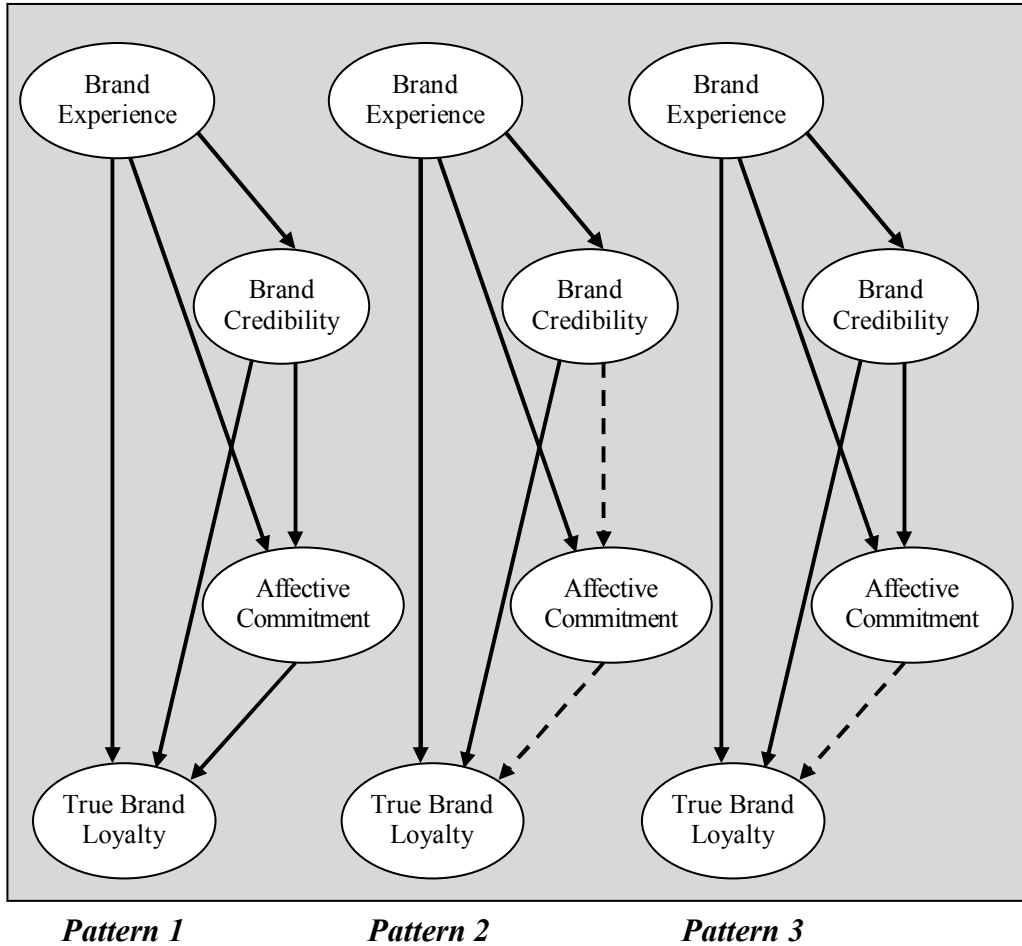
*Note: D*otted lines represent insignificant paths and all other paths in the diagram are significant.

Figure 4.7: Patterns of conceptual model observed among involvement groups

In Car-high group Pattern 1 was observed, where all paths are significant. The results show that brand credibility (a cognition) contributes to affective commitment (an attitude) contributes to the formation of true loyalty (a behaviour) following Krugman's high involvement hierarchy of *cognition → attitude → behaviour*.

The toothpaste-low group exhibited the lowest involvement level among the six conforming to Pattern 2 where both *brand credibility → affective commitment and affective commitment→ true brand loyalty* are insignificant. This shows brand credibility (a cognition) directly contributes to the formation of true brand loyalty (a behaviour) while affective commitment (an attitude) does not contribute to this formation. This is in line with Krugman's low involvement hierarchy of *cognition → behaviour*.

Car-low and Toothpaste-high are groups where either the subject-involvement or product-involvement is high while the other is low. These groups conformed to Pattern 3 where the *brand credibility → affective commitment* is significant but *affective commitment → true brand loyalty* is insignificant. For this reason, the conceptual model characteristics of these groups lie in between the extremes

The product mobile phone handset a high involvement product, but not as high as car. Being a high involvement product, mobile-high group revealed the characteristics similar to that of Pattern 1. The mobile-low group, where the subject-involvement is inconsistent with the product-involvement the conceptual model revealed Pattern 2. Thus the interaction of subject-involvement with product-involvement in this group results in the conceptual model behaviour similar to that of toothpaste-low.

In short, the variations in the conceptual model among these six groups show that the formation of true loyalty is in different hierarchies within each product and is based on the level of consumer's involvement perception. This, in turn, substantiates the need for the definition of involvement as an interaction of between-product and between-subject i.e. as a combination of product and subject.

Before concluding this section, a brief summary of findings from interaction effect of between-product and between-subject involvement is provided:

The interaction effect is achieved by considering involvement as a combination of subject (consumer) and the product. This approach has resulted in six groups and these groups can be arranged in an order of involvement.

Multi-group invariance testing showed variation in structural paths (regression paths) across the six groups. The results supported the view that there are differences in the conceptual model between low and high groups of involvement within the each product category.

Even after selecting customers from homogenous groups A1 and A2 of Socio-Economic-Classification (SEC), variations in conceptual model were observed within each product. These differences observed show that involvement is not purely product based or consumer based alone; rather it is a combination of both product and consumer.

These results support the contention of Hornik (1982), which advocates that 'neither individual differences nor situational factors alone are major contributors to the variance in consumer behaviour. Instead, since individual consumers are expected to react differently to a given situation, it is the person-within-a-situation interaction that is expected to contribute most to the variance' Quester and Smart (1998).

4.10 Effect of Brand Experience

All those variations in conceptual model reported above are based on the indirect effect of brand experience on true brand loyalty. Table 4.22 summarises the magnitude of variation in direct and indirect effects. Involvement is found to

be moderating the direct effect among product involvement groups as well as in interaction groups of product and customer involvement. But moderation was not found on all paths among customer involvement groups. Irrespective of whether involvement is the moderator or not, the direct effect of brand experience is found to be a significant contributor to true brand loyalty. Further, the direct effect of brand experience on true brand loyalty is higher than its indirect effect. This result was found to be consistent while testing the conceptual model irrespective of whether involvement was considered as a moderator or not. This shows the important role played by brand experience in the formation of true brand loyalty. This result supports the argument of Schmitt (1999) about the present economy which associates high value for the experiences over and above the functional features, benefits and quality of the product/service.

Table 4.22: Direct and indirect effects of brand experience on true brand loyalty

Moderator Considered	Group	Direct effect	Indirect effect	Total Effect
None	Not applicable	0.365	0.188	0.553
Between-product involvement	Car	0.328	0.227	0.554
	Toothpaste	0.276	0.313	0.589
	Mobile phone	0.440	0.159	0.599
Between-subject involvement	Low	0.371	0.151	0.522
	High	0.375	0.152	0.527
Interaction of between-product and between-subject involvement	Car-high	0.357	0.226	0.583
	Car-low	0.336	0.105	0.441
	Toothpaste-high	0.229	0.226	0.455
	Toothpaste-low	0.304	0.297	0.601
	Mobile Phone-high	0.466	0.191	0.657
	Mobile phone-low	0.437	0.085	0.522
Note: Direct and indirect effects are calculated based on significant standardized regression coefficient.				

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Chapter **5**

DISCUSSION

5.1   Hypothesis Related Findings and Discussion

Testing the conceptual model without including involvement resulted in the acceptance of an alternate model where *affective commitment* → *true brand loyalty* (H$_4$) is constrained to zero. Thus all hypotheses except H$_4$ were accepted. This proves that brand experience and brand credibility make a significant contribution to the formation of true loyalty. Further, the indirect effect of brand experience on true brand loyalty was found to be much lower than its direct effect.

The conceptual model was further tested for its variation due to involvement. Involvement in this study is operationalized in three ways. First, it is operationalized as between-product-involvement, then as between-subject involvement and finally as a combination of between-product and between-subject. The variations in the conceptual model due to involvement are

obtained using multi-group invariance testing in SEM and are explained below.

The investigation of variations in the model based on between-product involvement (three product-groups) supported the hierarchy-of-effects view. High involvement hierarchy (all hypotheses found significant) was operational for the products-car and mobile phone handset, while low involvement hierarchy (H_3 and H_4 are insignificant) was observed in toothpaste. Further, it was observed that between-product involvement had a moderating effect on all paths, as depicted in the conceptual model, supporting hypothesis H_{7a}.

Variations observed in the model due to between-subject-involvement (low and high groups) do not support the hierarchy-of-effects view. Involvement had a moderating effect only on the *brand credibility → affective commitment and affective commitment → true brand loyalty* path. This shows H_{7b} is true only on these two paths.

Investigation of variation in the model due to interaction-effect involvement (six groups) showed moderating effect on all paths, supporting H_{7c}. It has also supported the hierarchy-of-effects view. Three patterns of hierarchy have been observed: the first pattern was observed in high-high groups (both product involvement and subject-involvement were high), the second pattern was observed in Low-Low groups (both product and subject involvements were low) and the third pattern among High-Low or Low-High groups. The first pattern supported all stated hypotheses. The second pattern supported all hypotheses except *brand credibility → affective commitment → true brand loyalty* (H_3 and H_4) and the third pattern supported all hypotheses

except *affective commitment → true brand loyalty* (H$_4$). The first pattern supported a high-involvement hierarchy while the second pattern supported a low-involvement hierarchy while the third pattern lay in between. These results point to the need of having different strategies for each of these groups.

The direct effect of brand experience on true brand loyalty is found to be higher than its indirect effect. This result is consistently observed while testing the conceptual model without involvement as well as in all groups formed out of the three operationalizations of involvement. This shows the important role played by brand experience in the formation of true loyalty. This finding also substantiates the need to focus on brand experience. This result supports the argument of Schmitt (1999) about the present economy which associates high value to the experiences above and beyond the functional features, benefits and quality of the product/service.

5.2 Managerial Implications

In the present market scenario, customers buy a product not only for the functional benefits but also for the experiences associated with it, which could stimulate their senses, hearts and minds (Brakus et al., 2009). Schmitt (2003) has identified the provision of brand experience as an important source through which marketers could provide memorable experiences. Hence, it is necessary to know the sources through which a customer is exposed to these experiences. Schmitt, Brakus and Zarantonello (2014) suggested various settings like advertisements or public relations activities or event marketing which expose a customer to these experiences. Other exposures could happen through direct interaction with the products

displayed during shopping/store visits, through interaction with staff or through the internet or word-of-mouth.

Further, Nysveen and Pedersen (2014) suggested that communication and interaction are a part of co-creation activities that provides stimuli to enhance the brand experience. Rahman (2014) suggested that the strategy of using brands from related or non-related industries along with their own brand (branded branding strategy) will enhance the overall brand experience of the customer. Roswinanto and Strutton (2014) suggested four antecedents for brand experience, on which the marketers could strategize. This includes attitude towards the brand name, connectedness to the celebrity endorser, visual imaging manifested in the advertisement and the extent to which the advertising messages align with the core values. The list mentioned provides sufficient opportunities for marketers to adapt strategies in order to enhance the brand experience. Further, all such strategies adapted for enhancing brand experience must stimulate their senses and touch their minds and hearts at every touch point.

Further, the variations observed with regard to the indirect effect of brand experience will be of great use for marketers. It suggests that, based on involvement, markets could be segmented into three: (1) high in both product involvement and consumer involvement, (2) low in both product involvement and consumer involvement and (3) high in product involvement and low in consumer involvement for the product; or low in product involvement and high in consumer involvement for the product. This segmentation helps the marketers to evolve appropriate strategies to build loyalty for each of these segments, as the hierarchy of effect on true brand loyalty varies across them.

5.2.1 Strategies for High-High Segment

In the first segment, all three concepts - brand experience, brand credibility and affective commitment - contribute to the development of true loyalty. The contribution of affective commitment is what makes this segment different from the other two. Thus the strategies for this segment should also focus on the affective (relationship) commitment. In other words, companies should adopt strategies through their relationship management system, which enables them to differentiate from their competitors and should measure and nurture the relationship constantly in the process (Bendapudi & Leone, 2002; Johnson et al., 2006).

5.2.2 Strategies for Low-Low Segment

In the second segment, both between-product involvement and between-subject involvement are low. These groups have insignificant paths connecting *brand credibility → affective commitment → true brand loyalty*. This makes it different from the first segment, as affective commitment does not have any role in the formation of true brand loyalty. Instead, brand credibility and brand experience contribute to loyalty. Thus, the strategies adapted for this segment should focus on the enhancement of both brand experience and brand credibility.

The marketers who are engaged in the process of enhancing experience should also be consistent and truthful while communicating with the customers. This is since, Erdem and Swait (1998) found that a satisfactory usage experience with the product/brand, which is consistent with firm's product claims, has the ability to increase the credibility of the brand. So, marketers also need to take special effort to reduce the gap between promised and actual offerings in order to enhance the credibility.

5.2.3 Strategies for High-Low or Low-High Segment

Marketers need to be extra cautious while deciding on the strategies for the third segment. In this segment the consumer perception of involvement and the product involvement are not consistent. This inconsistency has resulted in two subgroups within the third segment. The first group is where a high involvement product is perceived as low in involvement by the consumer (as in car-low) and second group where a low involvement product is perceived as high by the customer (as in toothpaste-high). Of these two, the latter scenario is much more supportive to marketers than the former. This is because a high-involved consumer pays higher levels of attention as his motivations levels are high and so the processing is done out of volition (Heath, 2001). So any effort taken to provide memorable brand experience and developing credibility would be well accepted, processed, stored and retrieved. Conversely, the former group puts the marketer in an unfavourable situation as the low-involved consumer pays a low level of attention as his motivation is low and so the processing of information is done automatically (Heath, 2001). In such cases, repeated efforts may be necessary to achieve the objectives. This could possibly explain why efforts taken by the organisation to manage the relationship sometimes does not contribute to true loyalty. It is highly difficult for marketers to reach low involved customers. They should repeatedly provide memorable experiences and maintain the credibility image, with a sufficient level of consistency. An alternate possible strategy for this group could be to work on increasing consumer involvement with the product and convert it to a high-high item. This could be achieved by working on the antecedents of involvement namely consumer's risk perception of product, product's hedonic value, product familiarity, brand awareness, dissimilarity, etc. (Jain & Sharma, 2000).

After brand experience, brand credibility is found to be contributing the maximum to the true loyalty. This effect of brand credibility on loyalty is consistent with Erdem and Swait (1998), which states that if the consumers have satisfactory usage experience with the product and if the usage experience is consistent with firm's product claims, the ability of the brand to signal credibility increases, leading to the formation of loyalty. They have also found that any brand investment made by the company will have a direct effect on its credibility. This would happen when consumers see brand as an information source for them (i.e. under information asymmetry). So any communication from the firm regarding the product needs to be consistent and truthful. The efforts taken by the marketers to improve brand experience will have its effects on the brands signalling capability (Erdem & Swait, 1998).

5.3 Theoretical Implications

Even after selecting a highly homogenous group of respondents (A1 and A2) with respect to socio-economic-classification (SEC), the result showed differences in the formation of true brand loyalty because of differences in involvement, supporting the hierarchy of effects. The differences observed in the effect on true brand loyalty followed certain patterns. The pattern in hierarchy became clearer as we moved across the groups within the sample. The pattern observed within the product was found to vary when individual differences in involvement were considered. These differences observed show that involvement was not a product based or consumer based phenomenon alone, rather it is based on a combination of product and consumer. These results supported the contention of Hornik (1982), which advocates that 'neither individual differences nor situational factors are major contributors to the variance in consumer behaviour. Instead,

consumers are expected to react differently to a given situation, it is the person-within-a-situation interaction that is expected to contribute most to the variance' (Quester & Smart, 1998).

The direct effect of brand experience on true brand loyalty was found to be greater than its indirect effect across the pooled data as well as in all involvement groups. Thus the contribution of brand experience is more than brand credibility and affective commitment. Similar findings were also reported by Brakus et al. (2009). They found brand experience as a stronger predictor of loyalty than brand personality and satisfaction. They substantiated this finding based on the arguments of Aaker (1999) which says 'the result is related to the very nature of experience. If a brand stimulates the senses, makes the person feel good, and engages the mind and body, a stimulation seeking organism may strive to receive such stimulation again. In contrast, the private nature of experiences may make them less malleable and less subject to situational influences....'

The products' car and mobile phone handset belong to high involvement product groups, and both are technology-driven products. Once the technology becomes accepted, the product differentiation through brand experience, relationship commitment and credibility becomes important. Apart from this, traditionally brand managers have focused mainly on the functional attributes and its consistent delivery, which otherwise could lead to dissatisfaction (Mosley, 2007; Shaw & Ivens, 2002). Lately marketing has shifted its focus to relationship management and then to customer experience management. These practices enabled them to differentiate their product, as it was found that the emotions produced during the consumption have a longer impact on the memory (Westbrook & Oliver, 1991). Thus this study reiterates that a brand

needs to stimulate the senses, keeping the mind and body engaged by producing superior brand experience consistently and credibly at all its touch points with the consumer. This deliberate attempt to enhance the relationship with the consumer can also succeed in differentiating the products and in gaining consumer preference and loyalty (Brakus et al., 2009; Iglesias et al., 2011).

5.4 Contributions of the Study

5.4.1 Contributions to Research/Academia

This study provides various theoretical and managerial inputs to marketing practitioners as well as researchers. In order to understand the underlying process of true brand loyalty formation, the study considered the effect of brand experience, brand credibility and affective commitment. In addition to this, the hierarchy-of-effects of brand experience, brand credibility and affective commitment under different level of involvements was looked into. For this purpose involvement was operationalized in three ways. These three operationalizations allowed the researcher to explore the variation in hierarchy further. The first two operationalizations (i.e. product based and subject based approach in involvement) have been commonly researched in involvement studies, and are shown to have distinct hierarchy-of-effects on true brand loyalty. Further, following the interactionist approach of considering subject (i.e. customers) within the different context (i.e. product) in the operationalization of involvement, differences in the hierarchy among its groups have been noticed. These differences point to the need of considering involvement as a combination of customer within the context. This interactionist approach of involvement, which is rare in literature, has added substantially to the understanding of the hierarchy phenomenon. There

is very little research regarding such an approach in involvement in brand loyalty studies. The study also emphasizes the important role of brand experience among the customer and product dimensions in the formation of true loyalty.

Further, the investigation into the variation in a conceptual model across distinct groups (moderation effects) has been elaborated in the context of involvement through this research. This is done using multi-group-invariance-testing procedure in Structural Equations Modelling. This could be useful to researchers as a frame work to test moderation.

5.4.2 Contributions to Practice

An important managerial implication is that the advertisers need to identify the role of affective commitment (an attitude) under high and low involvement conditions, in leading experience and credibility (a cognition) of consumers into a consistent behaviour of true loyalty. By understanding this, advertisers and marketers in general, would be able to develop persuasion strategies, which focus on relationship management. This is because the findings of this study show that the role of affective commitment, brand credibility and brand experience are significant for high involvement. In the case of low involvement, the role of affective commitment is replaced by brand credibility and brand experience. Thus the persuasion strategies developed should be different, addressing the specific groups in involvement in order to make their consumers truly loyal. Moreover, the effect of brand experience is found to be higher than that of brand credibility and affective commitment. This directs marketers to focus on the strategies which will enable the organization to consistently provide superior brand experience. This

investigation will be a key input in developing the communication strategy, especially for a new brand which normally requires a long period of time to make consumers truly brand loyal. The product category classification scheme (i.e. high and low categories based on involvement for each product) used in this research can be a basis for segmentation. This strategic research process will become critical in light of the wide practice of integrated marketing communications, whose ultimate goal is to build brand value, which is based on strong and long-term consumer support, i.e., true brand loyalty.

5.5 Limitations

As it is true for any empirical research, the current study also has its limitations. First, the cross-sectional design of the study does not allow for causal inferences because such studies aim at understanding the causal processes that occur at the here-and-now time period. Second, the measurement of brand experience using a quantitative scale may be seen as a limitation. The post-experience measure of brand experience resembles an outcome-oriented satisfaction measure whereas experience is defined as process oriented (Nysveen et al., 2013). Third, Moderation and mediation effects are verified by the multi-group invariance method in Structural Equations Modelling (SEM). It was found that the data does not strictly follow the distributional assumptions of MLE. But, Chou & Bentler, (1995) suggested that 'MLE estimators are quite robust to violation of normality. That is, the estimates are good estimates, even when the data are not normally distributed'. However, using multiple methods for the verification of moderation and mediation might have improved the validity of findings. Fourth, the research has included three products reflecting different levels of involvement and hence the generalizability may be limited to the product classes they represent. Fifth, the research has

included target respondents across gender, Socio-Economic groups (SEC) and age groups. Also, the study did not control the brands (included multiple brands) of products selected. These approaches have made the sample heterogeneous and might have adversely affected the measurement invariance. Also, using multiple methods for distribution of questionnaires to the target respondents can also be a source which affected the measurement invariance adversely.

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APPENDIX TO CHAPTER 3: RESEARCH METHODOLOGY

Contents *A1.1 Socio-Economic-Classification*

A1.1 Socio-Economic-Classification

The Socio-Economic-Classification (SEC) of a household proposed by The Market Research Society of India and Media Research Users Council (MRSI & MRUC, 2011) uses two variables for its classification, namely the educational qualification of the chief income earner for the household and the number of household items they possess. Based on these two variables a family could be classified into one of the 12 categories of SEC namely A_1, A_2, A_3, B_1, B_2, C_1, C_2, D_1, D_2, E_1, E_2 and E_3, in descending order.

Table A1.1: Socio-Economic-Classification grid

No. of Durables	Chief Earner: Educational Qualification						
	EQ1	*EQ2*	*EQ3*	*EQ4*	*EQ5*	*EQ6*	*EQ7*
None	E3	E2	E2	E2	E2	E1	D2
1	E2	E1	E1	E1	D2	D2	D2
2	E1	E1	D2	D2	D1	D1	D1
3	D2	D2	D1	D1	C2	C2	C2
4	D1	C2	C2	C1	C1	B2	B2
5	C2	C1	C1	B2	B1	B1	B1
6	C1	B2	B2	B1	A3	A3	A3
7	C1	B1	B1	A3	A3	**A2**	**A2**
8	B1	A3	A3	A3	**A2**	**A2**	**A2**
9 or more	B1	A3	A3	**A2**	**A2**	**A1**	**A1**

Note: EQ1 to EQ7 shows the educational qualification of Chief Earner of the family. Bold faced items in the table are the SEC groups included in the study.
Abbreviations used: EQ1 = Illiterate; EQ2 = Literate but no formal schooling/school-up to 4 years; EQ3=School-5 to 9 years; EQ4=SSC/HSC; EQ5=Some college (including Diploma) but not Graduate; EQ6=Graduate/Post Graduate: General; EQ7=Graduate/Post Graduate: Professional.
Source: (MRSI & MRUC, 2011)

Of the two variables, the list of consumer durables owned is a predefined list of 11 household items namely electric connection, ceiling fan, LPG stove, two wheeler, colour television, refrigerator, washing machine, personal computer/laptop, car/jeep/van and air conditioner. The second variable, educational qualification of chief income earner is classified into seven groups namely, Illiterate; Literate but no formal schooling or done schooling up to 4 years; Attended school for 5 to 9 years; SSC/HSC; Attended some college (including diploma) but not Graduate; Graduate or Post Graduate (General), Graduate or Post Graduate (Professional). A household can be classified based on SEC using the values of these variables as per table A1.1. In table A1.1 the 'Number of household items' is given as row title and the 'Educational qualification' as the column title. For e.g. If a household possesses seven consumer durable items (as per list) and if the chief income earner's educational qualification is SSC/HSC (QE4), then the household belongs to 'A3' SEC group.

APPENDIX TO CHAPTER 4: ASSESSMENT OF THE CONCEPTUAL MODEL AND ITS VARIATION ACROSS SUBGROUPS

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A2.6 Assessment of Variation in Conceptual Model: Interaction Involvement Groups

A2.1 Re-specification of Measurement Model

Based on the modification index, theoretically justifiable re-specifications were made on the measurement model (Anderson & Gerbing, 1988; Bagozzi & Yi, 2012; Byrne, 2010). This is done by including five error covariances. The error covariances were added one at a time. Adding an error covariance will improve chi-square as well as decrease the number of degrees of freedom. Each time the improvement produced in Chi-square by losing one degree of freedom is tested. This is done using Chi-square difference tests. The difference produced is found to be significant in each situation, showing that the re-specification has significantly improved the measurement model (Byrne, 2010). The results are given in table A2.1.

Table A2.1: Chi-square difference test: Re-specification of measurement model

Error Covariance included	Modification Index	χ^2 Value	d.f.	$\Delta\chi^2$	Δd.f	Probability
Nil	-	2396.054	289	-	-	-
(e28, e29)	333.404	2036.066	288	359.988	1	p<0.01
(e27,e28)	324.077	1695.202	287	340.864	1	p<0.01
(e23,e24)	90.003	1569.010	286	126.192	1	p<0.01
(e24, e25)	122.237	1386.464	285	182.546	1	p<0.01
(e35,e37)	35.669	1311.966	284	74.498	1	p<0.01

Abbreviations used: d.f. = degrees of freedom; $\Delta\chi^2$ = difference in Chi-square; Δd.f. = difference in degrees of freedom; p<0.01=difference in Chi-square is significant; NS = Not Significant; e23, e24, e25, e27, e28 and e29 are measurement errors of items measuring brand credibility; e35, e37 are measurement errors of items measuring affective commitment.

A2.2 Measurement Model after Re-Specification

Table: A2.2 provides the unstandardized and standardized factor loadings and the significance of each measurement item after including five error covariances. All factor loadings are found to be significant.

Table A2.2: Measurement model: Unstandardized factor loadings and significance (after re-specification)

Regression path			b-Value	Standard Error	Probability	Standardized Regression Coefficient
From	→	*To*				
Sen	→	*sen3*	1			0.850
Sen	→	*sen2*	1.101	0.015	p<0.001	0.931
Sen	→	*sen1*	1.098	0.016	p<0.001	0.918
Aff	→	*aff3*	1			0.915
Aff	→	*aff2*	1.068	0.012	p<0.001	0.931
Aff	→	*aff1*	1.014	0.013	p<0.001	0.893
Beh	→	*beh3*	1			0.894
Beh	→	*beh2*	1.034	0.013	p<0.001	0.930
Beh	→	*beh1*	0.984	0.013	p<0.001	0.900
Int	→	*int3*	1			0.896
Int	→	*int2*	1.027	0.013	p<0.001	0.912
Int	→	*int1*	1.026	0.014	p<0.001	0.902
BE	→	*Sen*	0.975	0.029	p<0.001	0.662
BE	→	*Aff*	1.252	0.030	p<0.001	0.769
BE	→	*Beh*	1.057	0.033	p<0.001	0.621
BE	→	*Int*	1.004	0.032	p<0.001	0.611
BCR	→	*bcr7*	1			0.812
BCR	→	*bcr6*	0.973	0.015	p<0.001	0.843
BCR	→	*bcr5*	1.007	0.019	p<0.001	0.843
BCR	→	*bcr4*	0.849	0.019	p<0.001	0.737
BCR	→	*bcr3*	0.861	0.016	p<0.001	0.823
BCR	→	*bcr2*	0.797	0.018	p<0.001	0.729
BCR	→	*bcr1*	0.928	0.019	p<0.001	0.770
AFC	→	*afc4*	1			0.801
AFC	→	*afc3*	1.023	0.018	p<0.001	0.899
AFC	→	*afc2*	1.056	0.018	p<0.001	0.862
AFC	→	*afc1*	1.112	0.021	p<0.001	0.866
TBL	→	*tbl1*	1			0.924
TBL	→	*tbl2*	1.053	0.011	p<0.001	0.943
TBL	→	*tbl3*	0.987	0.011	p<0.001	0.908

Abbreviations used: b-value=unstandardized regression coefficient; NS = Not Significant(i.e. p>0.05); TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility;Sen = Sensory; Aff = Affective; Beh = Behavioural; Int = Intellectual; '→' = regression path.; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measure Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual factors of Brand Experience; tbl1 to tbl3 measure True Brand Loyalty.

Table A2.3 provides R^2, the squared multiple correlation values of each measurement item after including five error covariances.

Table A2.3: Squared multiple correlations of measurement model (after re-specification)

Items	R^2	Items	R^2	Items	R^2
tbl3	0.825	bcr4	0.543	aff1	0.798
tbl2	0.889	bcr3	0.711	aff2	0.867
tbl1	0.854	bcr2	0.711	aff3	0.838
afc1	0.751	bcr1	0.659	sen1	0.843
afc2	0.743	int1	0.813	sen2	0.868
afc3	0.808	int2	0.832	sen3	0.723
afc4	0.642	int3	0.803	Int	0.374
bcr7	0.592	beh1	0.811	Beh	0.386
bcr6	0.531	beh2	0.865	Aff	0.591
bcr5	0.677	beh3	0.799	Sen	0.438

Abbreviations used:R^2 = squared multiple correlations; Sen = Sensory; Aff = Affective; Beh = Behavioural; Int = Intellectual; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measure Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual factors of Brand Experience; tbl1 to tbl3 measure True Brand Loyalty.

Table A2.4 enables us to compare the hypothesized measurement model to the respective saturated model and independence model after including five error covariances. Both BIC and CAIC values for the hypothesised model are lower than the values of the independence model and the saturated model. Moreover the AIC and BCC values have reduced after the re-specifications and are closer to saturated model values, showing an improvement in the measurement.

Table A2.4: Model comparison indices: Measurement model (after re-specification)

Model	AIC	BCC	BIC	CAIC
Hypothesised model	1518.464	1519.579	1919.657	1985.657
Saturated model	702.000	707.929	2835.620	3186.620
Independence model	73801.830	73802.270	73959.876	73985.876

Abbreviations used: AIC=Akaike's Information Criterion; BCC=Browne-Cudeck Criterion; BIC= Bayes Information Criterion; CAIC= Consistent Akaike's Information Criterion

Table A2.4A: Single Factor Model in EFA: Factor Loadings and Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.845	37.865	37.865	9.845	37.865	37.865
2	3.218	12.376	50.241			
3	2.230	8.578	58.819			
4	1.707	6.564	65.383			
5	1.583	6.089	71.472			
6	1.554	5.978	77.450			
7	1.282	4.931	82.381			
8	.597	2.296	84.677			
9	.436	1.677	86.354			
10	.338	1.300	87.654			
11	.316	1.215	88.869			
12	.304	1.168	90.037			
13	.286	1.102	91.139			
14	.253	.974	92.113			
15	.237	.912	93.024			
16	.213	.818	93.842			
17	.197	.757	94.598			
18	.192	.739	95.337			
19	.177	.682	96.019			
20	.173	.665	96.684			
21	.164	.632	97.316			
22	.151	.581	97.897			
23	.150	.576	98.472			
24	.139	.536	99.009			
25	.138	.531	99.539			
26	.120	.461	100.000			

Note: Extraction Method: Principal Component Analysis.

The above table depicts the results of factor analysis (PCA) extracting one factor. The single factor extracted could explain 37.865 percent variance of the total. The explained variance is much less than the cut-off value of 50 percent. Hence common method variance could not be a problem in this data.

A2.3 Assessment of Conceptual Model

Table A2.5 compares the hypothesised structural model with the saturated model and the independence model before including involvement based on indices AIC, BIC, BCC and CAIC. Both BIC and CAIC values for the hypothesised (conceptual) model are lower than the values of the independence model and the saturated model. Moreover the AIC and BCC values are found to be closer to saturated model values.

Table A2.5: Model comparison indices: Conceptual model before including Involvement

Model	AIC	BCC	BIC	CAIC
Hypothesized model	1445.966	1447.098	1853.239	1920.239
Saturated model	702.000	707.929	2835.620	3186.620
Independence model	73801.830	73802.270	73959.876	73985.876
Abbreviations used: AIC=Akaike's Information Criterion; BCC=Browne-Cudeck Criterion; BIC= Bayes Information Criterion; CAIC= Consistent Akaike's Information Criterion				

A2.4 Assessment of Variation in Conceptual Model: Between-Product Involvement Groups

Table A2.6 provides the factor loadings of the measurement model, structural path coefficients and its significance among between-product-involvement groups. The coefficients (b-values) reported are unstandardized and are obtained after constraining all invariant (equivalent) paths among between-product-involvement (as per model no. 31, page 94). Those paths marked with '*' are constrained to be equal while testing for invariance (equivalence) of structural (regression) paths.

Table A2.6: Unstandardized factor loadings and significance: Between-product involvement groups

Regression path			Car		Mobile Phone		Toothpaste	
From	→	*to*	*b-value*	*Proba bility*	*b-value*	*Proba bility*	*b-value*	*Proba bility*
BE	→	Sen	0.895	p<0.01	1.051	p<0.01	0.913	p<0.01
BE	→	Aff *	1.178	p<0.01	1.178	p<0.01	1.178	p<0.01
BE	→	Beh	0.961	p<0.01	1.255	p<0.01	0.953	p<0.01
BE	→	Int	1.000	p<0.01	1.134	p<0.01	0.917	p<0.01
Sen	→	sen3	1		1		1	
Sen	→	sen2 *	1.106	p<0.01	1.106	p<0.01	1.106	p<0.01
Sen	→	sen1*	1.095	p<0.01	1.095	p<0.01	1.095	p<0.01
Aff	→	aff3	1		1		1	
Aff	→	aff2 *	1.049	p<0.01	1.049	p<0.01	1.049	p<0.01
Aff	→	aff1*	0.972	p<0.01	0.972	p<0.01	0.972	p<0.01
Beh	→	beh3	1		1		1	
Beh	→	beh2	1.063	p<0.01	0.992	p<0.01	1.045	p<0.01
Beh	→	beh1*	0.987	p<0.01	0.987	p<0.01	0.987	p<0.01
Int	→	int3	1		1		1	
Int	→	int2*	1.024	p<0.01	1.024	p<0.01	1.024	p<0.01
Int	→	int1	0.991	p<0.01	1.051	p<0.01	1.059	p<0.01
BCR	→	bcr1	1		1		1	
BCR	→	bcr2	0.971	p<0.01	0.925	p<0.01	1.014	p<0.01
BCR	→	bcr3*	1.005	p<0.01	1.005	p<0.01	1.005	p<0.01
BCR	→	bcr4*	0.874	p<0.01	0.874	p<0.01	0.874	p<0.01
BCR	→	bcr5	0.820	p<0.01	0.876	p<0.01	0.896	p<0.01
BCR	→	bcr6*	0.808	p<0.01	0.808	p<0.01	0.808	p<0.01
BCR	→	bcr7*	0.909	p<0.01	0.909	p<0.01	0.909	p<0.01
AFC	→	afc4	1		1		1	
AFC	→	afc3	1.246	p<0.01	0.958	p<0.01	1.000	p<0.01
AFC	→	afc2	1.174	p<0.01	1.013	p<0.01	1.129	p<0.01
AFC	→	afc1	1.103	p<0.01	1.046	p<0.01	1.361	p<0.01
TBL	→	tbl1	1		1		1	
TBL	→	tbl2*	1.047	p<0.01	1.047	p<0.01	1.047	p<0.01
TBL	→	tbl3*	0.987	p<0.01	0.987	p<0.01	0.987	p<0.01

Abbreviations used: '*'=shows the path is constrained to be equal for all three products; b-value = unstandardized regression coefficient; NS = Not Significant (i.e. p > 0.05); TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility; Sen = Sensory; Aff = Affective; Beh = Behavioural; Int = Intellectual; '→' = regression path.; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measure Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual factors of Brand Experience respectively; tbl1 to tbl3 measure True Brand Loyalty.

A2.5 Assessment of Variation in Conceptual Model: Between-Subject Involvement Groups

The details of the baseline model after including five error-covariances based on the modification index are given in table A2.7. For both low and high groups in between-subject-involvement the comparative indices AIC, BCC values for the hypothesised model are found to be lower than the values of Independence model and are closer to Saturated model values. While BIC and CAIC values for the hypothesised model is found to be lower than the Saturated and the Independence model.

Table A2.7: Standardized factor loadings and model comparison indices of conceptual model: Between-subject involvement groups

	Between-subject involvement groups	
	Low Involvement	**High Involvement**
Factor Loadings between*	0.720 & 0.950	0.702 & 0.933
2ⁿᵈ order factor paths between *	0.525 & 0.671	0.573 & 0.726
AIC	919.940	916.448
BCC	921.871	919.239
BIC	1291.799	1264.071
CAIC	1358.799	1331.071
Abbreviations used: AIC=Akaike's Information Criterion; BCC=Browne-Cudeck Criterion; BIC= Bayes Information Criterion; CAIC= Consistent Akaike's Information Criterion. *Note:* * All factor loadings and second order factor path coefficients are significant.		

The details of invariance testing of the Measurement model across between-subject-involvement are given in table A2.8. The table shows the results of difference in chi-square produced as well as CFI. The difference in each case is denoted as 'Δ'. A non-significant $\Delta\chi^2$ (i.e. p>0.05) denotes the constrained factor loadings or covariancesor error covariances are invariant (equivalent) among between.-subject-involvement groups.

Table A2.8 Invariance tests of measurement model: Between-subject involvement groups

No	Model	Equality constraint imposed	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f.	Probability	ΔCFI
1	*Configural model*	No equality constraint imposed	1568.387	568	0.985				
2	*Model 1*	All Factor Loadings, Error Covariances and Covariances.	1841.372	602	0.981	272.985	34	p<0.01	0.004
3	*Model 2*	All FL of TBL	1574.279	570	0.985	5.892	2	**NS**	0.000
4	*Model 3*	Model 2 plus all FL of AFC	1608.549	573	0.984	40.162	5	p<0.01	0.001
	Model 4	Model 2 plus FL of afc1	1575.122	571	0.985	6.735	3	**NS**	0.000
	Model 5	Model 4 plus FL of afc2	1587.200	572	0.985	18.813	4	p<0.01	0.000
	Model 6	Model 4 plus FL of afc3	1606.421	572	0.984	38.034	4	p<0.01	0.001
5	*Model 7*	Model 4 plus all FL of BCR	1585.462	577	0.985	17.075	9	**NS**	0.000
	Model 8	Model 7 plus all FL of BE	1637.692	589	0.984	69.305	21	p<0.01	0.001
	Model 9	Model 7 plus all FL of Sensory	1592.583	579	0.985	24.196	11	**NS**	0.000
	Model 10	Model 9 plus all FL of Affective	1598.772	581	0.985	30.385	13	p<0.01	0.000
6	*Model 11*	Model 9 plus FL of aff1	1592.583	580	0.985	24.196	12	**NS**	0.000
	Model 12	Model 11 plus all FL of Behaviour	1614.937	582	0.984	46.550	14	p<0.01	0.001
	Model 13	Model 11 plus FL of beh1	1613.897	581	0.984	45.510	13	p<0.01	0.001
	Model 14	Model 11 plus FL of beh2	1594.572	581	0.985	26.185	13	**NS**	0.000
	Model 15	Model 14 plus all FL of Intellectual	1597.829	583	0.985	29.442	15	**NS**	0.000

table continued ......

No	Model	Equality constraint imposed	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f.	Probability	ΔCFI
	Model 16	Model 15 plus BE→Aff, BE→Sen, BE→Beh, BE→Int	1613.324	587	0.984	44.937	19	p<0.01	0.001
	Model 17	Model 15 plus BE→Sen	1605.972	584	0.985	37.585	16	p<0.01	0.000
	Model 18	Model 15 plus BE→Aff	1602.320	584	0.985	33.933	16	p<0.01	0.000
	Model 19	Model 15 plus BE→Beh, BE→Int	1599.160	585	0.985	30.773	17	NS	0.000
	Model 20	Model 19 plus all Error-Covariance in the model	1674.527	590	0.984	106.140	22	p<0.01	0.001
	Model 21	Model 19 plus Error-Cov(23,24)	1615.813	586	0.984	47.426	18	p<0.01	0.001
	Model 22	Model 19 plus Error-Cov (24,25)	1616.229	586	0.984	47.842	18	p<0.01	0.001
	Model 23	Model 19 plus Error-Cov(27,28)	1631.953	586	0.984	63.566	18	p<0.01	0.001
	Model 24	Model 19 plus Error-Cov(28,29)	1599.895	586	0.985	31.508	18	NS	0.000
	Model 25	Model 24 plus Error-Cov(35,37)	1605.122	587	0.985	36.735	19	p<0.01	0.000
	Model 26	Model 24 plus all Covariances	1680.542	592	0.984	112.155	24	p<0.01	0.001
7	Model 27	Model 24 plus Cov(BE, BCR)	1603.511	587	0.985	35.124	19	NS	0.000
	Model 28	Model 27 plus Cov(BCR, AFC)	1616.793	588	0.984	48.406	20	p<0.01	0.001

table continued ……

No	Model	χ² Value	d.f.	CFI	Δχ²	Δd.f.	Probability	ΔCFI
Model 29	Model 27 plus Cov(AFC, TBL)	1626.663	588	0.984	58.276	20	p<0.01	0.001
Model 30	Model 27 plus Cov(BCR, TBL)	1629.313	588	0.984	60.926	20	p<0.01	0.001
Model 31	Model 27 plus Cov(BE, TBL)	1605.875	588	0.985	37.488	20	**NS**	0.000
Model 32	Model 31 plus Cov(BE, AFC)	1621.415	589	0.984	53.028	21	p<0.01	0.001

Abbreviations used: d.f.= degrees of freedom; CFI = Comparative Fit Index; $\Delta\chi^2$ =difference in Chi-square; Δd.f. = difference in degrees of freedom; ΔCFI = difference in CFI; p<0.01 = difference in Chi-square is significant; NS = Not Significant; FL = Factor Loading; TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility; Cov = Covariance; Sen = Sensory; Aff = Affective; Beh = Behavioural; Int = Intellectual; '$\rightarrow$' = regression path.; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measures Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual factors of Brand Experience.
Note 1: All models are compared with Unconstrained model for $\Delta\chi^2$, Δd.f and ΔCFI.

Table A2.9 provides the factor loadings of measurement model, structural path coefficients and its significance among high and low-involvement groups. The coefficients (b-values) reported are unstandardized and are obtained after constraining all invariant (equivalent) paths among between-subject-involvement (as per model 24, page 108). Those paths marked with '*' are constrained to be equal while testing for invariance (equivalence) of structural (regression) paths.

Table A2.9: Unstandardized factor loadings, structural path coefficients and significance: Between-subject-involvement groups

Regression path			low-involvement		high-involvement	
From	→	*To*	*b-Value*	*probability*	*b-Value*	*probability*
BE	→	BCR*	0.464	p<0.01	0.464	p<0.01
BCR	→	AFC	0.077	p=0.004	0.365	p<0.01
BE	→	AFC*	0.452	p<0.01	0.452	p<0.01
BE	→	Sens	0.877	p<0.01	0.734	p<0.01
BE	→	Aff	0.977	p<0.01	1.104	p<0.01
BE	→	Beh*	0.928	p<0.01	0.928	p<0.01
BE	→	Int*	0.830	p<0.01	0.830	p<0.01
AFC	→	TBL	-0.395	NS	0.300	NS
BE	→	TBL*	3.955	p<0.01	3.955	p<0.01
BCR	→	TBL*	3.473	p<0.01	3.473	p<0.01
Sen	→	sen3	1		1	
Sen	→	sen2*	1.066	p<0.01	1.066	p<0.01
Sen	→	sen1*	1.062	p<0.01	1.062	p<0.01
Aff	→	aff3	1		1	
Aff	→	aff2	1.092	p<0.01	1.031	p<0.01
Aff	→	aff1*	0.978	p<0.01	0.978	p<0.01
Beh	→	beh3	1		1	

Table continued…

Regression path			low-involvement		high-involvement	
From	→	*To*	*b-Value*	*probability*	*b-Value*	*probability*
Beh	→	beh2*	0.995	p<0.01	0.995	p<0.01
Beh	→	beh1	0.924	p<0.01	1.032	p<0.01
Int	→	int3	1		1	
Int	→	int2*	1.057	p<0.01	1.057	p<0.01
Int	→	int1*	1.049	p<0.01	1.049	p<0.01
BCR	→	bcr1	1		1	
BCR	→	bcr2*	0.975	p<0.01	0.975	p<0.01
BCR	→	bcr3*	1.006	p<0.01	1.006	p<0.01
BCR	→	bcr4*	0.868	p<0.01	0.868	p<0.01
BCR	→	bcr5*	0.878	p<0.01	0.878	p<0.01
BCR	→	bcr6*	0.804	p<0.01	0.804	p<0.01
BCR	→	bcr7*	0.902	p<0.01	0.902	p<0.01
AFC	→	afc4	1		1	
AFC	→	afc3	0.917	p<0.01	1.112	p<0.01
AFC	→	afc2	0.981	p<0.01	1.108	p<0.01
AFC	→	afc1*	1.086	p<0.01	1.086	p<0.01
TBL	→	tbl1	1		1	
TBL	→	tbl2*	1.064	p<0.01	1.064	p<0.01
TBL	→	tbl3*	0.993	p<0.01	0.993	p<0.01

Abbreviations used: b-value=unstandardized regression coefficient; NS = Not Significant (i.e. p>0.05); TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility; Sen = Sensory; Aff = Affective; Beh = Behavioural; Int = Intellectual; '→' = regression path.; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measure Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual factors of Brand Experience; tbl1 to tbl3 measure True Brand Loyalty.

Note: '*' shows the path is constrained to be equal for both low and high involvement groups.

A2.6 Assessment of Variation in Conceptual Model: Interaction Involvement Groups

The difference in involvement among the six involvement groups is found to be significant [F (5, 3219) = 1694.863, p<0.001]. Pairwise comparison of six subgroups (using 'LSD' method of post-hoc analysis in one way ANOVA) revealed that all pairs, except the pair mobile phone-high and toothpaste-high, are significantly different in involvement. The results obtained are given in Table A2.10

Table A2.10: Post-hoc analysis for comparison of arithmetic means using LSD: Interaction involvement groups

Group Name	Group Name	Mean Difference	Std. Error	p-value
Car-Low	Car-High	-21.203	0.439	p< 0.01
	Mobile-Low	3.676	0.443	p< 0.01
	Mobile-High	-17.492	0.516	p< 0.01
	Toothpaste-Low	4.954	0.424	p< 0.01
	Toothpaste-High	-17.316	0.540	p< 0.01
Car-High	Mobile-Low	24.878	0.382	p< 0.01
	Mobile-High	3.711	0.465	p< 0.01
	Toothpaste-Low	26.156	0.361	p< 0.01
	Toothpaste-High	3.887	0.492	p< 0.01
Mobile-Low	Mobile-High	-21.168	0.469	p< 0.01
	Toothpaste-Low	1.278	0.366	p< 0.01
	Toothpaste-High	-20.991	0.495	p< 0.01
Mobile-High	Toothpaste-Low	22.446	0.452	p< 0.01
	Toothpaste-High	0.176	0.562	NS
Toothpaste-Low	Toothpaste-High	-22.269	0.479	p< 0.01

Abbreviations used: Mean difference is the difference between the arithmetic means in involvement for every pair of interaction groups; p<0.01 = difference in arithmetic mean between the groups is significant; NS = difference in arithmetic mean not significant.
Note: Arithmetic Mean value of involvement for each group is given in table 4.19 page 113.

The fit measures of baseline measurement model for all six interaction involvement groups, when tested separately, found to be consistent. These results are reported in tables A2.11 and A2.12.

Table A2.11: Fit measures of confirmatory factor analysis: Interaction involvement groups

Group	χ^2-value	Normed-χ^2	CFI	GFI	AGFI	RFI	RMSEA	SRMR
Car-Low	425.926	1.500	0.981	0.928	0.911	0.937	0.035	0.042
Car-High	664.391	2.339	0.971	0.930	0.913	0.943	0.044	0.048
Mobile-Low	500.720	1.763	0.984	0.943	0.929	0.959	0.034	0.039
Mobile-High	450.402	1.586	0.977	0.907	0.885	0.932	0.042	0.05
Toothpaste-Low	648.972	2.285	0.981	0.944	0.930	0.962	0.039	0.041
Toothpaste-High	436.325	1.536	0.973	0.898	0.874	0.916	0.050	0.043

Abbreviations used: χ^2 = Chi-square; Normed-χ^2 = χ^2 /d.f.; CFI = Comparative Fit Index; GFI = Goodness of Fit Index; AGFI = Adjusted Goodness of Fit Index; RFI = Relative Fit Index; RMSEA = Root Mean Square Approximation; SRMR = Standardized Root Mean Square Residual
Note: degrees of freedom (d.f.) for each group is 284

Apart from the results given in table A2.11, AIC, BCC, BIC and CAIC values for the measurement model are found to be lower than both the Independence model and the Saturated model for Car-Low group. For Car-High group BIC and CAIC values are lower than both the Independent model and the Saturated model values, while AIC and BCC values are closer to the Saturated model values and much lower than the Independent model values. Fit measures provide evidence of sufficient fit of data and are above the minimum cut-off for both Car-Low and Car-High groups. RMSEA and SRMR values are below the cut-off values as well.

Table A2.12: Model comparison indices of conceptual model: Interaction involvement groups

Model	Factor Loadings between*	2nd order factor paths between *	AIC	BCC	BIC	CAIC
Car-Low	0.706 & 0.931	0.545 & 0.781	559.926	569.447	828.680	895.680
Car-High	0.693 & 0.932	0.571 & 0.752	798.391	803.831	1102.640	1169.640
Mobile-Low	0.663 & 0.955	0.592 & 0.673	634.720	640.445	935.700	1002.700
Mobile-High	0.612 & 0.936	0.674 & 0.700	584.402	595.961	841.138	908.138
Toothpaste-Low	0.703 & 0.964	0.446 & 0.613	782.972	787.466	1099.549	1166.549
Toothpaste-High	0.567 & 0.960	0.447 & 0.819	570.325	584.134	816.207	883.207

Abbreviations used: AIC=Akaike's Information Criterion; BCC=Browne-Cudeck Criterion; BIC= Bayes Information Criterion; CAIC= Consistent Akaike's Information Criterion.
Note: * All factor loadings and second order factor paths of brand experience are significant. Factor loadings reported are standardized coefficients

The comparative indices (AIC, BCC, BIC and CAIC) values of the measurement model for both mobile phones-low and mobile phone-high groups are found to be smaller than both Independence model and Saturated model. Fit measures are above the minimum cut-off, while RMSEA and SRMR values are below the cut-off values for both groups. For both toothpaste-low and toothpaste-high groups, the comparative indices AIC, BCC, BIC and CAIC values of the measurement model are found to be smaller than both the Independence model and the Saturated model values. Further, fit indices values CFI, RFI, AGFI shows adequate fit of measurement model, while RMSEA and SRMR are below the cut-off. Thus the results show that the measurement model adequately fits in all groups.

The results of the invariance test of measurement model are given in the following table A2.13. All subsequent models obtained by constraining factor loadings among six interaction groups are compared with the configural model, as in the invariance tests among between-product groups.

Table A2.13: Invariance tests of measurement model: Interaction involvement groups

No	Model	Equality constraint imposed	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f	Probability	ΔCFI
1	*Configural model*	No equality constraint imposed	3126.735	1704	0.979				
2	*Model 1*	All Factor loadings, Error Covariances and Covariances.	3855.194	1874	0.970	728.459	170	p<0.01	0.009
3	*Model 2*	All FL of TBL	3149.218	1714	0.978	22.483	10	NS	0.001
4	*Model 3*	Model 2 plus all FL of AFC	3264.527	1729	0.977	137.792	25	p<0.01	0.002
	Model 4	Model 2 plus FL of afc1	3186.380	1719	0.978	59.645	15	p<0.01	0.001
	Model 5	Model 2 plus FL of afc2	3167.205	1719	0.978	40.470	15	p<0.01	0.001
	Model 6	Model 2 plus FL of afc3	3178.512	1719	0.978	51.777	15	p<0.01	0.001
	Model 7	Model 2 plus all FL of BCR	3206.445	1744	0.978	79.710	40	p<0.01	0.001
5	*Model 8*	Model 2 plus FL of bcr2, bcr3, bcr4, bcr5	3174.348	1734	0.978	47.613	30	NS	0.001
	Model 9	Model 8 plus FL of bcr6	3190.496	1739	0.978	63.761	35	p<0.01	0.001
	Model 10	Model 8 plus FL of bcr7	3193.961	1739	0.978	67.226	35	p<0.01	0.001
	Model 11	Model 8 plus all FL of BE	3305.592	1794	0.977	178.857	90	p<0.01	0.002
	Model 12	Model 8 plus all FL of Sensory, Affective, Intellectual	3212.352	1764	0.978	85.617	60	NS	0.001
	Model 13	Model 12 plus all FL of Behaviour	3253.582	1774	0.978	126.847	70	p<0.01	0.001

table continued ......

No.	Model	Equality constraint imposed	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f	Probability	ΔCFI
	Model 14	Model 12 plus FL of beh1	3244.645	1769	0.978	117.910	65	p<0.01	0.001
6	Model 15	Model 12 plus FL of beh2	3218.301	1769	0.978	91.566	65	NS	0.001
	Model 16	Model 15 plus BE→Aff, BE→Sen, BE→Beh, BE→Int	3270.421	1789	0.978	143.686	85	p<0.01	0.001
	Model 17	Model 15 plus BE→Sen	3231.714	1774	0.978	104.979	70	p<0.01	0.001
	Model 18	Model 15 plus BE→Aff	3235.364	1774	0.978	108.629	70	p<0.01	0.001
	Model 19	Model 15 plus BE→Beh	3229.563	1774	0.978	102.828	70	p<0.01	0.001
	Model 20	Model 15 plus BE→Int	3230.770	1774	0.978	104.035	70	p<0.01	0.001
	Model 21	Model 15 plus all Error-Covariance in the model	3375.170	1794	0.976	248.435	90	p<0.01	0.003
7	Model 22	Model 15 plus Error-Cov(23,24)	3256.777	1774	0.978	130.042	70	p<0.01	0.001
	Model 23	Model 15 plus Error-Cov (24,25)	3250.327	1774	0.978	123.592	70	p<0.01	0.001
	Model 24	Model 15 plus Error-Cov(27,28)	3273.630	1774	0.977	146.895	70	p<0.01	0.002
	Model 25	Model 15 plus Error-Cov(28,29)	3222.112	1774	0.978	95.377	70	NS	0.001
8	Model 26	Model 25 plus Error-Cov(34,37)	3242.907	1779	0.978	116.172	75	p<0.01	0.001
	Model 27	Model 25 plus all Covariances	3481.078	1804	0.975	354.343	100	p<0.01	0.004
	Model 28	Model 25 plus Cov(BE, BCR)	3251.453	1779	0.978	124.718	75	p<0.01	0.001

table continued ....

No.	Model	Equality constraint imposed	χ^2 Value	d.f.	CFI	$\Delta\chi^2$	Δd.f	Probability	ΔCFI
Model 29	Model 25 plus Cov(BCR, AFC)		3242.784	1779	0.978	116.049	75	p<0.01	0.001
Model 30	Model 25 plus Cov(AFC, TBL)		3280.452	1779	0.977	153.717	75	p<0.01	0.002
Model 31	Model 25 plus Cov(BCR, TBL)		3326.641	1779	0.977	199.906	75	p<0.01	0.002
Model 32	Model 25 plus Cov(BE, TBL)		3242.586	1779	0.978	115.851	75	p<0.01	0.001
Model 33	Model 25 plus Cov(BE, AFC)		3255.551	1779	0.978	128.816	75	p<0.01	0.001

Abbreviations used: d.f.= degrees of freedom; CFI = Comparative Fit Index; $\Delta\chi^2$ =difference in Chi-square; Δd.f = difference in degrees of freedom; ΔCFI = difference in CFI; p<0.01 = difference in Chi-square is significant; NS = Not Significant; FL = Factor Loading; TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility; Cov = Covariance; Sen = Sensory; Aff = Affective; Beh = Behavioural; Int = Intellectual; '$\rightarrow$' = regression path.; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measures Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual factors of Brand Experience.

Note 1: All models are compared with Unconstrained model for $\Delta\chi^2$, Δd.f and ΔCFI.

Table A2.14a, Table A2.14b and Table A2.14c report unstandardized regression coefficients of measurement as well as regression (structural) model and its significance. Tables A2.14b and A2.14c are to be read in continuation to A2.14a. Further, A2.14a, reports coefficients of car-low and car-high group and the significance; A2.14b reports the coefficients of mobile-low and mobile-high groups and the significance while A2.14c reports that of toothpaste-high and toothpaste-low group. Path coefficients which are constrained (invariant) to be equal are marked by '*'.

Table A2.14a: Unstandardized factor loadings, regression coefficients and its significance: Interaction involvement groups of Car

Regression Paths			Car-Low		Car-High	
From		To	b-Value	Prob ability	b-Value	Prob ability
BE	→	BCR	0.276	p<0.01	0.457	p<0.01
BCR	→	AFC	0.153	p=0.031	0.311	p<0.01
BE	→	AFC	0.352	p<0.01	0.498	p<0.01
BE	→	Sen	0.841	p<0.01	0.755	p<0.01
BE	→	Aff	1.132	p<0.01	1.066	p<0.01
BE	→	Beh	1.011	p<0.01	0.834	p<0.01
BE	→	Int	0.754	p<0.01	0.892	p<0.01
AFC	→	TBL	0.667	p=0.122	2.140	p<0.01
BE	→	TBL	3.125	p<0.01	3.590	p<0.01
BCR	→	TBL	3.540	p<0.01	1.961	p<0.01
Sen	→	sen3	1		1	
Sen	→	sen2*	1.068	p<0.01	1.068	p<0.01
Sen	→	sen1*	1.062	p<0.01	1.062	p<0.01
Aff	→	aff3	1		1	
Aff	→	aff2*	1.052	p<0.01	1.052	p<0.01
Aff	→	aff1*	0.954	p<0.01	0.954	p<0.01

Table continued…

Regression Paths			Car-Low		Car-High	
From		**To**	**b-Value**	**Prob ability**	**b-Value**	**Prob ability**
Beh	→	*beh3*	1		1	
Beh	→	*beh2**	1.005	p<0.01	1.005	p<0.01
Beh	→	*beh1*	0.83	p<0.01	1.029	p<0.01
Int	→	*int3*	1		1	
Int	→	*int2**	1.052	p<0.01	1.052	p<0.01
Int	→	*int1**	1.039	p<0.01	1.039	p<0.01
BCR	→	*bcr1*	1		1	
BCR	→	*bcr2**	0.976	p<0.01	0.976	p<0.01
BCR	→	*bcr3**	1.006	p<0.01	1.006	p<0.01
BCR	→	*bcr4**	0.892	p<0.01	0.892	p<0.01
BCR	→	*bcr5**	0.881	p<0.01	0.881	p<0.01
BCR	→	*bcr6*	0.830	p<0.01	0.849	p<0.01
BCR	→	*bcr7*	0.894	p<0.01	0.877	p<0.01
AFC	→	*afc4*	1		1	
AFC	→	*afc3*	1.049	p<0.01	1.224	p<0.01
AFC	→	*afc2*	1.109	p<0.01	1.246	p<0.01
AFC	→	*afc1*	0.963	p<0.01	0.931	p<0.01
TBL	→	*tbl1*	1		1	
TBL	→	*tbl2**	1.059	p<0.01	1.059	p<0.01
TBL	→	*tbl3**	0.992	p<0.01	0.992	p<0.01

Abbreviations used: '*'=shows the path is constrained to be equal across all six interaction groups; b-value=unstandardized regression coefficient; TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility; Sen = Sensory; Aff = Affective; Beh = Behavioural; Int = Intellectual; '→' = regression path.; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measure Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual factors of Brand Experience; tbl1 to tbl3 measure True Brand Loyalty.
Note: b-value and its significance for mobile-low and mobile-high are given in Table A2.14b and for toothpaste-low and toothpaste high in table A2.14c.

Table A2.14b: Unstandardized factor loadings, regression coefficients and its significance: Interaction involvement groups of Mobile Phone Handset

Regression Paths			Mobile-Low		Mobile-High	
From		*To*	*b-Value*	*Prob ability*	*b-Value*	*Prob ability*
BE	→	BCR	0.377	p<0.01	0.429	p<0.01
BCR	→	AFC	0.073	p=0.104	0.327	p=0.004
BE	→	AFC	0.274	p<0.01	0.645	p<0.01
BE	→	Sen	0.942	p<0.01	0.801	p<0.01
BE	→	Aff	0.976	p<0.01	1.116	p<0.01
BE	→	Beh	1.071	p<0.01	1.020	p<0.01
BE	→	Int	0.976	p<0.01	0.949	p<0.01
AFC	→	TBL	0.614	p=0.116	1.792	p<0.01
BE	→	TBL	4.875	p<0.01	5.177	p<0.01
BCR	→	TBL	2.513	p<0.01	1.683	p=0.013
Sen	→	sen3	1		1	
Sen	→	sen2*	1.068	p<0.01	1.068	p<0.01
Sen	→	sen1*	1.062	p<0.01	1.062	p<0.01
Aff	→	aff3	1		1	
Aff	→	aff2*	1.052	p<0.01	1.052	p<0.01
Aff	→	aff1*	0.954	p<0.01	0.954	p<0.01
Beh	→	beh3	1		1	
Beh	→	beh2*	1.005	p<0.01	1.005	p<0.01
Beh	→	beh1	0.984	p<0.01	1.081	p<0.01
Int	→	int3	1		1	
Int	→	int2*	1.052	p<0.01	1.052	p<0.01
Int	→	int1*	1.039	p<0.01	1.039	p<0.01
BCR	→	bcr1	1		1	

Table continued…

Regression Paths			Mobile-Low		Mobile-High	
From		**To**	*b-Value*	*Prob ability*	*b-Value*	*Prob ability*
BCR	→	*bcr2*	0.976	p<0.01	0.976	p<0.01
BCR	→	*bcr3*	1.006	p<0.01	1.006	p<0.01
BCR	→	*bcr4*	0.892	p<0.01	0.892	p<0.01
BCR	→	*bcr5*	0.881	p<0.01	0.881	p<0.01
BCR	→	*bcr6*	0.810	p<0.01	0.935	p<0.01
BCR	→	*bcr7*	0.870	p<0.01	1.048	p<0.01
AFC	→	*afc4*	1		1	
AFC	→	*afc3*	0.84	p<0.01	0.966	p<0.01
AFC	→	*afc2*	0.972	p<0.01	1.01	p<0.01
AFC	→	*afc1*	0.984	p<0.01	0.932	p<0.01
TBL	→	*tbl1*	1		1	
TBL	→	*tbl2*	1.059	p<0.01	1.059	p<0.01
TBL	→	*tbl3*	0.992	p<0.01	0.992	p<0.01

Abbreviations used: '*'=shows the path is constrained to be equal across all six interaction groups; b-value=unstandardized regression coefficient; TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility; Sen = Sensory; Aff = Affective; Beh = Behavioural; Int = Intellectual; '→' = regression path.; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measure Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual factors of Brand Experience; tbl1 to tbl3 measure True Brand Loyalty.

Note: b-value and its significance for car-low and car-high are given in Table A2.14a and for toothpaste-low and toothpaste high in table A2.14c.

Table A2.14c: Unstandardized factor loadings, regression coefficients and significance: Interaction involvement groups of Toothpaste

Regression Paths			Toothpaste-Low		Toothpaste-High	
From		*To*	*b-Value*	*Prob ability*	*b-Value*	*Prob ability*
BE	→	BCR	0.688	p<0.01	0.343	p<0.01
BCR	→	AFC	0.009	p=0.815	0.225	p=0.014
BE	→	AFC	0.427	p<0.01	0.268	p=0.004
BE	→	Sen	0.850	p<0.01	0.582	p<0.01
BE	→	Aff	0.852	p<0.01	1.257	p<0.01
BE	→	Beh	0.808	p<0.01	0.855	p<0.01
BE	→	Int	0.735	p<0.01	0.677	p<0.01
AFC	→	TBL	0.169	p=0.638	0.169	p=0.691
BE	→	TBL	3.264	p<0.01	2.165	p<0.01
BCR	→	TBL	4.631	p<0.01	6.222	p<0.01
Sen	→	sen3	1		1	
Sen	→	sen2*	1.068	p<0.01	1.068	p<0.01
Sen	→	sen1*	1.062	p<0.01	1.062	p<0.01
Aff	→	aff3	1		1	
Aff	→	aff2*	1.052	p<0.01	1.052	p<0.01
Aff	→	aff1*	0.954	p<0.01	0.954	p<0.01
Beh	→	beh3	1		1	
Beh	→	beh2*	1.005	p<0.01	1.005	p<0.01
Beh	→	beh1	0.945	p<0.01	0.976	p<0.01
Int	→	int3	1		1	
Int	→	int2*	1.052	p<0.01	1.052	p<0.01
Int	→	int1*	1.039	p<0.01	1.039	p<0.01
BCR	→	bcr1	1		1	
BCR	→	bcr2*	0.976	p<0.01	0.976	p<0.01

Regression Paths			Toothpaste-Low		Toothpaste-High	
From		*To*	*b-Value*	*Prob ability*	*b-Value*	*Prob ability*
BCR	→	bcr3*	1.006	p<0.01	1.006	p<0.01
BCR	→	bcr4*	0.892	p<0.01	0.892	p<0.01
BCR	→	bcr5*	0.881	p<0.01	0.881	p<0.01
BCR	→	bcr6	0.760	p<0.01	0.721	p<0.01
BCR	→	bcr7	0.930	p<0.01	0.693	p<0.01
AFC	→	afc4	1		1	
AFC	→	afc3	0.927	p<0.01	0.929	p<0.01
AFC	→	afc2	1.089	p<0.01	1.261	p<0.01
AFC	→	afc1	1.234	p<0.01	1.337	p<0.01
TBL	→	tbl1	1		1	
TBL	→	tbl2*	1.059	p<0.01	1.059	p<0.01
TBL	→	tbl3*	0.992	p<0.01	0.992	p<0.01

Abbreviations used: '*'=shows the path is constrained to be equal across all six interaction groups; b-value=unstandardized regression coefficient; TBL= True Brand Loyalty; AFC= Affective Commitment; BE=Brand Experience; BCR= Brand Credibility; Sen = Sensory; Aff = Affective; Beh = Behavioural; Int = Intellectual; '→' = regression path.; afc1 to afc4 are items measuring Affective Commitment; bcr1 to bcr7 measure Brand Credibility; sen1 to sen3, aff1 to aff3, beh1 to beh3 and int1 to int3 measure sensory, affective, behavioural and intellectual factors of Brand Experience; tbl1 to tbl3 measure True Brand Loyalty.

Note: b-value and its significance for car-low and car-high are given in Table A2.14a and for mobile-low and mobile-high in table A2.14b.

III A. Questionnaire for the Product Car

Sir/Madam,

This questionnaire has two parts, Part A and Part B. Part A is about the **Product** Car, while part B is regarding the **brand of Car** that you own. There are no correct or wrong answers. *The researcher seeks to understand the degree of agreement or disagreement with the statements given*. The researcher promises that your identity and your views/opinion will be kept confidential and will be used only for academic purpose. I thank you in anticipation for participating in this survey.

<div align="center">

PART A

</div>

Do you own a car:　　　　Yes ☐　　　No ☐

If NO, thank you for participating in this survey.

If YES, For how many years are you using (your own) car_____years /months

Directions: The following are some statements regarding the **product Car**. You are required to **state your agreement/disagreement** with these.

EI1　**Car is a part of my self-image**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

EI2　**Car I own portray an image of me to others**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

EI3 **Car is fun to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI4 **Car is fascinating to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI5 **Car is appealing to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI6 **Car is exciting to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI7 **Car I own tell others about me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI8 **Car they own tell me about them**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI9 **Others judge me by the car that I have**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI10 **Car is boring to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BS1 **Brand name is the first thing I would be looking at while purchasing car**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

PART B

This part of the questionnaire is about your opinion regarding the **Car that you own**.

Brand name (or company name) of your *car* _____ (give one name if you own more than one car)

For how many years are you using this car _____years / months

Is this your first car   Yes   ☐   No   ☐

Directions: Following are some statements regarding the **Brand of Car** *that you have mentioned above*. You are required to *state your agreement/ disagreement* with these statements.

SEN1   **This brand makes a strong impression on my visual and other senses**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

SEN2   **I find this brand interesting in a sensory way**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

SEN3   **This brand does not appeal to my senses**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFF1   **This brand evokes feelings and sentiments**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFF2   **I have strong emotions for this brand**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFF3   **This brand is an emotional brand**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BEH1   **When I use this brand, I engage in physical actions and behaviours**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BEH2   **This brand results in bodily experiences**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BEH3   **This brand is not action oriented**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

INT1   **When I encounter with this brand, I engage in a lot of thinking**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

INT2   **This brand does not make me think**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

INT3   **This brand stimulates my curiosity**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

RBP1   **I am loyal only to this brand of Car**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

RBP2   **Next time I will definitely buy this brand of Car again**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

RBP3   **If I got any brand of car for free, I would choose my brand of Car**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC1   **I want to continue my relationship with the Car manufacturer**.

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC2   **The car manufacturer is interested in how I use my Car**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC3   **I give feedback about my evaluations of the Car regularly.**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC4   **Occasionally the Car dealer arranges events to show new products.**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR1   **My brand of Car gives me what it promises**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR2   **My brand's product claims are believable**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR3   **You can believe, what the ads say about my brand of Car**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR4   **My experience with my brand of Car makes me worried of their claims**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR5   **My brand of Car has a name that you can trust**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR6   **My brand of Car is at the forefront in using technology to deliver a better product**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR7   **My brand of Car reminds me of someone who is competent and knows what he/she is doing.**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

SEC1. From the given list, please tick those items you have at home? (Items could be owned by you or your family or provided by the employer or it could be available in the house you live. ***Tick the items that you own***)

Electricity connection	☐	Ceiling Fan	☐
LPG Stove	☐	Air Conditioner	☐
Two Wheeler	☐	Colour TV	☐
Refrigerator	☐	Washing Machine	☐
Car/Jeep/Van/SUV	☐	Personal Computer/ Laptop	☐
Agricultural Land (Land that is currently under cultivation or plantation)			☐

SEC2. The following options concern the educational profile of the person who makes the biggest financial contribution to the running of household. To what level has he/she studied?

Illiterate	☐	Literate but no formal schooling or schooling up to 4 years	☐
School 5 to 9 years	☐	10th/SSC/HSC/+12	☐
Some College (including diploma) but not graduation	☐	Graduate/Post-graduate (General)	☐
Graduate/post-graduate (Professional)	☐		

Personal Details

Occupation:

Salaried	☐	Student	☐
Self-employed	☐	Others (Specify)_____	

Gender:

Male	☐	Female	☐

Age_____   **Place:**_____

THANK YOU

Note: EI 1 to EI10 are items measuring Enduring Involvement; BS1 measures Brand Sensitivity; SEN1 to SEN3, AFF1 to AFF3, BEH1 to BEH3 and INT1 to INT3 measures the Sensory, Affective, Behavioural and Intellectual factors of Brand Experience; RPB1 to RPB3 measures Repeat Purchase Behaviour; AFC1 to AFC3 measures Affective Commitment and BCR1 to BCR7 measures Brand Credibility; SEC1 and SEC2 measures Socio-Economic-Status.

III B. Questionnaire for the Product Mobile Phone Handset

Sir/Madam,

This questionnaire has two parts, Part A and Part B. Part A is about the **Product Mobile Phone Handset**, while part B is regarding the brand of Mobile Phone Handset that you own. There are no correct or wrong answers. *The researcher seeks to understand the degree of agreement or disagreement with the statements given*. The researcher promises that your identity and your views/opinion will be kept confidential and will be used only for academic purpose. I thank you in anticipation for participating in this survey.

<div align="center">

PART A

</div>

Do you own a Mobile Phone: ☐ Yes   ☐ NO

If NO, thank you for participating in this survey.

If YES, For how many years are you using (your own) mobile phone_____years.

Directions: The following are some statements regarding the **Product Mobile Phone**. You are required to **state your agreement/disagreement** with these.

EI1   **Mobile Phone is a part of my self-image**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI2   **Mobile Phone, I own portray an image of me to others**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI3   **Mobile Phone is fun to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI4   **Mobile Phone is fascinating to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI5 **Mobile Phone is appealing to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI6 **Mobile Phone is exciting to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI7 **Mobile Phone I own tell others about me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI8 **Mobile Phone they own tell me about them**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI9 **Others judge me by the Mobile Phone that I have**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI10 **Mobile Phone is boring to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BS1 **Brand name is the first thing I would be looking at while purchasing Mobile Phone**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

PART B

This part of the questionnaire is about your opinion regarding the **Mobile Phone Handset** that you own.

Brand name (or company name) of your **Mobile Phone** _____(give most used name if you own more than one Mobile Phone)

For how many years are you using this **Mobile Phone** _____years / months

Is this your first **Mobile Phone:** Yes ☐   No ☐

Directions: Following are some statements regarding the **Brand of Mobile Phone that you have mentioned above**. You are required to ***state your agreement/disagreement*** with these statements.

SEN1   **This brand makes a strong impression on my visual and other senses**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

SEN2   **I find this brand interesting in a sensory way**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

SEN3   **This brand does not appeal to my senses**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

AFF1   **This brand evokes feelings and sentiments**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

AFF2   **I have strong emotions for this brand**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

AFF3   **This brand is an emotional brand**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BEH1   **When I use this brand, I engage in physical actions and behaviours**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BEH2   **This brand results in bodily experiences**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BEH3   **This brand is not action oriented**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

INT1   **When I encounter with this brand, I engage in a lot of thinking**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

INT2   **This brand does not make me think**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

INT3   **This brand stimulates my curiosity**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

RPB1   **I am loyal only to this brand of Mobile Phone**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

RPB2   **Next time I will definitely buy this brand of Mobile Phone again**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

RPB3 **If I got any brand of Mobile Phone for free, I would choose my brand of Mobile Phone**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC1 **I want to continue my relationship with the Mobile Phone manufacturer**.

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC2 **The Mobile Phone manufacturer is interested in how I use my Mobile Phone**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC3 **I give feedback about my evaluations of the Mobile Phone regularly.**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC4 **Occasionally the Mobile Phone dealer arranges events to show new products.**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR1 **My brand of Mobile Phone gives me what it promises**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR2 **My brand's product claims are believable**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR3 **You can believe, what the ads say about my brand of Mobile Phone**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR4 **My experience with my brand of Mobile Phone makes me worried of their claims**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR5 My brand of Mobile Phone has a name that you can trust

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR6 My brand of Mobile Phone is at the forefront in using technology to deliver a better product

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR7 My brand of Mobile Phone reminds me of someone who is competent and knows what he/she is doing.

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

SEC1. From the given list, please tick those items you have at home? (Items could be owned by you or your family or provided by the employer or it could be available in the house you live. ***Tick the items that you own***)

Electricity connection ☐   Ceiling Fan ☐

LPG Stove ☐   Air Conditioner ☐

Two Wheeler ☐   Colour TV ☐

Refrigerator ☐   Washing Machine ☐

Car/Jeep/Van/SUV ☐   Personal Computer/ Laptop ☐

Agricultural Land (Land that is currently under cultivation or plantation) ☐

SEC2. The following options concern the educational profile of the person who makes the biggest financial contribution to the running of household. To what level has he/she studied?

Illiterate ☐   Literate but no formal schooling or schooling up to 4 years ☐

School 5 to 9 years ☐   10th/SSC/HSC/+12 ☐

Some College (including diploma) but not graduation ☐   Graduate/Post-graduate (General) ☐

Graduate/post-graduate (Professional) ☐

Personal Details

Occupation:

Salaried ☐   Student ☐

Self-employed ☐   Others (Specify)_____

Gender:

Male ☐   Female ☐

Age_____   **Place:**_____

THANK YOU

Note: EI 1 to EI10 are items measuring Enduring Involvement; BS1 measures Brand Sensitivity; SEN1 to SEN3, AFF1 to AFF3, BEH1 to BEH3 and INT1 to INT3 measures the Sensory, Affective, Behavioural and Intellectual factors of Brand Experience; RPB1 to RPB3 measures Repeat Purchase Behaviour; AFC1 to AFC3 measures Affective Commitment and BCR1 to BCR7 measures Brand Credibility; SEC1 and SEC2 measures Socio-Economic-Status.

III C. Questionnaire for the Product Toothpaste

Sir/Madam,

This questionnaire has two parts, Part A and Part B. Part A is about the **Product** **Toothpaste**, while part B is regarding the brand of Toothpaste that you use. There are no correct or wrong answers. *The researcher seeks to understand the degree of agreement or disagreement with the statements given*. The researcher promises that your identity and your views/opinion will be kept confidential and will be used only for academic purpose. I thank you in anticipation for participating in this survey.

<div align="center">

PART A

</div>

Do you use Toothpaste: Yes ☐   No ☐

If NO, thank you for participating in this survey.

Directions: The following are some statements regarding the **Product** **Toothpaste**. You are required to **state your agreement/disagreement** with these.

EI1   **Toothpaste is a part of my self-image**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI2   **Toothpaste, I use portray an image of me to others**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI3   **Toothpaste is fun to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI4   **Toothpaste is fascinating to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI5 **Toothpaste is appealing to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI6 **Toothpaste is exciting to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI7 **Toothpaste I use tell others about me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI8 **Toothpaste they use tell me about them**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI9 **Others judge me by the Toothpaste that I use**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

EI10 **Toothpaste is boring to me**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BS1 **Brand name is the first thing I would be looking at while purchasing Toothpaste**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

<div style="text-align: center">

PART B

</div>

This part of the questionnaire is about your opinion regarding the ***Brand of*** **Toothpaste that you use**.

Brand name (or company name) of your ***Toothpaste*** _____
(give most commonly used brand if you use more than one Toothpaste)

<u>*Directions*</u>: Following are some statements regarding the **Brand of Toothpaste** *that you have mentioned above*. You are required to ***state your agreement/disagreement*** with these statements.

SEN1   **This brand makes a strong impression /on my visual and other senses**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

SEN2   **I find this brand interesting in a sensory way**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

SEN3   **This brand does not appeal to my senses**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

AFF1   **This brand evokes feelings and sentiments**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

AFF2   **I have strong emotions for this brand**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

AFF3   **This brand is an emotional brand**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

BEH1   **When I use this brand, I engage in physical actions and behaviours**

Strongly disagree	*Disagree*	*Somewhat disagree*	*neutral*	*Somewhat agree*	*Agree*	*Strongly agree*

BEH2   **This brand results in bodily experiences**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BEH3   **This brand is not action oriented**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

INT1   **When I encounter with this brand, I engage in a lot of thinking**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

INT2   **This brand does not make me think**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

INT3   **This brand stimulates my curiosity**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

RPB1   **I am loyal only to this brand of Toothpaste**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

RPB2   **Next time I will definitely buy this brand of Toothpaste again**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

RPB3   **If I got any brand of Toothpaste for free, I would choose my brand of Toothpaste**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC1   **I want to continue my relationship with the Toothpaste brand**.

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly Agree* |

AFC2 **The Toothpaste manufacturer is interested in how I use my Toothpaste**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC3 **I give feedback about my evaluations of the Toothpaste regularly.**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

AFC4 **Occasionally the Toothpaste dealer arranges events to show new products.**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR1 **My brand of Toothpaste gives me what it promises**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR2 **My brand's product claims are believable**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR3 **You can believe, what the ads say about my brand of Toothpaste**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR4 **My experience with my brand of Toothpaste makes me worried of their claims**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR5 **My brand of Toothpaste has a name that you can trust**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR6 **My brand of Toothpaste is at the forefront in using technology to deliver a better product**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

BCR7   **My brand of Toothpaste reminds me of someone who is competent and knows what he/she is doing.**

| *Strongly disagree* | *Disagree* | *Somewhat disagree* | *neutral* | *Somewhat agree* | *Agree* | *Strongly agree* |

SEC1. From the given list, please tick those items you have at home? (Items could be owned by you or your family or provided by the employer or it could be available in the house you live. ***Tick the items that you own***)

Electricity connection ☐   Ceiling Fan ☐

LPG Stove ☐   Air Conditioner ☐

Two Wheeler ☐   Colour TV ☐

Refrigerator ☐   Washing Machine ☐

Car/Jeep/Van/SUV ☐   Personal Computer/ Laptop ☐

Agricultural Land (Land that is currently under cultivation or plantation) ☐

SEC2. The following options concern the educational profile of the person who makes the biggest financial contribution to the running of household. To what level has he/she studied?

Illiterate ☐   Literate but no formal schooling or schooling up to 4 years ☐

School 5 to 9 years ☐   10th/SSC/HSC/+12 ☐

Some College (including diploma) but not graduation ☐   Graduate/Post-graduate (General) ☐

Graduate/post-graduate (Professional) ☐

Personal Details

Occupation:

Salaried ☐   Student ☐

Self-employed ☐   Others (Specify)_____

Gender:

Male ☐   Female ☐

Age_____   **Place:**_____

THANK YOU

Note: EI 1 to EI10 are items measuring Enduring Involvement; BS1 measures Brand Sensitivity; SEN1 to SEN3, AFF1 to AFF3, BEH1 to BEH3 and INT1 to INT3 measures the Sensory, Affective, Behavioural and Intellectual factors of Brand Experience; RPB1 to RPB3 measures Repeat Purchase Behaviour; AFC1 to AFC3 measures Affective Commitment and BCR1 to BCR7 measures Brand Credibility; SEC1 and SEC2 measures Socio-Economic-Status.

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List of Publication

Publications: Journal Article and Book Chapter

[1] Co-authored journal article titled "Loyalty Intentions: Does the effect of commitment, credibility and awareness vary across consumers with low and high involvement?" in the journal titled "Journal of Indian Business Research" Vol.6, No.3, 2014, page: 213-230; published by Emerald Group Publishing Limited.

[2] Co-authored journal article titled "Direct and indirect effect of brand credibility, brand commitment and loyalty intentions on brand equity" in the journal titled "Economic Review – Journal of Economics and Business" Vol. X, Issue: 2, November 2012, page: 73-82; published by Faculty of Economics, University of Tuzla, Bosnia and Herzegovina.

[3] Co-authored book chapter titled "The Impact of Satisfaction, Relationship Quality and Affective Commitment on Loyalty Intentions" in the book titled "Towards Managerial Excellence: Challenges and Choices" Edited by P David Jawahar, published by Macmillan Advanced Research Series. 2011.

Doctoral Consortium:

[1] Participated and presented this research work in the Doctoral Student Mentoring Programme (DSMP) at the third Biennial Conference of the Indian Academy of Management (IAM) held from 12-14th December, 2013 at Indian Institute of Management (IIM), Ahmedabad.

Conference Paper Presentations:

[1] "An Exploratory Study on the relationship between retail service quality and repurchase behaviour" presented at National Conference on Emerging Trends in Business on 7th and 8th March 2011, conducted by Department of Management Studies, Christ University, Bangalore

[2] "The Impact of Satisfaction, Relationship Quality and Affective Commitment on Loyalty Intentions" presented at International Conference on Management Research 'Athenaeum 2011' on 12th and 13th February; conducted by Bharathidasan Institute of Management, Tiruchirappalli.

[3] Service Quality and Repurchase Behaviour: A field Study among the retail apparel shoppers in Cochin, Kerala; presented at the National Seminar on creating and delivering value for customers; March 27-28, 2009; Organized by School of Management Studies, Cochin University of Science and Technology.

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